AN EVALUATION OF UPHOLD'S LONG LASTING INSECTICIDE TREATED NETS (LLINs) DISTRIBUTION EXERCISE

A Process Evaluation Report

Submitted to

UPHOLD

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List of Abbreviations

ADRA	Adventist Relief Agency
CBOs	Community Based Organizations
CCF	Christian Children's Fund
CMD	Community Medicine Distributors
DDHSs	District Directors of Health Services
FGD	Focus Group Discussion
FINCA	Foundation for International Community Assistance
HIV/AIDS	Human Immune Virus and Acquired Immuno-Deficiency Syndrome
ICOBI	Integrated Community Based Initiatives
IDPs	Internally Displaced Persons
IEC	Information Education and Communication
ITNs	Insecticide Treated Nets
LC	Local Council
LLINs	Long Lasting Insecticide-Treated Nets
MSF	Médecins Sans Frontières
PAG	Pentecostal Assembly of God
PLWHA	Persons Living with HIV/AIDS
SIDA	Swedish International Development Agency
SOCADIDO	Soroti Catholic Development Organization
UNICEF	United Nations Children's Fund
UPHOLD	Uganda Program for Human and Holistic Development

Executive Summary

The Process Evaluation of the Long Lasting Insecticide Treated Nets (LLINs) distribution exercise by Community Medicine Distributors (CMDs) was commissioned by the Uganda Program for Human and Holistic Development (UPHOLD) and was conducted by Wilsken Agencies Ltd in the districts of Gulu, Katakwi, Mayuge and Bushenyi. The evaluation was carried out between the 2nd and 8th of July 2006. The overall objective of the evaluation was to conduct an in-depth process assessment of the LLIN distribution exercise with the aim of documenting lessons learned, best practices as well as challenges in the process. This report is an outcome of both the qualitative and quantitative evaluation.

Methodology: The evaluation used a mix of quantitative and qualitative research methodology. A household survey was conducted that involved 368 interviews with caretakers of children below five years of age. A total of 16 Focus Group Discussions (FGDs) were conducted with CMDs and caretakers of children under five; two of each category in each of the four districts. A total of five key informant interviews were conducted in each of the districts with individuals who were involved in the distribution process at different levels including district and community Leaders, district trainers and private net providers. A review of relevant records and documents were conducted at UPHOLD. In addition, the field personnel made observations to ascertain the availability of the distributed nets in households, their condition and correct use.

Overview of the Evaluation Results

Overall, the distribution of LLINs using CMDs mechanism worked efficiently and effectively albeit a few minor glitches. The objective of the exercise was to distribute about 260,000 nets in the shorted time possible to poor families and households living in nine districts that combined a high burden of malaria, were hard to reach, had low socio-economic status and depicted very low Insecticide Treated Nets (ITN) coverage. The evaluation shows that this objective was largely achieved with 205,155 nets being delivered to selected beneficiaries within a period of about three months (Dec 2005 – March 2006) inclusive of the time it took to register households with children under five years; representing an achievement of about 79% of the intended target.

Factors that contributed to the success of the exercise are largely attributed to the design of the process and mechanisms employed to ensure adequate preparation, organization and transparency of the process. These mechanisms and design facets of the process are:

Training of the CMDS by the District Trainers

Positive findings- In all instances CMDs received training from district trainers prior to registration of children below five years of age. The purpose of the training was to prepare CMDs on how to register households with children under five years and how to communicate key messages on malaria; its causes and prevention as well as the correct use and proper handling of ITNs. Although the evaluation captured some inter-district variations regarding approach and content as was the case in Gulu and some parts of Katakwi and Amuria districts, all CMDs contacted during the evaluation said that the training received helped them to successfully register the right beneficiaries (children below five years) in their villages and distribute the bed nets appropriately.

Sensitization of Communities

Positive findings: In all districts visited, apart from Gulu and Katakwi, CMDs sensitized children caretakers on the correct use and proper handling of bed nets including why they needed to have their children sleeping under ITNs. Sensitization facilitated buy-in of communities and increased the chances of individuals accepting the particular brand of nets given out. Results of the evaluation bear this out.

Household ITN Retention, Use and Care: According to household survey results, most net recipients still had the nets and they were using them. Survey interviewers were able to identify the particular blue brand of nets given in 95% of the households visited. In 78% of the households the nets were seen to be in good condition. In 6% of households visited, although the interviewers were shown the nets received, no one in the household was using the net; these nets were reportedly being kept for future use. All the caretakers interviewed reported that the benefiting child was using the bed net, 88% of them indicated that the index child was sharing this net with other children and/or their mothers/caretakers. Further, survey results show that 87% of the benefiting children had reportedly slept under the net the night before the survey.

Community Perceptions on the Importance and Benefits of ITNs also support sensitization done by CMDs. Perceptions that ITNs are the most effective and reliable preventive measure against malaria was found high among the net recipients, 86% of household survey respondents said ITNs kill mosquitoes and another 90% agreed that ITNs repel mosquitoes. Similarly, 86% said ITNs protect those who sleep under them and 84% reported that ITNs lead to a reduction on medical bills.

Further, community FGD participants reported that they were already experiencing a decline in the occurrence of malaria among the children who sleep under the nets. They also said that they had observed that expenditure on malaria treatment for children their households was on the decrease.

Misconceptions, Fears and Problems People have with ITNs: There are still a significant number of people with misconceptions, fears and myths about ITNs. Some of the perceived ITN side effects commonly mentioned by FGD participants included; skin rashes, eye irritation, cough, flu, TB, asthma and cancer. The fear that bed nets can easily catch fire was commonly reported across all the FGD groups conducted.

In the household survey, 27% of the respondents said that ITNs can harm a child/baby, while 30% reported that it can cause skin allergy and 14% thought that ITNs can affect pregnancy. In addition, 29% of the survey respondents were of the view that ITNs cause discomfort and 4% expressed fear that ITNs can cause impotence among male users. However, despite the above concerns most people said that ITNs were the most effective way to prevent malaria.

Prior registration of households with children below five years

Positive findings: Registration of households with children under five prior to selection of the actual beneficiaries was a unique feature of this process. Whereas the purpose for doing this was originally to estimate the need in terms of number of nets required per area, prior registration also provided the added advantage of knowing the exact identity and location of the right beneficiaries. This knowledge reduced the potential risk of wasting nets through unauthorised diversion and multiple allocations to same household including ensuring equitable distribution by knowing the true identity and location of the intended beneficiaries. Registration was done house-to-house and this helped to verify that the households actually had children below five years. The fact that the CMDs were conversant with the localities made them very effective in listing the households with children below five years. CMDs worked closely with the LC officials under the supervision of the District Trainers which also helped ensure transparency of the process**.**

Challenges: In a few instances, there were complaints that listing of the beneficiaries was done at the homes of the CMDs instead of the house-to-house process. In Bushenyi, some caretakers refused to register their children because they claimed they did not know why children were being registered.

Distribution Mechanism; Handing over one function and in view of the entire community: handing over nets to all pre-selected recipients, at an agreed distribution point in the community, in one day saved a lot of time that would have been otherwise lost if the exercise was done over many days. Further, the convenience of one day function allowed for the presence of a majority of members of the community, LC officials and district teams which further rendered the process credible, transparent as well as ensuring that the nets got to the right beneficiaries.

The evaluation found that this mechanism of delivery of nets to the selected recipients worked well; nets reached the intended beneficiaries**,** selected beneficiaries were pre-qualified by the district teams as required, recipients had their names read out in public before being handed nets and LC officials were present to ensure that the nets were got to the right beneficiaries.

Involvement of the local administration: Having the LCs work with CMDs throughout the entire process encouraged transparency, equity, local ownership and responsibility for the exercise as well as abating potential conflicts and discrediting of the CMDs.

Challenges: in a few cases some CMDs reported that transportation of the nets from the delivery point (Health centres) to the distribution points was a constraint, which in some cases led to late delivery of the nets to the distribution centres. In Bushenyi and Gulu for example, it was pointed out that some CMDs carried the LLINs on their heads. In some areas the caretakers had to contribute some money towards transportation of the LLINs and in some cases the CMDs were not able to distribute the LLINs on the scheduled time. Whenever this happened some originally selected recipients did not receive their nets because, either they left or their nets were given to someone else who was present but was not lucky enough to be selected the first time. However in all instances, nets were allocated only to children under five years of age.

Conclusion

The study concludes that distribution of bed nets using CMDs and Local Council (LC) authorities an appropriate and effective mechanism because it is equitable and time saving. It is in itself is a unique contribution of using the already well established Home Based Management of Fever (HBMF) system. By pre-registering households with children under five, not only were the CMDs able to reach the most remote rural households who probably would otherwise never have visited a health centre for one reason or another, they were able to identify actual destinations for a large volume of nets , in a comparatively short time, which made distribution a lot faster.

The evaluation team noted inter-district variations in the training approach of CMDs. This is an area recommended for further improvement of the process. However this occurrence in our opinion is expected of any new approach. These were largely a few isolated incidences; their overall effect on the entire exercise did not undermine its overall effectiveness and efficiency.

However, a few of the points noted represent important challenges for future similar exercises. These include, managing contextual factors such as, distances between net storage centres and distribution, population mobility particularly in IDP camps; household sizes and sleeping arrangements. One important area for strengthening this delivery mechanism is providing adequate logistical support for CMDs. Such an exercise and the accompanying sensitization can be used to create appropriate desirable behaviour change such as the willingness to purchase ITNs and their correct usage.

Therefore, a major lesson learned from this process is that mass distribution of bed nets using Community Medicine Distributors works better than other conventional methods in that the mechanism is equitable, transparent and moves large volumes in a relatively short time. However, the process is labour intensive and requires active support and engagement of the local administration system; adequate communication and sufficient facilitation of CMD teams in terms of availability of enough materials and support for the day-to-day duties.

Recommendations

- In addition to house-to-house follow up on the benefiting households, there is need for the CMDs to conduct follow up community meetings for caretakers of benefiting children to remind them on the correct use and proper handling of bed nets in the households. This would provide an opportunity for the caretakers to share their experiences and any problem they might have with using the LLINs and get correct advice
- The training of CMDs and community sensitization should emphasize important specific issues about the LLINs such as the importance of washing them sparingly in order to avoid insecticide loss
- There is need to facilitate transportation of the bed nets up to the final distribution centres in order to avoid unnecessary delays in delivery
- Interpersonal communication mechanisms were effective in getting the message to the communities. They should be strengthened, instead of the costly radio programmes that reached less than 10% of the target group
- Transport allowance given to CMDs should be provided in consideration of the distance from their villages to the health centres where nets are stored
- There is need for more post net distribution commitment and involvement of district and sub-county leaders to advocate for continued correct use and proper handling of bed nets
- The use of CMDs as a mechanism to distribute ITNs to target groups with the assistance of local council officials was found to be novel and therefore it is recommended that the approach should be adopted by future programs for rapid scale up of net coverage in target populations

1.0 INTRODUCTION

The Process Evaluation of Long Lasting Insecticide Treated Nets (LLINs) commissioned by UPHOLD was conducted by Wilsken Agencies Ltd in the districts of Gulu, Mayuge, Bushenyi and Katakwi between 2nd and 8th July 2006. The study aimed at documenting lessons learned, best practices as well as challenges in the process. This report presents the findings of both the qualitative and quantitative evaluation. The qualitative track involved key informant interviews with persons involved in the distribution process and Focus Group Discussions (FGDs) with caretakers of children below five years of age and Community Medicine Distributors (CMDs) while the quantitative component entailed a household survey.

1.1 Objectives of the Evaluation

The overall objective of the evaluation was to conduct an in-depth process assessment of the LLINs distribution exercise that is representative of both 'conflict' and 'non conflict' districts. The data pertaining to the distribution of LLINs collected was to be useful for replication and revision of the process.

1.1.1 Specific Objectives

- To systematically document lessons learned from the exercise with a particular view of identifying those procedures that worked well and what could be improved in similar future exercises
- To document challenges faced during the exercise, in particular pointing out those circumstances that led to the distribution exercise deviating from originally planned procedures
- To identify major alterations in the process in order to cater for the unique circumstances of the 'conflict' districts in Northern Uganda
- To identify major factors that could have led to 'net wastage' during the distribution exercise and give an assessment of the scale of the problem
- To carry out rapid household based assessment of current LLIN coverage in those sub-counties/camps that were targeted by the distribution exercise
- To assess the proportion of nets that were successfully targeted (i.e. those that reached the targeted individuals and target group)
- To evaluate the use of health education (to both CMDs and beneficiary households) during the distribution exercise and assess the perceptions of ITN recipients about the usefulness of LLINs
- To establish the perceptions of major ITN sector players at the district level on the process of ITN distribution.

2.0 METHODOLOGY

2.1 Study Area

The evaluation was conducted in four districts that were representative of 'conflict' and 'non-conflict' areas. These were Gulu, Katakwi and Amuria to represent the 'conflict' areas, and Mayuge and Bushenyi for 'non-conflict' areas. The selection was purposively done by the consultants in liaison with UPHOLD. These districts were selected from among the nine that were targeted for the net distribution. During the net distribution exercise, Amuria and Katakwi were considered as one district. The quantitative analysis therefore combines data for Amuria and Katakwi districts.

2.2 Study Population

The study population included UPHOLD staff who were involved in the planning and supervising the distribution, District and Community Leaders, District Trainers, CMDs, Private ITN providers and caretakers of children below five years who had been given nets.

2.3 Data Collection Techniques

Data collection used a combination of both quantitative and qualitative methodology. The quantitative evaluation involved a household survey using a structured questionnaire, while the qualitative approach employed document review, key informant interviews, focus group discussions and observation.

2.4 Quantitative Evaluation

2.4.1 Household Survey

A total of 368 households were randomly selected from district lists of net recipients; 92 in each of the four districts. The survey used a semi-structured questionnaire administered in the randomly selected households. The questionnaire collected data on: socio-economic and demographic characteristics of the respondents; household long lasting insecticidal net (LLIN) coverage and use; distribution of Information Education and Communication (IEC) messages, their reach and comprehension and understanding, LLIN targeting, wastage and loss. The questionnaires were administered through face-to-face interviews with caretakers of children below five years within the selected households.

2.4.2 Socio-Demographic Characteristics of the Survey Respondents

Female-males gender ratios - The majority 95% of the caretakers interviewed in the quantitative evaluation were females while males constituted only 5%. The majority were females because at the household the evaluation focussed on the person who is primarily responsible for the day-to-day feeding, clothing and caring for children.

Social economic status - 29% of the respondents had no formal schooling, 65% had attained primary education only and just 6% had attained secondary education. None of the survey respondents had achieved any kind of a post-secondary qualification. Of the 368 caretakers interviewed, 86% were subsistence farmers, 7% small retailers and just over 1% reported to be employed as government workers, while the remaining 6% had other occupations. In regard to household monthly income, 49% of the households reported to be earning less than 10, 000 UG Shs. per month. 33% reported monthly household earnings of between 10,000 UG Shs. and 50,000 UG Shs. while 8% reported a monthly household income of between 50,000 UG Shs. to 100,000 UG Shs. Only 3% reported to earn above 100,000 UG Shs. per month while another 3% said they do not earn anything.

Table I: Social Demographic Characteristics of Household Survey Respondents n=368

Male: Female Ratio	**1:19**
Education level	**Percent (%)**
No formal schooling	29
Primary	65
Secondary	6
Occupation	
Peasant farmer	86
Small retailer	7
Government worker	1
Artisan	0.3
Boda boda Cyclists	1
Other	4.7
Household monthly income	
No cash income	3
Not able to estimate income	4
less than 10,000 UGX	49
10,001 – 50,000 UGX	33
50,001 – 100,000 UGX	8
More than 100,000 UGX	3

2.5 Qualitative Evaluation

2.5.1 Key Informant Interviews

In-depth interviews were conducted with key informants such as UPHOLD staff, who participated in the distribution exercise, District and Community Leaders, District Trainers and private sector ITN providers. A total of five interviews were conducted in each of the districts. The interviews helped in sharing experiences of the implementation including factors that precipitated easy distribution, challenges, weaknesses and lessons learned.

2.5.2 Focus Group Discussions

Focus group discussions were held with caretakers of children below five years and CMDs. A total of four FGDs were held in each district, two with CMDs and another two with caretakers of children below five years. Each FGD comprised of 8-12 individuals. The discussions focused on exploring group perspectives of the bed net distribution approach used by UPHOLD. The discussions also explored caretakers' perceptions on the fairness of the criteria used for pre-qualification and whether the LLINs were given to the right beneficiaries. The FGDs further helped in highlighting challenges related to bed net use, and the usefulness of the messages that the CMDs and beneficiaries received when obtaining LLINs.

2.5.3 Document review

Relevant documents and records were reviewed regarding the LLINs distribution process. These included training tools, distribution plans, health education materials and registration forms for children below five years. This review helped to provide information given to the CMDs and beneficiaries in preparation for the distribution and the pre-qualified households that received the nets.

2.5.4 Observation

At the households the field teams requested to see if the bed nets were available and being correctly used. In addition, they observed the condition of the LLINs. The type and condition of dwelling was also observed and recorded.

2.6 Recruitment of Field Personnel

Field data collectors were recruited from Wilsken Agencies' database of field interviewers. The selection process considered a combination of availability, individual's research experience as a field interviewer, past field experience working with Wilsken as well as his/her quality of work and disciplinary record. It was ensured that the recruited field personnel were familiar with the districts where they were assigned to work. For the quantitative component of the study we used a total of 16 interviewers and 4 supervisors grouped into 4 teams. Further, selection of the field interviewers took into consideration the interviewer's ability to read, write and speak English and the appropriate local language. From our core staff and database we identified personnel with skills and experience in qualitative data collection to conduct FGDs and key informant interviews. Each district had a team of one Moderator, one Note taker and four Recruiters to collect the qualitative data.

2.7 Translation of Questionnaire into the Local Languages

The household questionnaire was translated from its English version into the appropriate local languages namely Ateso, Runyankole, Luo and Lusoga. To ensure that the translated version was in synchrony with the English version, prior to the translation process, we went through the English version of the questionnaire together with the translators to synchronize interpretation and contextual understanding of the questions. After the translation had been completed we repeated the same process of synchronizing before sending the translated version for back translation. This way we were able to ensure that the responses received from either of the languages are for the same questions.

2.8 Training of Field Interviewers and Supervisors

A joint Wilsken and UPHOLD team provided training of field personnel. The purpose of having UPHOLD staff to participate in the training was to provide input on the technical aspects of the survey during the training. The two-day training program covered the LLINs distribution exercise, objectives of the evaluation and implementation of the sampling strategy in the field. Also covered was questionnaire administering techniques and role plays or mock interviews. The training ran from 9.00 am to 5.00 pm and was conducted in both English and the appropriate local language. The trainees were taken through the questions one by one to ensure that they are familiar with every individual item in the questionnaire. The training also helped to check for any inconsistencies and ambiguity. The second day involved a field pre-test of the instruments that also provided an opportunity for field training. Both the interviewers and supervisors participated in the training. A field interviewer-training manual was prepared and used as a quick tool for training as well as a field reference when implementing fieldwork.

2.9 Field Data Collection and Supervision

In the household survey interviewers located the randomly selected households, using the head of household names that were obtained from the registration lists of children below 5 years and conducted the interviews with caretakers of these children. The supervisors did not conduct any interviews but were charged with a full time role of quality assurance and team management which involved checking each individual completed questionnaire returned before leaving a sampled point and sitting in some of the interviews. The supervisors also provided technical advice and problem solving in the field.

2.10 Data Analysis

Data analysis was preceded by entry of quantitative data using SPSS data entry station 4.0. Audio taped responses from the FGDs and Key Informant interviews were transcribed, categorised into the different evaluation thematic areas and analysed using grid analysis. Quantitative analysis was mainly descriptive involving simple frequencies and cross-tabulations.

3.0 RESULTS

The LLIN Distribution Process

Long lasting insecticide treated nets were distributed through a process that involved a central team, district leaders, district trainers or supervisors, community medicine distributors and local council officials.

The central team comprised of personnel from UPHOLD and Ministry of Health who had the overall responsibility of developing and managing the LLINs distribution. Their role was to sensitize district leaders about ITNs specifically the LLINs and the free distribution system. In addition, they trained the district teams and provided back-up support during the registration of children below 5 years and actual distribution of nets.

The role of the District Leaders was to mobilise their communities and to advocate for nets, their correct use and appropriate care. The District Directors of Health Services (DDHSs) managed the storage of the nets and their distribution to the lower level health facilities and subsequently to the beneficiaries.

The District Trainers or Supervisors, trained the CMDs and local leaders, on the distribution mechanism and their respective roles, subsequently they supervised and monitored the distribution exercise.

The CMDs compiled lists of target beneficiaries in their villages (children below five years of age). Thereafter they educated the caretakers on the benefits, effective use and care of insecticide treated nets. In addition, they followed up on households that received nets to assure correct use.

At registration the Local Council Officials certified the pre-qualification registration forms of benefiting children below five years of age and worked along side the CMDs through out the entire exercise. On the day of distribution, the caretakers of children below five years brought them along and either thumb printed or signed against the name of the benefiting child on receiving the net. The LC officials endorsed the post distribution forms. All this was intended to minimise leakages and misallocation of nets.

3.1 Training of Community Medicine Distributors (CMDs)

In the LLIN distribution exercise, the role of District Trainers or Supervisors was to equip CMDs with sufficient information to enable them to distribute LLINs to children below five years and promote correct use of these nets. The training covered key messages on malaria as well as addressed correct use and handling of the bed nets. The training was conducted at sub-county level by trainers drawn from health units within the respective districts. The training covered the key messages about malaria. In addition, the CMDs were trained on correct use and proper handling of bed nets. In Mayuge district the training was conducted

for three days and the participants felt it was adequate. According to one of the district trainers, it covered all that was planned.

The training took about three days. We employed both classroom and practical methods. During the training we trained the CMDs on causes of malaria and its prevention. We also narrowed down to mosquito nets (Key Informant, District Trainer Mayuge district).

At the end of each day's training, we asked the trainees questions and they answered them appropriately (Key Informant, District trainer, Mayuge district)

During the training of the CMDs by the district trainers the latter used relevant IEC materials to reinforce key facts about malaria causes and prevention and messages on LLINs correct use and proper handling.

The evaluation found that in all the four districts the CMDs had received adequate training to enable them to effectively distribute the nets and advice the caretaker appropriately on the benefits, correct use and of nets

3.2 Community Sensitization on Appropriate Handling and Correct Use of Nets

In preparation for the LLIN distribution, the CMDs and LC1 officials conducted community sensitization on the appropriate handling and correct use of bed nets. Specifically, the CMDs talked to the community members about the insecticide treated nets, how they work and how to handle and use them correctly. In addition the sensitisation focused on the importance of sleeping under insecticide treated nets, safety of the nets and what to do to keep the net safe. Additionally, UPHOLD ran radio programs in local languages in all the implementing districts to create awareness in the communities about malaria and the net distribution. The programs were aired for about one hour and listeners were given the opportunity to make phone calls and ask for clarifications.

It was evident from the group discussions with caretakers that the caretakers were knowledgeable about key issues regarding proper care and correct use of bed nets.

The community medicine distributors educated us when they were giving us the nets, they would first educate us and then give the nets. The information was on how to use the net properly and keep it in good condition (FGD, Caretakers, Bushenyi district).

The caretakers were for instance aware that it is important to spread out the nets for two to three days before use in order to minimise possible side effects such as itching that may happen during the first few days of use. Further, they knew that it is important to dry the bed nets under a shade after washing to protect the insecticide from being weakened by the direct sun rays.

We were advised to hang the nets in our door ways for at least two days before we start using them to avoid skin rashes and itching (FGD, caretaker, Bushenyi district)

I was told that when I wash the net I should dry it under a shade like a tree for it to remain effective. (FGD, Caretaker, Gulu district)

Other net use messages that featured in the discussions included: avoiding open fire near the net; proper way of hanging a net for use; folding the net up in the morning to avoid children playing with it; and careful and less frequent washing to avoid loss of the chemicals used in the treatment. In Mayuge, the caretakers were advised to always wash hands after touching the net.

We were told to wash our hands after touching the nets (FGD, Caretakers, Mayuge district)

According to the household survey results the caretakers had heard of the free distribution of bed nets from CMDs (38%), community / LC1 meetings (36%), radio programs (9%), health facility visit (7%) and fellow village mates (6%), while 3% heard about it from other sources. Comparison between 'conflict' and 'non-conflict' areas show that, more caretakers in the former first heard about the LLINs distribution process from CMDs, while in the 'non-conflict' districts more care takers heard about the net distribution through community / LC meetings in their areas. The number of care takers who first heard about the LLINs distribution from the CMDs was highest in Katakwi (49%), followed by Gulu (41%) Mayuge (32%) and Bushenyi (30%). On the other hand community/LC meetings was the first source of information for 46% of caretakers in Mayuge, 44% in Bushenyi UG Shs, 27% in Gulu and 27% in Katakwi. The radio sensitisation program was listened to more in the 'non-conflict' (8%) areas compared to the 'conflict' areas (1%). It was noted that the radio programmes were intended to provide a forum for clarification of any issues pertaining to insecticide treated nets and to reinforce the community sensitisation approach of informing the population about the exercise. They were not intended as a main method of mobilising the communities for the exercise.

Figure 1: First Source of Information about LLINs Distribution, in the four districts; Bushenyi, Gulu, Katakwi and Mayuge, July 2006

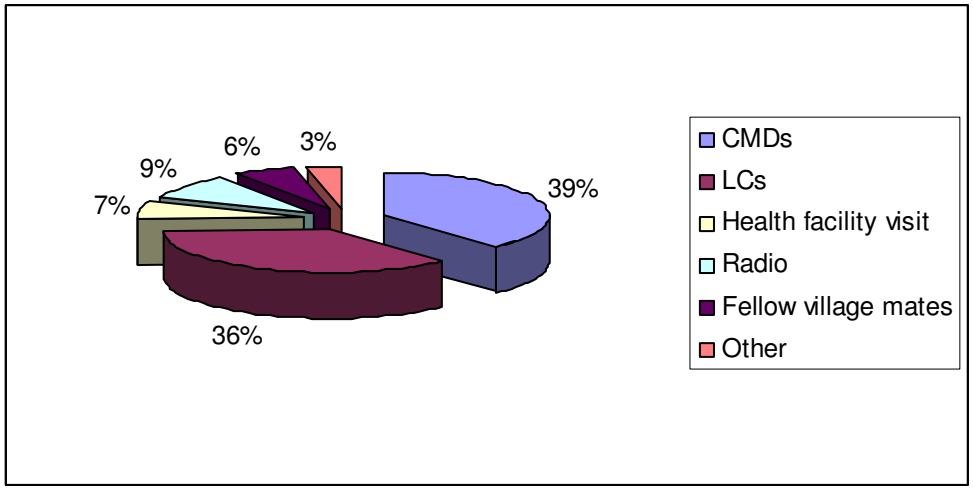
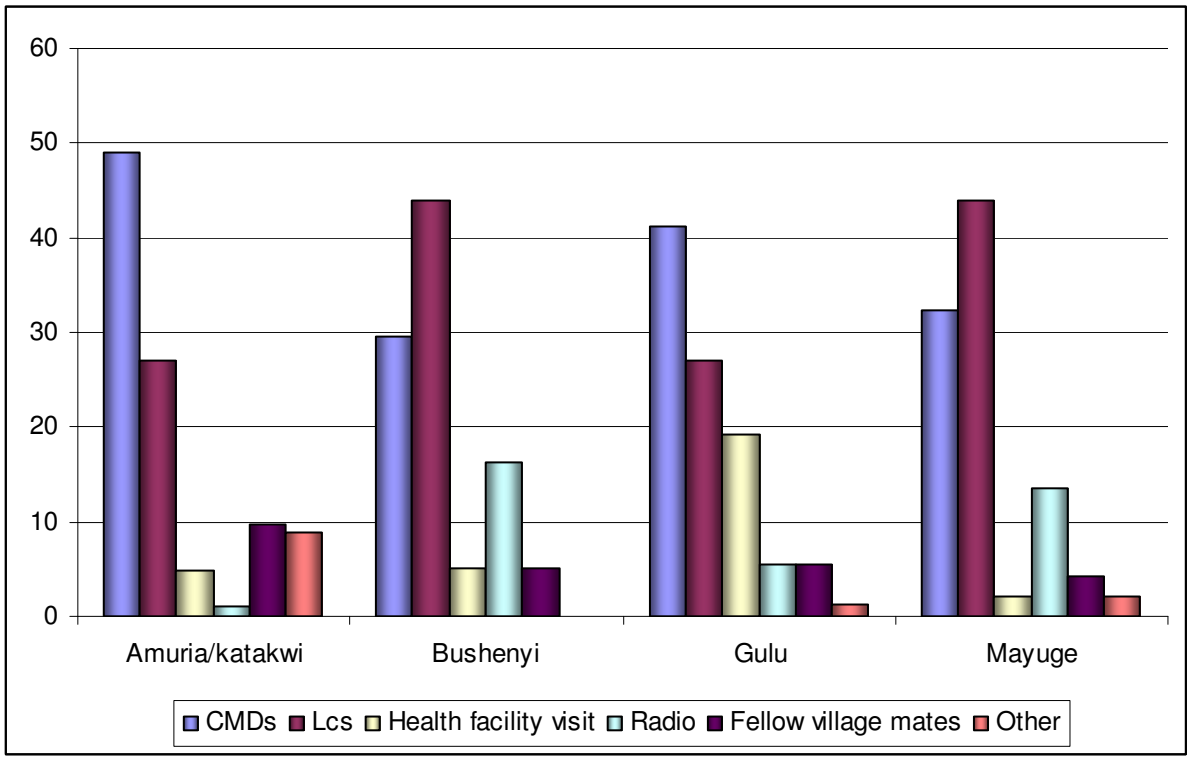


Figure 2: First Source of Information about LLINs Distribution by District, in four districts; Bushenyi, Gulu, Katakwi and Mayuge, July 2006



3.3 Registration of Children below Five Years by CMDs

The cardinal task of the CMDs in the LLIN distribution exercise was to compile lists of children below five years in the villages. These lists were used to allocate the available bed nets to the most deserving children. In order to ensure equity the listing was done house-to-house by CMDs and certified by a community leader such as the LC1 chairperson or the representative. Further, communities were informed in clear terms why some households had been pre-qualified to receive nets while others were not. Generally the evaluation found that this was hugely a successful exercise. The process was fast in addition to being accurate and efficient in locating the potential recipients.

In the discussions with both CMDs and Caretakers most noted that all children less than five years in their villages were registered. It was observed that the fact that the CMDs are conversant[1] with the localities where they conducted the registration and knew most of the households therein greatly worked in favour of the exercise. In addition, working with the area LC officials also enhanced the accuracy of locating all potential recipients. Registration was done house-to-house and this helped to verify that the households actually had children below five years. Further, communities understood why pre-qualification was needed and why registration of households with children below five years was the best option to do the pre-qualification.

Most FGD participants were cognizant of the fact that children under five years are the most vulnerable to malaria and therefore the criterion used to pre-qualify eligible beneficiaries was considered the best option under the circumstances.

The household survey findings show that the majority of the caretakers were aware that they were pre-qualified because they had a child below five years.

Overall, the CMDs did the correct things and achieved a successful prequalification exercise, commented one of the district leaders.

The areas I visited the CMDs were doing the correct things and we achieved a successful pre-qualification (District Leader, Bushenyi district). However, despite the great achievements of the exercise, they are a few reported anomalies picked up by the evaluation that would need to be addressed in future exercises. These include;

1. **More rigorous supervision of CMDs-** In Atiriri camp, Katakwi district for instance it was reported that the CMD did not conduct door-to-door registration as required but instead listed the households from his home. There were complaints that most of the beneficiaries he registered were his relatives and people

[1] The CMDs have been distributing malaria drugs to children in the same areas.

he knew. It was also reported that some households in that camp received more than one net yet others missed. In Angaro camp, the evaluation team found a case where two nets were allocated to one index child who was registered twice, first with the mother and secondly with the father as different household heads.

In some parts of Bushenyi district in Bihanga sub-county, some participants accused the CMDs of selective registration and bias. Others were criticised for registering relatives including children who were above five years and leaving out some genuine families especially if such a family was not in good terms with the CMD.

Even though these claims were not verified by the evaluation team and the registration forms show no one above five years listed on them, the fact they come up shows that in some areas, the CMD-LC combination was not well executed. One of the CMDs who accused of considering mostly his relatives and households in his neighbourhood blamed the anomaly on the negative attitude of some families towards the registration exercise.

> *They told us that we want to register their children for our personal benefit and yet when we brought the nets they again blamed us for having distributed to our friends only* (FGD, CMDs, Mayuge district)

2. **More clarity in informing communities of the purpose of the registration**- There were misconceptions about the purpose of the registration which was said to have affected the registration process in some areas in Bihanga and Birere, Bushenyi district. For example, because the caretakers were suspicious of the registration, some of them were said to have hidden their children and hence were not registered. Others linked the LLIN registration exercise to an earlier similar registration conducted in the area for immunization of children against polio. People in this area perceived this to have gone bad after some children who had received the vaccine died. .

> *Last time people came and registered our children and some later died after being immunised, the vice president came and apologised. The other time we saw people registering children and we were suspicious of the purpose of the registration. So people feared to give names of the children.* (FGD, Caretaker, Bushenyi)

3. **The lack of consideration for the condition of a net possessed by a household as one of the eligibility conditions was considered unfair by some-** In FGD discussions, some participants were critical that eligibility of household did not take into account the type and conditions of the bed nets possessed by a household. In Gulu and Amuria for instance some caretakers interviewed complained that households that had a mosquito net were not considered for a net, regardless of the type or

condition of the net. Households that had old, worn out or untreated nets were not pre-qualified even when they had children under-five years.

Households that had nets from any other source were not pre-qualified to receive the nets regardless of the type or condition of the net. Some households that fell in this category had very old nets, others had untreated nets but were denied the chance to get the LLIN. (FGD, CMDs, Gulu district)

Some people in the households thought they were going to be given insecticide for re-treatment of their nets. Those with nets in poor condition gave information that they had nets and hence missed out because they were taken to have nets (FGD, CMDs, Amuria district).

4. **Mobility of some families particular in IDP camps-** In Gulu, due to the nature of life in the camps where people are mobile, some households with children under five years were reportedly missed out during the registration exercise. This is because adult members of the households spend most of the day in the fields looking for food and firewood.

When they were registering children, some people were not at home so those ones missed. Some had for example gone for funerals (FGD, Caretakers, Gulu district)

However it was learned that in the conflict districts, during the actual distribution exercise, supplementary lists of those who had missed registration were done and they received nets as appropriate.

3.4 Nets Distribution and Coverage

Nets distribution was preceded by selection of the benefiting children that were to receive the nets among the registered children by a district team that did not include a CMD and LC who registered the children. The actual giving of nets was conducted by the CMDs at a previously selected centre in the village. The CMDs were assisted by the village LC 1 chairman or his representative. One CMD and LC official mobilised the caretakers to come with the benefiting children to the distribution centres while the other CMD collected the bed nets from the health centre, where they were stored over a few days. Upon successful verification, selected recipients were handed nets, recorded and given the necessary advice. The evaluation found that this process was assessed by participants as generally open and transparent.

The procedure was okay because beneficiaries were selected randomly at the district whereby those who selected did not have any attachment to those who were selected (FGD, CMDs, Mayuge district).

Selection of the final beneficiary households by the district team was good because it insulated the CMDs from being dubbed corrupt by the community (FGD, CMDs, Mayuge district)

The pre-selection of recipients was appreciated as the best option available since in the non-conflict districts, the nets available were not enough to cover all the registered children below five years and in some cases for example in Mayuge, this necessitated the consideration of only the youngest of those registered because these were considered to be the most vulnerable to malaria.

It was also good to consider the youngest children, one and a half years because the nets were not enough (Key Informant, District trainer, Mayuge district).

Unfortunately in some cases, households that missed the bed nets blamed it on the CMDs and LC officials.

Those who missed getting LLINs and yet their children had been registered are now looking at us as their enemies (Key Informant, Community Leader, Katakwi district).

The caretakers complained that we are the ones who removed their names from the list (FGD, CMDs, Gulu district)

However, the procedure used to distribute the bed nets in public to the beneficiaries whose names were highlighted on the register absolved them the CMDs and LC officials from such blames as reported by the Bulyanganda village L C I Chairman.

We gave the nets out to those highlighted at the trading centre in everybody's presence and at least no one can say we are corrupt. (Key Informant, Community Leader, Mayuge district)

Overall, the discussions revealed that the distribution process was largely successful. The evaluation found that UPHOLD delivered the bed nets to the selected health centres for storage for a few days, from where the CMDs picked them and delivered to the distribution points in the villages. The caretakers were mobilised to assemble at the distribution points from where their names were read out from the registers and nets handed over to them. Most of the benefiting children that were finally selected by the district team received the bed nets. In the household survey the majority (76%) of the caretakers reported that they collected the LLINs from the distribution points themselves. The CMDs reportedly hand delivered the LLINs to only 18% of the selected households and in 6% of the households the net was delivered by a third party. Results in Table 2 below indicate that the number of caregivers who collected the nets from the distribution centres was highest in Gulu (96%), followed by Katakwi (78%), Mayuge (69%) and Bushenyi (66%) districts.

Table 2: Mode of LLINs Delivery to the Beneficiaries, in four districts; Bushenyi, Gulu, Katakwi and Mayuge, July 2006

	Katakwi (%)	Gulu (%)	Mayuge (%)	Bushenyi (%)
Collected by self	78	96	69	66
CMD/LC	15	3	17	33
Third Party (friends, neighbours and relatives)	7	1	15	1
Total	**100**	**100**	**100**	**100**

Participants in the group discussions observed that the distribution of the nets in public minimised the possibility of net losses or wastage. The distribution was witnessed by LC officials and supervised by the District Trainers. To minimise the possibility of resell, the CMDs removed the net covers and returned them to the District Directorate of Health Services. It was also noted that the short notice given to both the CMDs and beneficiaries about the arrival of the donated nets helped to check possible plans to divert the nets.

It was good that the nets were delivered at short notice because it made it difficult for people to come up with ways of diverting them (FGD, Beneficiaries, Bushenyi.)

Even the distributors were caught unaware. However, this was okay because the nets were few. If the community had been alerted earlier there would have been a lot of commotion (FGD, CMDs, Katakwi district)

The CMDs asked the caretakers to bring the benefiting children along when coming to collect the LLINs as evidence of eligibility to receive the bed nets. Asked in the household survey whether they were required to provide any evidence of eligibility to finally get the LLIN, 44% of the caretakers interviewed said no evidence was required. 33% reported that they were asked to come along with the benefiting child while 19% only registered the child's details prior to receiving the nets and 2% produced immunization cards. (See Figure 3 below) Comparison across districts shown in Figure 3 below indicate that the highest number of care takers who picked their nets with the benefiting child was highest in Gulu district with 45% followed by Bushenyi (32%), Katakwi (29%) and Mayuge (28%). Proof of identity is one of the areas were process could improved may be my asking caretakers to come along with child health cards along with the child.

Figure 3: Proof of identity produced by the net recipients, in four districts; Bushenyi, Gulu, Katakwi and Mayuge, July 2006

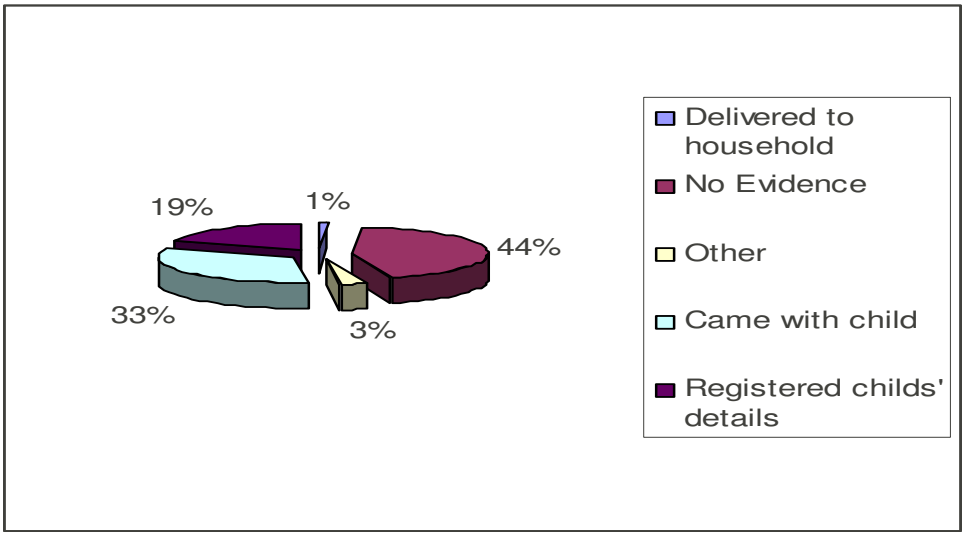


Table 3: Proof of identity produced by the net recipients by district, in four districts; Bushenyi, Gulu, Katakwi and Mayuge, July 2006

	Katakwi (%)	Gulu (%)	Bushenyi (%)	Mayuge (%)
No Evidence	38	29	55	51
Came with Child	28	45	32	28
Registered Childs' details	30	16	9	20
Delivered to Household	3	0	0	1
Other	0	10	4	0

A number of issues emerged in the discussions that participants felt did not work well during the LLIN distribution. Although it was planned that the CMDs would be assisted by the supervisors to transport the nets to the distribution points after the communities had been mobilized, in some areas the CMDs were not provided with the transport. This made it difficult for the nets to be delivered promptly to the distribution points. In Gulu and Bushenyi, some CMDs reportedly had to improvise by carrying the nets on their heads.

*It was difficult to deliver the mosquito nets to the people because we had to carry them on our heads (*FGD, CMDs, and Bushenyi district)

Further, in Bushenyi there were complaints that the collection centres from where CMDs were expected to pick the bed nets were far away from some of the villages yet they did not get facilitation to transport the

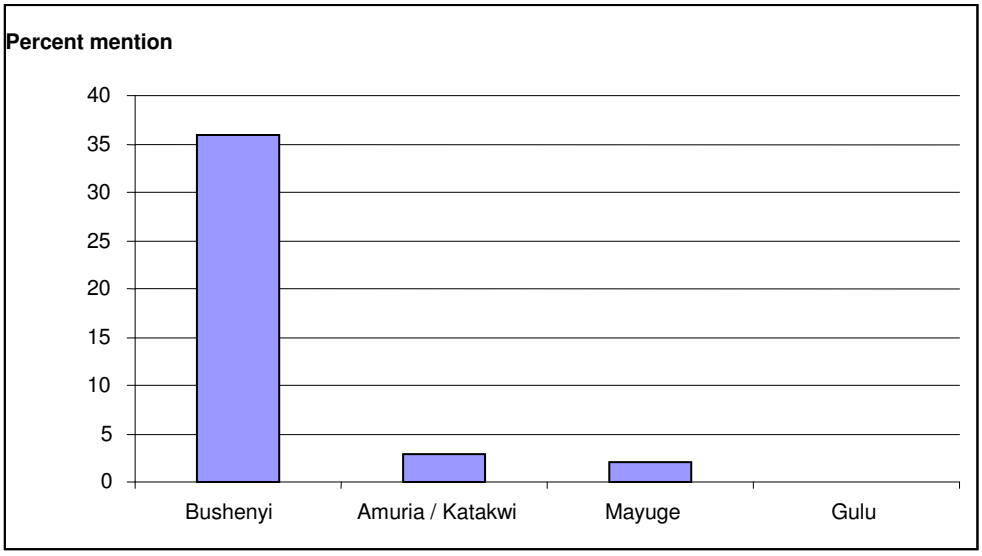
nets. The CMDs in Bihanga sub-county for example made three trips to the collection centre before they received the nets.

The nets should be brought at the cell instead of the sub-county and health centres to avoid suffering like we did, waiting for the nets for three days. (FGD, CMDs – Bushenyi district)

There were also concerns in Bushenyi and Katakwi that the caretakers were asked to pay between 150 UG Shs. to 500 UG Shs. to facilitate the transportation of the bed nets to the villages. Because of this the CMDs were accused of corruption by the caretakers. However, there was no case reported where a beneficiary did not receive a net because of failure to contribute towards the transportation. In Amuria even the CMDs had to pay some money to collect the LLINs they had been allocated from the district.
The CMDs were promised nets after the exercise but had to pay 500 UG Shs. *to collect them from the district headquarters* (FGD, CMDs, Amuria district)

In the household survey, cases were reported where caretakers had to pay some money or other kind of incentive in order to receive the net. When asked whether they had to pay or give out incentive to receive the LLIN from the CMDs and LC the results in Figure 3 below shows that 10% of the respondents in the four districts reported to have paid. The amount of money reported ranged from 50 to 500 UG Shs. The highest number of cases where such payment was reported was in Bushenyi (36%), followed by Katakwi (3%) and Mayuge (2%). In Gulu no case of payment or giving incentive was cited.

Figure 4: Proportion of Respondents who Paid or Gave Incentive to get LLINs, in four districts; Bushenyi, Gulu, Katakwi and Mayuge, July 2006



In Kigulu village, Mayuge, the nets were delivered late and it was not possible to distribute them on that same day. The CMD and the chairman had to keep the nets over night and delivered them to the selected

households the following day. There were allegations from the community members that some nets were given to households that were not pre-qualified. Indeed, it was found that in that village some households that were pre-qualified never received the nets but in the register it was indicated that they received the nets and their names signed against. In Nabyama village, in Mayuge district, where the nets were also kept over night there were allegations by the residents that they saw the nets being carried away to neighbouring Bugiri district that night. There were also allegations that the nets were sold to people who did not even have children under five but had the capacity to purchase them.

In the LLINs distribution exercise it was recommended that the actual distribution should not exceed two days at each distribution point. In Bushenyi the beneficiaries who did not receive the nets on the day of the distribution got them the following day from the CMDs. However, in Gulu it was reported that the bed nets were distributed for only one day and caretakers who were not available that day did not receive the bed nets. According to one of the district trainers, the remaining LLINs were returned to the DDHS' office. Soldiers' households were said to be the most affected since they are always mobile.

Caretakers who did not pick the LLINs on the day of the distribution were not given another chance; we just returned them to the district (FGD, CMD, Gulu district)

In Mayuge district, 4000 bed nets that were meant for Kigandalo sub-county were mistakenly delivered to Malongo HC IV in Malongo sub-county, where registration of children below five years had not been conducted.

Attempts to remove all the 4,000 nets to take them to Kigandalo sub-county were not successful. The LC officials mobilized the population block the transfer of the nets. It was only the intervention of the district authorities including the Chief Administrative Officer (CAO), Local Council V (LC V) Chairperson and Resident District Commissioner (RDC), that helped to resolve the stand-off that this confusion had caused. It was resolved that nets be shared between the two sub-counties. A total of 1,000 bed nets were left for Malongo sub-county. This meant that many pre-qualified households in Kigandalo had to miss the nets. On a more positive note, it was observed that the district team was very vigilant and acted promptly to sort out the problem.

We in Malongo were not considered and only got them by mistake. They alleged that we got nets from ADRA and yet ADRA nets were of a lower quality and were not free so not every one got (FGD, CMDs, Mayuge district)

When the district leaders came for the nets from Malongo sub-county we agreed that 1,000 nets be left for the sub-county. (FGD, CMDs, Mayuge district)

There were a few cases in the conflict affected districts, where it was reported that nets were either sold or exchanged for some other commodity. In Gulu, the research team was told of a father who sold the net immediately they received it. In Bushenyi, some nets were reportedly sold to students who were going back to boarding schools. In Katakwi, there was a report of a man who had taken the net to a bar to exchange for a drink. His wife followed to recover the net and a scuffle ensued. Later they settled the matter and agreed to exchange the net for a saucepan instead. The household survey showed that all the households randomly selected from the distribution lists acknowledged that they had received the nets. However in only 5% of respondents the nets were not seen by the interviewers. Those respondents, who were found without the nets, reported that they had given them to older children or the nets were destroyed.

In all the districts the CMDs were given a bed net each. In all the four districts visited there were complaints by the CMDs that the facilitation allowances (lunch and transport refund) given to them which ranged between UG Shs: 2,000 and 3,000 was inadequate. It was for instance noted that the same amount of money was given to all the CMDs from the different sub-counties regardless of the distance to the district headquarters.

We were given just a small token of 6,000 UG Shs *for the work, 3,000* UG Shs *for training, and 3,000* UG Shs *after registration. Although we are voluntary workers as they say if they want to appreciate our work, they should give us a reasonable package* (FGD, CMDs, Gulu district)

The criterion used for selecting one benefiting child per household raised complaints in polygamous families where different wives had children below five years. When one of the children from one of the wives was chosen the co-wife complained blaming the CMD to have favoured the other wife. This problem was more pronounced in Mayuge compared to other districts. The strategy of selecting the youngest child from among the registered children however helped to minimise this problem.

In homes with many wives, the woman whose children below fives years did not get the nets blamed us that we favoured, the woman whose child got the net. (FGD, CMDs, Mayuge district)

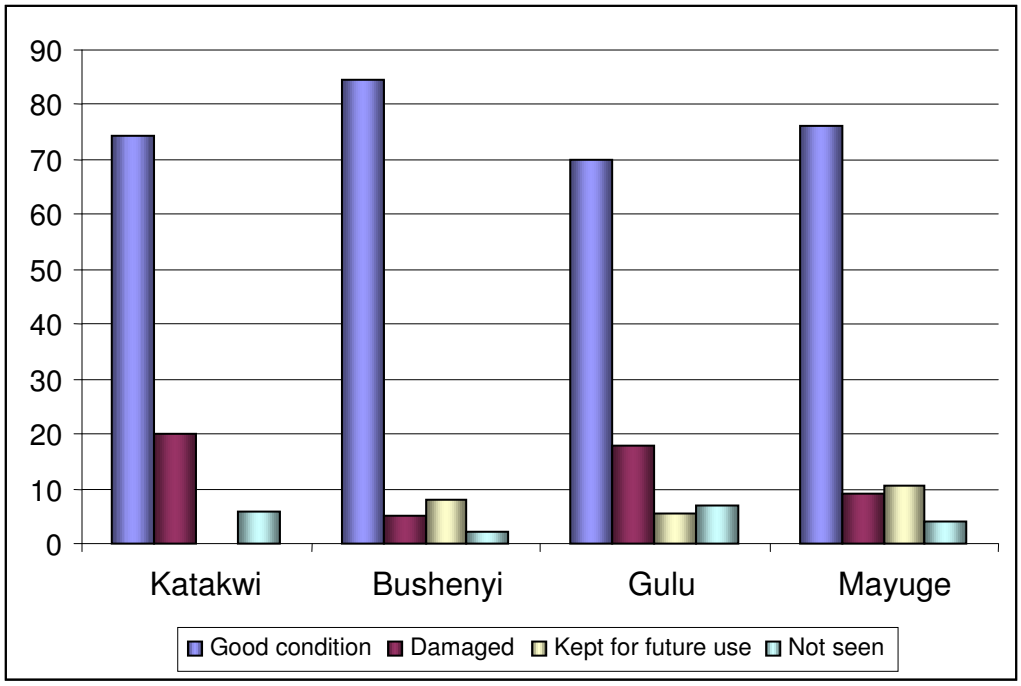
In conclusion, it is worthy noting here that even in the best of circumstances; not every eligible person can receive a net during the distribution exercise.

3.5 Household ITN Retention, Use and Care

When mobilising the community leaders the CMDs advised them on what to do to keep the nets safe. For instance they advised beneficiaries to wash the net whenever it appears dirty and avoid getting it close to open fire such as candles. In addition they advised them to tie the net up during the day to prevent it from being damaged by children as they played. The household survey sought to establish whether the households nets received were being correctly used and cared for as instructed. According to the results,

most of the households that received the LLINs still had the nets and were using them correctly. The interviewers were able to see the nets in 95% of the households visited, of which 78% the nets were seen to be in good condition, 3% were partly torn, 8% were dirty or kept in a manner that would render them easily damaged by children, rodents or fire, while 6% of household survey respondents, said that they had kept the nets reportedly for future use. The highest number of nets that were seen in good condition and hang over the sleeping place was in Bushenyi (85%) followed by Mayuge (76%), Katakwi (75%) and Gulu (70%).

Figure 5: Current condition of LLINs obtained, in four districts; Bushenyi, Gulu, Katakwi and Mayuge, July 2006



Overall, the majority of the households (78%) had only one net, and these were exclusively the blue LLINs, distributed by CMDs, while 19% had two and 3% had more than two nets. According to results, (See Table 4 below), Katakwi and Bushenyi were the only districts where some households were found to have more than two bed nets in a household. In cases where households had more than one net, in 22% of these cases, the household had at least one net before receiving the LLIN from UPHOLD.

All the caretakers interviewed in the household survey reported that the nets were being used by the beneficiary child. In most of the households (88%) the nets were being shared with other children and/or their mothers/caretakers, thereby protecting more people against malaria. Only in 12% of the survey households visited did the benefiting child sleep alone under the LLIN the night before the evaluation exercise.

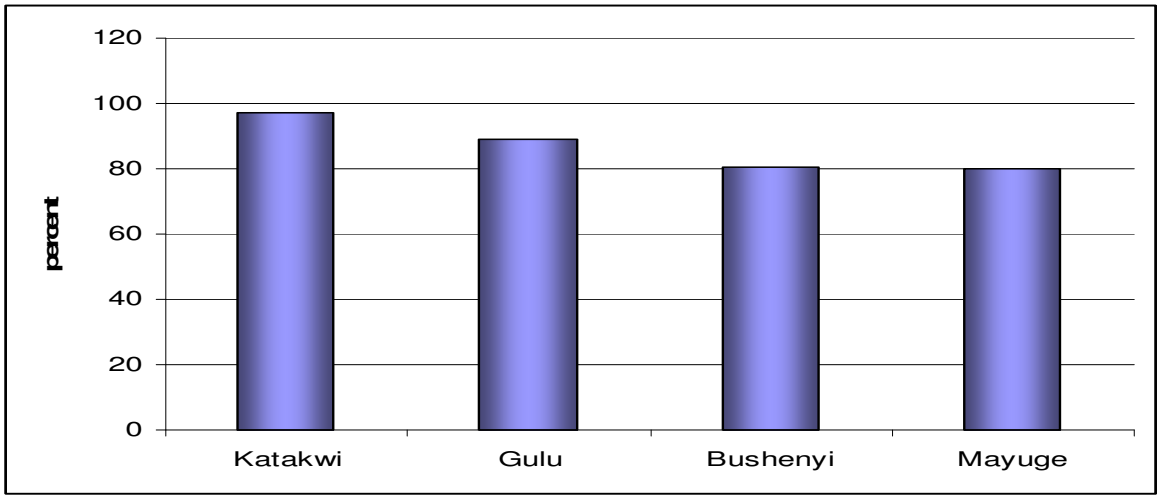
Qualitative evidence from the discussions across all the districts support the above finding that it's mostly mothers and young children who sleep under the nets. However, in Gulu some caretakers in the discussions pointed out that there are some men who insist on sleeping together with their wives even when the woman is sharing a bed with young children hence forcing out some of them. It was noted that it is common for men to sleep together with their wives and children especially in the small huts in the camps.

Table 4: Number of Bed Nets Available in a Household, in Bushenyi, Gulu, Katakwi and Mayuge, July 2006

N0. of bed nets in a household	Katakwi (%)	Bushenyi (%)	Gulu (%)	Mayuge (%)	total (%) n= 368
1	63	70	92	92	78
2	32	25	7	8	19
2 and above	6	5	0	0	3
Total	**100**	**100**	**100**	**100**	**100**

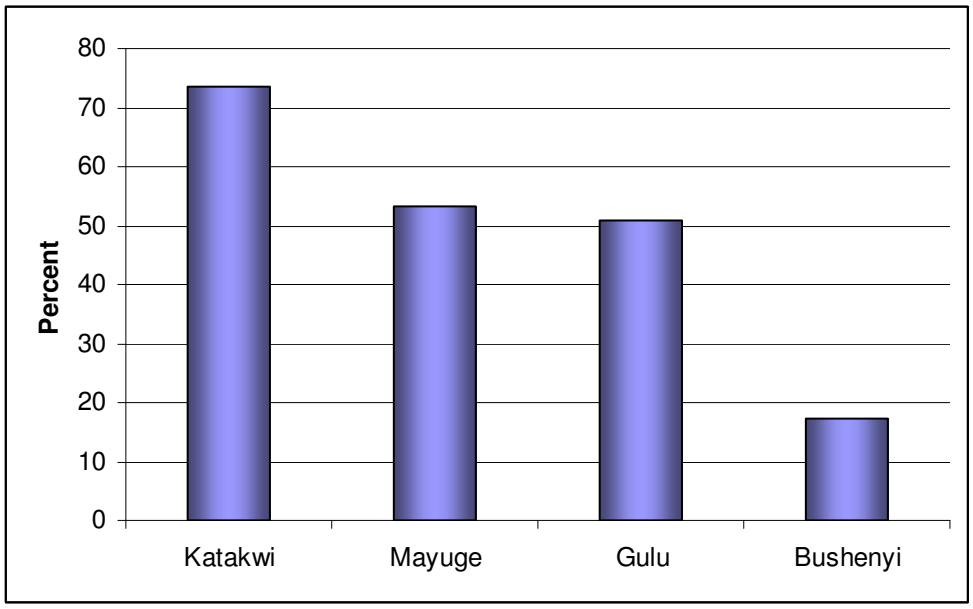
During the community sensitisation the CMDs emphasised to the beneficiaries the importance of having their children sleep under a net every night in all seasons. In 87% of the 368 households visited by the evaluation team, it was reported that the benefiting child had slept under the net the night before the interview. Katakwi had the highest number (97%) of benefiting children who slept under the net the night before the interview, followed by Gulu (89%), Bushenyi (81%) and Mayuge (80%) (See Figure 6, below). In only 18% of the households visited did all the family members sleep under mosquito nets the night before the survey.

Figure 6: Proportion of beneficiary children who slept under a LLIN the night before the study, Bushenyi, Gulu, Katakwi, and Mayuge, July 2006.



The caretakers were asked whether in the last two weeks preceding the interview the beneficiary child had had fever. Overall, 51% of households surveyed said the benefiting child had not suffered from fever. There is however inter-district variations noted. Bushenyi had a significantly lower proportion (17%) of benefiting children who had had fever in the past two weeks prior to the survey compared to Gulu (51%), Mayuge (53%) and Katakwi (74%). This could be explained by the fact that Bushenyi had received LLINs long before the other districts.

Figure 7: Proportion of Benefiting Children who had Fever in the Last Two Weeks before the Survey, Bushenyi, Gulu, Katakwi, and Mayuge, July 2006.



3.6 Community Perceptions of the Importance and Benefits of LLINs

Participants in the discussions in all the districts believed that use of ITNs is the most effective and reliable preventive measure against malaria. The nets received were liked because of their perceived better quality and durability compared to the ones they had seen before. Although the evaluation of the LLIN distribution exercise was conducted only a couple of months after the distribution had been completed, the participants in the discussions reported that they had already experienced a decline in the occurrence of malaria episodes among the children who sleep under nets. It was noted in the discussions that expenditure on malaria treatment for children in the households was going down because they were falling sick less frequently. The other benefits mentioned were that the children are not disturbed at night by mosquitoes, and that skin rashes due to mosquito bites are not as common as before.

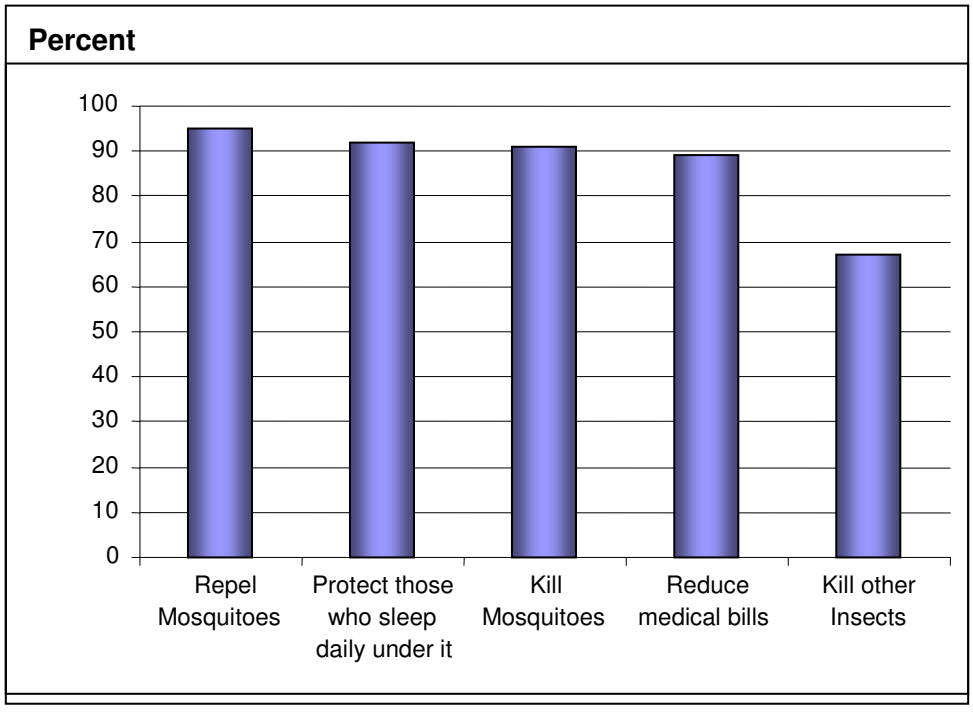
It was a good idea given the fact that people in my area think that malaria has gone down (Key Informant, District Trainer, Mayuge district)

Malaria has reduced greatly. Our children no longer get malaria, we can afford to go to our gardens and dig, our children were dying everyday because of malaria (FGD, Caretakers, Bushenyi)

In the household survey, a series of questions were asked regarding respondents' perceptions on the effectiveness of the ITNs. Overall, as shown in Fig 8: below, the results indicate a high awareness of the importance and benefits of the ITNs among caretakers. A large majority (95%) said an insecticide treated net can repel mosquitoes while 91% were aware that it kills mosquitoes. Similarly, the majority (92%) said ITN protects those who sleep under it and 89% reported that ITNs lead to a reduction on medical bills. Participants in the discussions noted that the net is not only effective in killing and repulsing mosquitoes but also other domestic pests including cockroaches and bed bugs. 67% of the respondents in the household survey reported that LLINs also kill cockroaches and bed bugs.

It kills even big cockroaches that come from the latrines (FGD, Caretakers, Gulu district)

Figure 8: Perceived benefits of insecticide treated nets (ITNs), Bushenyi, Gulu, Katakwi, and Mayuge, July 2006.



The household survey respondents were asked who in the household they thought should sleep under bed nets. Seventy seven percent felt that priority should be given to children below five years and 37% were concerned that pregnant women should also be considered. The sick were mentioned by 18% of the respondents while 54 % were of the view that it is important that all family members sleep under a mosquito net.

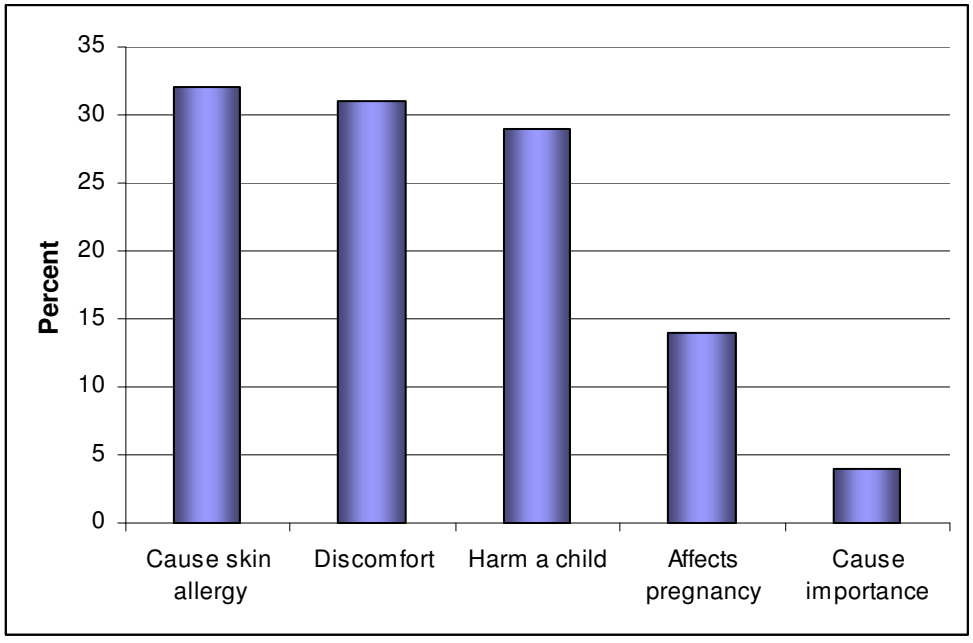
In all the group discussions across the districts participants requested for more nets to cover the households that missed. It was also suggested that other vulnerable groups such as pregnant women, the elderly, people living in swampy areas and all children in general should be considered. Other vulnerable groups mentioned that deserve bed nets were orphans and people living with HIV/AIDS. There was also concern that most families have more than one child below five years of age and therefore one net per household is not adequate.

Even adults should be given nets (FGD, Caretakers, Mayuge district)

3.7 Misconceptions, Fears and Problems People have about ITNs

The discussions showed that the fear that insecticide treated bed nets may not be safe for humans and children in particular, is still existent in the communities. In the household survey results shown in Fig 9 below indicate that 29% of the respondents were in agreement with the statement that ITNs can cause harm to a child/baby while 32% said it can cause skin allergy and 14% reported that it can affect pregnancy. In addition, some 31% of the respondents felt that ITNs cause discomfort and only 4% said the nets can cause impotence among male users.

Figure 9: Misconceptions and Fears about ITNs, Bushenyi, Gulu, Katakwi, and Mayuge, July 2006.



The perceived side effects such as skin rashes, eye irritation, cough and flu were commonly cited in the discussions. ITNs were also associated with more serious health conditions including TB, asthma and cancer.

If you inhale the chemical you can get long-term effect of TB, asthma and cancer. It can also make men impotent (FGD, CMDs, Katakwi district)

I got some one washing the net as soon as she got it, she thought she was reducing the chemical (FGD, CMDs, Amuria district)

People think that since these chemicals can kill mosquitoes they can also do the same to their children (FGD, Caretakers, Mayuge district)

However, there was no effect of the above misconceptions on possession and utilisation of the LLINs reported. A majority (88%) of the respondents who cited different misconceptions and reservation regarding the use of ITNs still reported that the benefiting children in their household had slept under LLINs the night before the interview.

In all districts the evaluation team learnt that some caretakers were not using the nets because of the type and size of their residence. Some of the houses are too small or short to allow hanging of the bed net. The bed nets were therefore being kept for future use when they can afford a better dwelling. In a village in Kigandalo sub-county the team saw a brand new unused LLIN still sealed in polythene covers as it was given out on the day of the distribution. Results of the household survey show that 60% of the households visited in the four districts were living in houses of mud and wattle with grass/polythene thatched roofs. Thirty percent were of mud and wattle with iron roofs and 10% were constructed of bricks and cemented. The fear that bed nets can easily catch fire was commonly reported across the different groups in the districts. There was concern that the majority of the beneficiaries use open fire for cooking and lighting. As a result of this fear some caretakers especially those who cook from the same hut where they sleep were reportedly not using the nets. This was mostly reported in Gulu and Katakwi Internally Displaced Person (IDP) camps.

Some use it well some don't because of the size of the huts in the camps. The same room is the kitchen, sitting room and bedroom. If people were in their normal homes there would be proper use (Key Informant, District Trainer, Gulu district)

In Bushenyi, a rumour had spread in the communities that the LLIN distribution exercise was a ploy by the government to reduce the growing population. This claim was based on the fact that the distribution exercise was targeting only children and not adults.

Why give children and not adults if there is no hidden agenda, why bring those ones that have Chemical (FGD, Caretakers, Bushenyi district)

About what they were doing to address the above fears and misconceptions the CMDs reported continued sensitization of the community. They reportedly explain to the caretakers that it is safe for both adults and young children to sleep under insecticide treated nets. They also emphasise that bed nets don't make people sick but instead protect them against malaria. The caretakers are advised that the chemicals are meant to kill and repulse mosquitoes but are safe for humans. In case of side effects like skin rashes among persons who may be allergic to the insecticide, they advise them to seek medical attention. In order to minimize the occurrence of such side effects caretakers were advised to hang up the nets for two or three days before use. In addition, they were cautioned against putting open fire such as candles near the nets.

In Bushenyi, during community sensitization the caretakers who drink and smoke were cautioned to take extra care when using the nets. They were advised not to smoke in the night especially after drinking to avoid the possibility of setting the net on fire that can lead to tragic consequences. As a result, it was reported that some caretakers decided to keep the nets since they felt they could not avoid drinking and smoking, and therefore putting themselves at great risk. It was said some of them sold the nets to other people who had missed.

3.8 Participants' Perceptions of Free Bed Net Distribution

It was reported in all the districts that it is not easy for ordinary people to obtain bed nets because they are expensive and therefore not easily affordable. The free bed net distribution was therefore hailed across all the districts but more so in Gulu where the bulk of the population is in the IDP camps with hardly any source of income.

These people have been in the camps for the last 15 years and can not afford nets so it was good that UPHOLD assisted (Key Informant, District Trainer, Gulu district).

The exercise was good, we had carried out a study and found out that the reason people were not using the nets was the issue of cost, they had requested that nets be sold at least at 3000 UG Shs. but they got them free (Key Informant, District Leader, Bushenyi district).

Participants also felt that the free bed net distribution will make people realise the importance of using mosquito nets as a preventive measure against malaria. It was anticipated that after using the nets in the households and seeing the benefits people will be motivated to acquire bed nets even if it means paying for it.

One district trainer on the other hand, pointed out that there is a danger in giving out the nets free of charge as this undermines sense of ownership. It was therefore suggested that it would have been better to charge some small fee like 500 or 1,000 UG Shs. as this would encourage them to care for the nets even better.

The idea of having a free item to be distributed is not sustainable; I would suggest somebody should pay at least 1,000 UG Shs. *to feel a sense of ownership* (Key Informant, District Trainer, Mayuge)

3.9 Amount Respondents were willing to pay for a Similar Net

In the household survey caretakers were asked how much they were willing to pay for a similar net. Thirty three percent of the respondents reported amounts not exceeding 5,000 UG Shs. Twenty one percent were willing to pay between UG Shs. 5,000 and 10,000, 6% said they would pay more that UG Shs. 12,000, 32% did not know how much they would pay and 8% were not ready to pay any money for a mosquito net. Gulu had the highest proportion (19%) of respondents who were not willing to pay any money to acquire a similar bed net. Bushenyi had the highest proportion (52%) of respondents who were willing to pay more than UG Shs. 5,000 for similar nets. Majority of respondents in Katakwi (46%) were willing to pay less than 5,000 UG Shs. compared to Mayuge (40), Gulu (29%) and Bushenyi (17%).

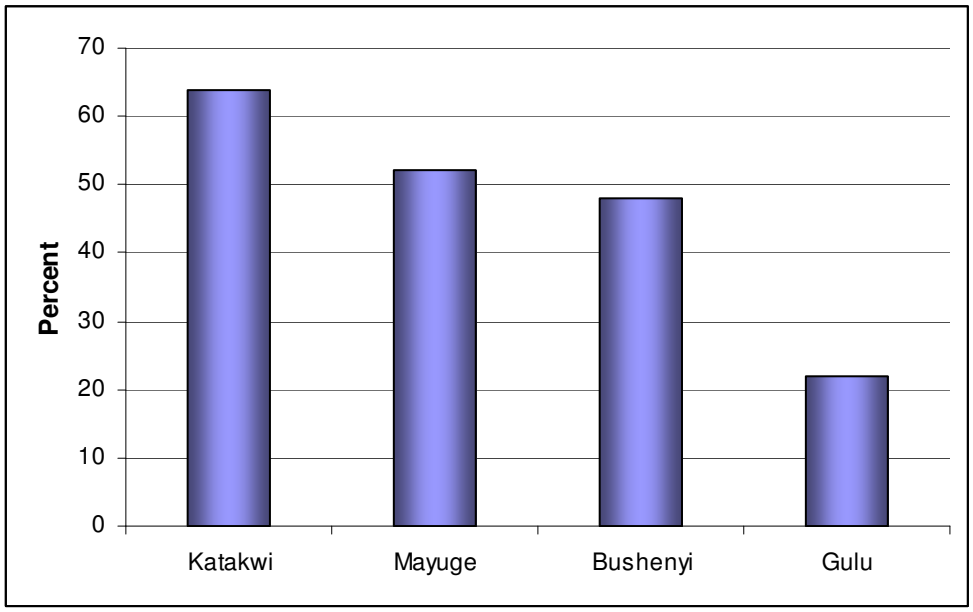
Table 5: Proportion of respondents willing to pay for ITNs by amount and district, in Bushenyi, Gulu, Katakwi and Mayuge, July 2006

	Katakwi (%)	Bushenyi (%)	Gulu (%)	Mayuge (%)	Total sample (n=368)
None	8	1	19	5	8
≥ 5,000 UG Shs.	46	17	29	40	33
5,000 – 10,000 UG Shs.	15	35	6	28	21
> 10,000 UG Shs.	2	17	0	3	6
Don't Know	29	30	46	24	32
Total	**100**	**100**	**100**	**100**	**100**

3.10 Willingness to buy an additional ITNs

Respondents were asked whether they had considered purchasing additional bed nets for their families and 48% reported to have done so. Katakwi had the highest number (64%) of caretakers who had thought of getting more bed nets for their families followed by Mayuge (52%), Bushenyi (48%) and Gulu (22%). The reasons commonly given for not considering purchasing more bed nets were: high cost (91%), lack of similar nets (5%) and nets are not important (4%).

Figure 10: Proportion of Respondents who have considered buying more ITNs by district, in Bushenyi, Gulu, Katakwi and Mayuge, July 2006



3.11 Other Organizations Distributing ITNS in the Implementing Districts

There were a number of organisations distributing free ITNs or at subsidised prices reported in the districts visited. In Bushenyi ICOBI was said to distribute bed nets to PLWHAs through trained Counsellors. The nets are distributed freely as part of a kit that also contains contrimoxazole (CTZ) and condoms. NGOs and CBOs including UNICEF, CCF, MSF, Lutheran World Vision, CONCERN, Med Air, OPOT, SOCADIDO, and PAG were reported in Katakwi and Amuria. These target expectant mothers, needy families, breast feeding children, the elderly and widows. In Mayuge ADRA distributes bed nets at a subsidised fee of 3,000 UG Shs, while FINCA provides bed nets through a loan scheme. SIDA was also mentioned in Mayuge. AVSI, UNICEF, Caritas and Lacor hospital were reported in Gulu. UNICEF supports distribution of free bed nets to mothers attending antenatal services at the health centres through out the district.

4.0 CONCLUSION

The study concludes that distribution of bed nets using CMDs and LCs authorities is an appropriate and effective mechanism because it is equitable and time saving. It is in itself an innovative way of using the already well established Community Medicine Distributors (CMDs) mechanism. By pre-registering households with children under five, not only were the CMDs able to reach most the targeted households who would probably never have visited a health centre for one reason or another, they were able to move a large volume of nets , in a comparatively short time which made distribution a lot faster.

The evaluation team noted inter-district variations in the training approach of CMDs, intended to suit the unique situation pertaining in the district at the time. This is an area recommended for further improvement of the process. However this occurrence in our opinion is expected of any new approach. These were largely a few isolated incidences, their overall effect on the entire exercise did not undermine its overall effectiveness and efficiency.

However, a few of the points noted represent important challenges for future similar exercises. These include, managing contextual factors such as, distances between net storage centres and distribution, population mobility particularly in IDP camps; household sizes and sleeping arrangements. One important area for strengthening this delivery mechanism is providing adequate logistical support for CMDs. Such an exercise and the accompanying sensitisation can be used to create appropriate desirable behaviour change such as, willingness to purchase ITNs and correct use.

Therefore, a major lesson learned from this process is, Mass distribution of bed nets using Community Medicine Distributors works better than other conventional methods in that the mechanism is equitable, transparent and moves large volumes of nets in a relatively short time. However, the process is labour intensive and requires active support and engagement of the local administration system; adequate communication and sufficient facilitation of CMD teams in terms of availability of enough materials and support for the day-to-day duties.

RECOMMENDATIONS

- In addition to house-to-house follow up on the benefiting households, there is need for the CMDs to conduct follow up community meetings for caretakers of benefiting children to remind them on the correct use and proper handling of bed nets in the households. This would provide an opportunity for the caretakers to share their experiences and any problem they might have with using the LLINs and get correct advice
- The training of CMDs and community sensitization should emphasize important specific issues about the LLINs such as the importance of washing them sparingly in order to avoid insecticide loss
- There is need to facilitate transportation of the bed nets up to the final distribution centres in order to avoid unnecessary delays in delivery
- Interpersonal communication mechanisms were effective in getting the message to the communities. They should be strengthened, instead of the costly radio programmes that reached less than 10% of the target group
- Transport allowance given to CMDs should be provided in consideration of the distance from their villages to the district headquarters and health centres where nets are stored before eventual distribution
- There is need for more post net distribution commitment and involvement of district and sub-county leaders to advocate for continued correct use and proper handling of bed nets
- The use of CMDs as a mechanism to distribute ITNs to vulnerable children with the assistance of local council officials was found to be novel and therefore it is recommended that the approach should be adopted by future programs for rapid scale up of net coverage in target populations