Monitoring and Evaluation of the Tanzanian National Net Strategy

Qualitative investigations
U5CC and Upgraded vouchers

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Executive Summary

This report presents the findings from qualitative investigation which was conducted during March/April 2010 in two districts, namely Nachingwea and Rorya, each representing either Southern or Lake zone in Tanzania. Throughout the results sections, these districts are represented as either district 1 or 2, according to ethical obligations to avoid disclosing respondents as promised during data collection.

The study explored perceptions understanding and use of the pregnant women and infant vouchers; perceptions and uptake of the free ITN distribution; perceptions and use of nets and retreatment; remaining existing barriers to uptake of nets in general; decision making by pregnant women about timing of attendance to antenatal care clinics; decision making process by service providers about issuing the upgraded vouchers. District level actors were interviewed to explore voucher and ITN distribution process.

Awareness, perceptions, understanding and use of the pregnant women and infant vouchers (Upgraded)

- Amount of topping up appeared as the most important identification of the fixed-value upgraded voucher
- Information materials about the initial version of the vouchers remained on walls of health facilities rather than for the fixed-value upgraded voucher
- Irregular availability and prolonged stock outs of upgraded vouchers were reported at local and district level health facilities and there were no plans for such missed opportunities.
- Age at issuing infant voucher was unclear to some mothers and health workers

Perceptions and uptake of the free ITN distribution

- Most respondents in this study recalled that free ITN distribution campaigns had been implemented in their areas by local leaders during 2009.
- Health workers in both districts expressed their dissatisfaction with non involvement in free nets distribution campaign. They thought that their involvement could have boosted awareness and uptake.
- There was a widespread notion in both districts that free nets had been supplied by president Kikwete. Many women in FGDs and several village leaders in both

districts frequently termed the nets distributed in the free ITN distribution campaigns as *hati punguzo za Kikwete (President Kikwete's nets).*

Who is using the nets from free ITN distribution campaign?

- There was a consensus among most respondents in both districts that the freely received nets were in use by children who had received and sometimes shared by other children or parents depending on the number of sleeping places. In households with fewer sleeping places than the number of nets following distribution of the free ITNs, the extra nets had been stored for future use.
- Some of extra nets gained through free nets distribution campaign or discount vouchers had been given away to friends or relatives on mutual and not monetary transactions.
- Despite satisfaction by the majority, the campaign had disappointed some people due to unrealistic expectations resulting from organisational flaws and social reasons, such as inadequate supplies, fewer nets received than expected number, difficult transport for implementers and supervisors as well as distorted information.

Perceptions and use of nets and retreatment

- Insecticide treated mosquito nets (ITN) were generally widely accepted and used especially in seasons with more mosquitoes.
- Seasonality featured as a major reason for irregular use of nets. IN contrast, more respondents in district 2 reported constant use throughout the year because mosquitoes were always around. Most respondents in district 1 including mothers, village leaders, health workers and CHMT members concurred that low use in their areas was inevitable because the survey took place at the peak of dry season when mosquitoes were uncommon
- There was a possibility of non use of nets, regardless of seasonality and willingness to use mosquito nets in both districts.
- A commonly reported barrier to utilization in district 1 was incompatibility of the local beds (made of wood and ropes) with mosquito nets. In district 2, more respondents specified perceived harm from using the insecticide as remaining barriers to net.

- Many respondents had heard of net retreatment campaign even in the district where it had not been implemented. However, it was repeatedly argued that "retreatment campaign took place at public points which were rather disappointing for those with shabby or dirty nets. There were other concerns on inadequate sensitization and distorted information on the targeted audience.
- The concept of "hang up campaign" was not popular any of the two districts. Apparently, the campaign was perceived to have been so disappointing among the district level respondents that they were unlikely to fully cooperate with same organisers in future.

Decision making by pregnant women for timing of attendance at antenatal services

- Most women in FGDs reported to have heard from health workers on the importance of seeking ANC services early. Early attendance was generally perceived among mothers as helpful for health of the unborn babies and pregnant mothers and also for scheduling next visits during pregnancy as well as preparing mothers for safe delivery. However, many women reported that they usually started clinic late after 5^{th} or 6^{th} months or near the time of delivery.
- A commonly reported reason, regardless of distance from health facility, was avoidance of many visits to clinic which were perceived as boring.

1. Introduction

The Ifakara Health Institute (IHI) has been conducting monitoring and evaluation of the Tanzanian national ITN strategy according to key indicators of national and international importance. The household survey conducted by IHI in five districts of Tanzania during November and December 2009, very soon after the distribution of free nets as part of the under five catch-up campaign, found variation in coverage of ITN use among children under 5 years of age across the districts. Nachingwea district in the Southern zone had the lowest coverage 37% [95%CI (29-45] compared to the highest level coverage in Sengerema district, in the Lake zone 72% [95%CI (66-77)]. These results called for a need to conduct an in-depth investigation on the possible explanations for variations in the coverage of ITNs in different and the responses to different net delivery systems.

This qualitative study was conducted to make an in-depth investigation in two districts of Southern and Lake zone in Tanzania, into attitudes and behaviours affecting the decision making process around different delivery systems for ITNs and its uptake. The study explored several process issues through interviews with service providers and community members. These included:

1. Perceptions, understanding and use of the pregnant women and infant vouchers 2. Perceptions and uptake of the free ITN distribution
3. Perceptions and use of nets and retreatment;
4. Remaining existing barriers to uptake of nets in general;
5. Decision making by pregnant women for timing of attendance at antenatal services
6. Decision making process by service providers when distributing the upgraded vouchers
7. District level actors in the voucher and ITN distribution process

2. Methods

A qualitative study was conducted during March and April 2010, in two districts of Tanzania, namely Nachingwea from the Southern zone and Rorya from the Lake zone. In keeping with ethical obligations, these districts are represented as either district 1 or 2, in the results and discussion sections. Sengerema district had the highest coverage of ITN use but its neighbourhood to the urban could have influenced the use, Rorya which is more rural was therefore selected for this qualitative study.

Data collection was carried out at community, health facility and Council Health Management Team (CHMT) levels; using different techniques including observations, focus group discussions (FGDs) with community members as well as in depth interviews with health workers and Council Health Management Teams (CHMTs).

Focus Group Discussions

The FGDs were held with respondents who were selected among women with children aged 3 and 9 months and those with visible pregnancy. These respondents were selected because they and, or their children were eligible to discount vouchers and their children were also eligible for their discount vouchers and some for free ITNs. The same FGD guide was used to facilitate group interviews with village leaders in the same communities where the FGDs took place. Each FGD involved ten to twelve participants and lasted for between one and two hours determined by the length it took to reach saturation.

In depth interviews

In each district, the In depth Interviews were held with CHMT members including the District Medical Officer (DMO), District Reproductive and Child Health Coordinator (DRCHC), District Nursing Officer (DNO) and Malaria Focal Person. In depth interviews were also held with health workers at dispensaries and health centres in the proximity of villages where the study took place. In depth interview guides adapted to target audiences were used to facilitate the conversations. A senior social scientist led data collection accompanied by four trained and experienced moderators who also served as note takers. All conversations were held in Kiswahili.

Informed Consent

The permission was sought from the respondents to record discussions using a digital recorder, after explaining the purpose of doing so. Confidentiality was assured to them by explaining that the recorded files would later be transcribed and used in report writing, without disclosing the respondent's identity.

Data capturing, management, analysis and presentation

All conversations were recorded using digital recorders and voice files were typed into the computer as a Word Document (word for word). The transcripts were then imported into Nvivo for coding into relevant themes and analysis. In most part of this report, the districts names (either Nachingwea or Rorya) are represented by numbers, e.g. district 1, or 2 in keeping with ethical considerations.

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3 Results

A total number of 28 sessions of data collection were held in both districts with different respondents in the following categories and places in the following order:

- Eight FGDs (Four per district, two at the centre and two at remote hamlets)
- Four group interviews with village leaders (in two villages per district)
- Two group interviews with health workers at dispensaries (one dispensary per district)
- Two in depth interviews with health workers at two dispensaries (one dispensary/health worker per district)
- Three interviews with three villagers who participated in "hang up campaign" (one from one district and two from another district)
- Eight in-depth interviews with CHMT members (four per district)
- 1 in depth interview with a respondent reported as non user of ITN

3.1. Awareness about mosquito nets

Respondents in all areas were aware of mosquito nets which were popularly termed as *"chandarua or neti"* in both study districts. In both districts, the terms *"Hati punguzo"* and "Chandarua/neti i.e. mosquito nets" were widely used synonymously in FGD sessions and other conversations with local communities.

3.2. Perceptions, understanding and use of the pregnant women and infant vouchers (Upgraded)

Awareness about discount vouchers

The vouchers for mosquito nets were widely termed as *Hati punguzo* in all study areas. Mothers frequently cited health workers at local health facilities as a source of information about *Hati punguzo*. Other sources of information included mosquito net campaigns, fellow villagers, local shops and radio. TBC 1 *(Tanzania Broadcasting Corporation)* television station was also mentioned, though rarely by village leaders in

district 2. Nevertheless, as already indicated earlier, in many occasions there was a shared tendency to name mosquito nets as *"Hati punguzo and* "Chandarua/neti i.e. mosquito nets""in both districts.

In several instances, it was only until further probing and sometimes showing the samples of vouchers when a few of them described *"Hati punguzo"* as a piece of paper that entitles the bearer to subsidized nets. Several respondents were hesitant to comment on what HP meant to them while others claimed that the terms *"Hati punguzo"* and nets were commonly used interchangeably. Most respondents in the FGDs just recalled more the amount for topping up on vouchers to redeem a net than other aspects such as colours, words and images on the vouchers. Many respondents in FGDS sessions talked about requirement to top up of Tshs 2,750/= or Tshs. 500/= to redeem a net. In all places visited, the promotional materials were more about the initial voucher scheme than the existing new strategy. Despite the fact that the top up amount for nets had changed from variable to fixed Tshs 500/= there were no information materials on the upgraded vouchers. The observed posters displayed on the walls of health facilities were written *"OKOA shilingi 2,750/= kila unaponunua chandarua chenye dawa i.e. SAVE TSHS 2,750/= whenever you buy a mosquito nets bundled with insecticide"*.

Availability of vouchers

The most pressing concern associated with discount vouchers for mosquito nets in both districts was irregular availability at local and district level health facilities. Mothers, village leaders, health workers and CHMT members in all areas concurred that the vouchers had been out of stock for several months. It appeared that infant vouchers were mostly unavailable compared to those intended for pregnant women.

> *In some areas only the vouchers are available for pregnant women but upgraded vouchers are not there. (DCCO District 2)*

> *The only obstacle which we experienced from dispensary level to district hospital was shortage of discount voucher booklets! (Public Health Nurse at a dispensary in District 1)*

Consequently, many children had missed opportunity to receive vouchers when they attended for immunisation. There were no plans for children who had competed immunisation without vouchers to be considered in case new stock would be available. At times, service providers and mothers from same areas had different explanations when asked on the status of availability at local health facilities. Surprisingly, mothers in FGDs at two villages in District 2 reported that the vouchers had been out of stock for a long time, contrary to nurses at the local clinics who claimed that the vouchers were present on the same day of data collection. The nurse could not tell why all FGD participants reported out of stock at the same time!!

> *We ran short of infant vouchers from 11th December and Pregnant women vouchers from 15th March, until last Monday (April) when I received a new stock of both (Public Health Nurse at a dispensary in District 1)*

Eligibility to and decision making on upgraded infant vouchers

Despite a high awareness on a new top amount of Tshs 500/= (for upgraded infant vouchers) in all areas, it was unclear to many respondents when it should be issued. Many FGD participants in both districts mentioned varying age including one month old, completion of DPT HB vaccinations at 3rd month and completion of measles vaccination at 9th month of age. The uncertainty on eligibility to upgraded infant vouchers was relatively mostly expressed by respondents including health workers (nurses working at ANC and EPI clinics) in District 2. Uncertainty on the age at which upgraded infant vouchers should be issued had negative effect on decisions making as far as issuing vouchers was concerned.

It was evident in district 2 that many children had been to clinic at entitled age, but missed vouchers even if they were available. In this district, only five vouchers had been issued to children when they received measles immunization at 9th month, although over 100 upgraded infant vouchers had been at one dispensary over four months prior to data collection for this study. The records and explanation by health workers confirmed that many eligible children had been to clinic for other immunizations at completion of 1st, 2nd and 3rd months but did not receive the vouchers. The nurses at two health facilities

in district 2 admitted to have denied vouchers to children because of unclear understanding on the eligibility criteria.

> *I don't think there is another age for issuing such vouchers before nine month at completion of measles vaccination. That is why I have not yet taken one (upgraded infant voucher) for my own baby who is three months old baby now [Upgraded infant voucher] (In charge of RCH clinic at a dispensary in district 2).*

Vouchers for mosquito nets were reported as compulsory items to pregnant women who delivered at a Designated District Hospital in district 2.

> *These days, when mothers go to deliver at the district hospital, they get bills which include Tshs 1000/= as a mandatory charge for "hati punguzo" for a mosquito net. That is why we call nets as "hati punguzo". (Leaders in village B, District 2)*

In contrast, the health workers at two health facilities and many mothers in the FGDs in district 1 concurred that upgraded infant vouchers were supposed to be issued during 1st immunization, if they were available.

> *It is very easy for mothers to understand about new vouchers because the top up amount is clearly written. We normally call attention to the top up amount of Tshs. 500/= and not colours etc (Health worker at a dispensary in district 1).*

> *These days we normally tell mothers that unlike previously when we had to wait for 9th month's vaccination, these days a child will receive a discount voucher for mosquito net soon after birth on the 1st visit for vaccination (1st dose of DPT HB (Health worker at a dispensary in district 1).*

Accessibility to subsidised mosquito nets in the villages

Access to nets was generally difficult in both districts except in a rare situation where health workers at a dispensary acted as local distribution agent. There were shared concerns in both districts that the local shops were no longer selling mosquito nets except at district headquarters. None among the eight hamlets in villages visited in both districts had a local shop selling mosquito nets, except a health worker sold them in district 1.

Reportedly respondents in the FGDs and among village leaders had heard from local shop owners (former local agents) complaining that unlike previous ones, the new vouchers were not profitable. Alternatively, the vouchers were accepted at shops in

district headquarters where it was unlikely for one to travel in search for a discounted net alone. Consequently, there was a broad consensus that most residents, particularly in district 2, had not used their vouchers because subsidised mosquito nets were locally unavailable.

> *The shop owner who used to accept the vouchers in our village is no longer selling nets. He claims that the new upgraded vouchers are not profitable (Mother in FGDs, village leaders IDI & a nurse in district 2).*

> *Even if the discount vouchers might be available at health facilities, the agents are only based at district headquarter which are too far from villages especially those located far from main roads. You cannot expect someone travelling for more than three hours, looking for subsidized net only.(DCCO District 2)*

Village leaders and mothers in FGDs in district 1 reported that a nurse at the local dispensary had been issuing vouchers and selling subsidized nets. The same nurse acknowledged to have inherited the mosquito net business from her predecessor who had been transferred to another place. In a separate interview, this nurse concurred with perceptions of mothers and village leaders that mosquito nets business had boosted her reputation because she maintained supplying nets while local agents were not interested due to low profit. Unlike in other places, more FGD participants in this village acknowledged to have used the pregnant and infant vouchers. There was optimism among mothers in FGDs to get discounted nets from this local nurse than any other local source in all areas.

> *My shop has never run short of mosquito nets since I started dealing with discount vouchers. I actually do encourage mothers and none of them has ever brought a voucher and missed a net!! (Public Health Nurse at a dispensary in district 1)*

> *If there is any pregnant woman or mother of a young child who has not used a voucher it could be due to lack of Tshs 500/= for topping up on the voucher. Our midwife always tells us that nets are there whenever we are ready [with top up amount] (Mother's FGD in district 1)*

> *I can't blame any one for not having bought a net. I have been to clinic twice and the nurse keeps asking me to bring Tshs 500 for topping up the voucher to get a subsidized net. However, I am still using my "nyangusi" (a local abusive term for shabby net/clothes) because my husband cannot get that amount of money. (Reported non user of mosquito nets in district 1)*

3.3. Perceptions and uptake of the free ITN distribution

Most respondents in this study recalled that free ITN distribution campaigns had been implemented in their areas during 2009. Although many respondents had forgotten the exact dates, others recalled that the campaigns had taken place between September and December 2009. Village leaders implemented the exercise under supervision of CHMT members in both districts. In district 2, a CHMT member reported that staff from World Vision, MEDA and PSI trained village leaders before child registration and distribution of mosquito nets took place. Training focussed on how to keep records before and after distribution of free nets. Reportedly, health workers at local health facilities were not involved in free nets distribution campaign except as parents if they had eligible child. Few health workers complained that they were not involved at least in communicating to mothers about free nets distribution which happened together with net retreatment campaigns. With references to previous examples of vitamin A supplementation and other health campaigns, these workers thought that their involvement could have boosted awareness and uptake.

Many respondents, especially FGD participants and village leaders either narrated their own experiences or fellow villagers who had benefited from free ITN distribution campaigns. Women in FGDs and several village leaders in both districts frequently termed the nets distributed in free ITN distribution campaigns as *hati punguzo za Kikwete (President Kikwete's nets).* In general, there was a widespread notion that free nets had been supplied by president Kikwete to protect young children from malaria because they were most vulnerable. It was also reported in district 2 that one NGO had distributed free ITNs in their areas for economically marginalized people (wasio na uwezo), pregnant women and children under five. The campaign also generated population data which might be useful in planning according to a CHMT member in district 2.

> *To me, the underfives catch up campaign was very successful because our district received 85,000 nets based on the over estimated population of under fives. According to the Census estimate, we should have 68, 000 children of that age group. After the campaign we remained with 2,000 nets on special order from the CHMT and all of them were distributed to our health centres and dispensaries. I*

believe we had 95% success because registration was well done through ward and village executive officers (malaria Focal Person in District 2).

Children and pregnant women were targeted because they are the ones who suffer most from illness than others in this village (Leaders in village B, District 2)

That campaign was good because many people got up to three nets if their children had the required age (village leaders).

Child enumeration which was conducted to facilitate that campaign generated very useful data to help us in future plans with clear idea of how many children are in each village. We did not have such information before (DCCO District 2)

Who is using the nets from free ITN distribution campaign?

There were mixed accounts on the use of freely received ITNs among respondents in both districts. In both study districts respondents in the interviews and FGDs asserted that pregnant women and young children in their areas were using nets. There was a consensus among most respondents in both districts that the freely received nets were in use by children who had received and sometimes shared by other children or parents depending on the number of sleeping places. In households with fewer sleeping places than number of nets after free ITNs, the extra (mostly new nets) had been stored for future use. This implies that some households continued using old nets which might not be treated given the challenges in accessing and accepting the insecticides in their areas.

Despite a shared view among most respondents that children and pregnant women were the main users because of their vulnerability to malaria, it was often argued that other family members also deserved to sleep under nets.

"It is important for the entire family to use mosquito nets. If we favour children and let ourselves die from malaria, who will look after the remaining orphans?" (Mother's FGD- in district 2)

Unlike young children, an adult can easily recognize if he/she is sick and start seeking treatment. That is why children should get first priority!! (Mother's FGD- in district 2)

Apart from children and their mothers, everyone should be protected against malaria. That is why we are eagerly waiting for nets as promised my some people who came to count all sleeping places in our houses (village leaders in district 1)

Giving away vs. misuse of nets from free distribution campaigns

However, several FGD participants in both districts reported their own situations and other women that they had given away some of extra nets gained through free nets distribution campaign or discount vouchers. There was no indication of giving away nets based on financial transaction. Most respondents said the nets might have been mutually given to relatives or friends by households which felt to have excess after free nets distribution campaign.

Few respondents in each district reported that the nets which were supposed to have been distributed free of charge leaked to people who sold in different places within the district and surrounding areas. In district 1 one FGD participant implied her husband for having exchanged the net with alcohol. The respondents in district 2 reported to have heard from other places that some people had misused nets as fence in their tree nurseries/gardens.

> *I heard that some nets were smuggled and sold in the market at a price of Tshs. 2000 (CHMT member in district 2)*
>
> *Some clever people (wajanja) got such nets and sold in the streets and other places (Mother's FGD in district 2).*
>
> *My husband is always drunk. He stole our child's net and sold it to pay for alcohol. (Mother's FGD in district 1)*

Complaints about free ITN distribution campaign

As already pointed out, most respondents in both districts expressed satisfaction with the idea and implementation of free nets distribution campaign. However, some mothers, village leaders and CHMT reported that the campaign had disappointed some people due unrealistic expectations resulting from organisational flaws and social reasons (See examples of in panel 1)

Panel 1: Flaws in Free ITNs distribution campaigns

- *Surprisingly, nets were issued according to number of sleeping places in the household contrary to initial promise of net per child aged below 5 years. Some households received only 2 nets while they had registered up to 10 children. (Leaders in village B, District 2)*
- *Some children missed the nets because more children attended during distribution than those who were initially registered. MEDA promised to bring more nets this year and we promised those who missed. It is now a 6th month after the campaign but that promise hasn't been fulfilled. (DCCO DISTRICT 2)*
- *Other children ended up missing opportunities to get the nets because we received misleading information that only children under one year would get free nets. Moreover, there was no second chance to register in case parents were absent during unannounced visits to register children at their homes. (Leaders in village B, District 2)*
- *Some supervisors from CHMT arrived late at their stations because they had to share the same cars while they were supposed to supervise different areas. Some routes were assigned open vehicles (pickups) which were inappropriate to staff and supplies, since the exercise was carried out during rainy season. (DRHC District 2)*

3.4 Perceptions and use of nets and retreatment

Insecticide treated mosquito nets (ITN) were generally widely accepted and used especially in seasons with more mosquitoes. Many respondents in both districts pointed out a common perception of ITNs as necessary tools to use for preventing mosquito nuisance and malaria as well as protection against creeping creatures such as snakes and scorpions. Unlike in district 1 where seasonality featured as a major reason for irregular use, more respondents in district 2 expressed their fellow residents' and personal habit of using nets throughout the year because mosquitoes were always around. The main reason behind such practice was avoidance of mosquito nuisance, although sometimes respondents mentioned protection against malaria.

Awareness on net retreatment campaign

Mosquito net retreatment campaign had only been implemented in one of the two districts when this study was conducted. Interestingly, several respondents had heard of it even in the district where it had not been implemented. In the district where the campaign had taken place, respondents recalled that it had been implemented on the same day with free U5CC at selected points in their villages. Several CHMT members, health workers and mothers in FGDs thought that the government decided to implement the campaign

free of charge after recognizing that the net insecticide sold in shops was not affordable to many people.

There were no impressions of negative rumours about insecticide having affected the uptake according to mothers, village leaders, health workers nor CHMT members. Very few respondents argued that they did not take their nets because they would afford the insecticide whenever they liked, or they already had done so. In contrast, many cited their own examples and other villagers, of not having re-treated during the campaigns, mostly because of stigma attached to condition of nets and inappropriateness of retreatment points. It was repeatedly argued that "retreatment campaign took place at public points which were rather disappointing for those with shabby or dirty nets. There were other concerns on inadequate sensitization and distorted information on the targeted audience.

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> *Some nets should have been white but have turned into unpleasant colour due to smoke from wood which we normally burn to cook in the same houses where we sleep. (Village leaders in District 1)*
>
> *There are some respectable elders in our community. They would have accepted if insecticide was for self use at home not at in public where anyone might tease them about their shabby nets. (Village leaders in District 1)*
>
> *I did not hear about net re-treatment campaign. Even so, I couldn't dare exposing my "nyangusi" at a village post where everyone would dishonour me. (Woman reported in the FGD as a non user of mosquito net in District 1)*
>
> *Some of us avoided going there because news spread that only those who had been registered should also present their old nets for re treatment. (FGD, Mothers group in District1)*

Willingness to accept net retreatment campaign

Although net retreatment campaign did not take place in district 2, many respondents were impressed by retreatment campaign after they were asked hypothetically about it. They were asked if they would like it and how it might successfully be implemented in their areas. In response, most respondents including the CHMT members, village leaders and FGD participants thought that net retreatment was necessary because insecticide was

not easily available in the rural areas. Hence there was optimism that the campaign would be highly accepted either at public point or for self treatment at home. It was argued that successful campaign should be preceded by sensitizing village leaders and local health workers before asking them to communicate information to their communities through village assembly and house to house visits. Surprisingly, in district 2, a CHMT member in the district where free re-treatment had not been implemented thought differently.

> *I heard there was an organization which was supposed to bring insecticides alongside free ITN distribution campaign. Despite the importance of this service, the responsible organization for free insecticides claimed to have failed because supplies were inadequate (DCCO DISTRICT 2).*

3.5 Hang up Campaigns

Awareness on the campaign and implementation process

Some respondents in both districts recalled that hang up campaign had been implemented after free nets distribution campaign in their areas. However, the concept of "hang up campaign" was not popular in both districts as the respondents did not have much to say about it fluently compared to other topics. When prompted, the respondents conversed about some people who had visited the households to follow up on the use of nets received during free distribution campaign. At times respondents struggled to distinguish the activities hang up campaigners from household survey teams because both visited their areas in a relatively perceived short interval after free nets distribution campaign.

> *Two people visited households to follow up if people had hanged up the nets. They were also instructing those who had not hanged up on how to do so. (Village leaders in District 1)*

Surprisingly, the majority of CHMT members and health workers at visited health centres and dispensaries were not aware if hang up campaign had happened in their districts. The level of awareness and experience of hang up campaign was also very low among many mothers in FGDs at the centre and remote hamlets, and among the village leaders.

Reportedly, the hang up campaigns and household surveys happened shortly after free net distribution campaign, each involving questions about and observations of net use. As a result, some respondents could not distinguish the two activities, except on the equipments used and where the implementers came from. Some respondents clarified that

the household survey team members were from Ifakara Health Institute and carried small computers [PDAs]. In contrast, the hang up campaigners were identified as local residents based in the same villages or district that went around inspecting if nets from campaign were in proper use. If not, they demonstrated how to do so.

Unexpectedly, with exception of the DMOs and malaria focal persons, the rest of CHMT members in both districts demonstrated low awareness on the purpose; implementation and outcome of hang up campaign in their areas. For example, in district 2, the DMO informed the study team that the DCCO was the right person to ask about the campaign. Unexpectedly, the same DCCO insisted that he was not aware and had not been involved anyhow. It was during interviews with village leaders and those who participated in the campaign [hang up campaigners] when it was clear who had coordinated the exercise in this district. They mentioned a district malaria focal person [a Co Opted CHMT member based at district hospital], who confirmed later on to have played the role.

> *Honestly, I remember to have seen our DMO wearing a hat and T shirt written "hang up campaign". However, the campaign has never been an agenda in any of our CHMT meetings and I am convinced that no one knows among us about it. He (the DMO) should tell you the truth about who implemented that hang up campaign in our district instead of falsely implicating others. (CHMT member in district 2)*

Perceptions on the success and gaps in the implementation of hang up campaign

The district malaria focal person in district 2 praised the regional office of an international NGO office for closely following up the exercise. However, in terms of coverage, there was a general perception among respondents in the villages (mothers and village leaders), and CHMT members, campaigners and their supervisors that hang up campaign was less successful because fewer households were visited compared to targeted number in both districts. Several reasons associated with less achievement centred around inadequate supplies of ropes and nails for hanging nets, untimely disbursement of funds from campaign organisers to districts, supervisors and campaigners, inadequate training to campaigners, inadequate supportive supervision and ambitious schedule for very few campaigners to cover all households in their villages. For example, in all areas, respondents complained about inadequate materials [nails and ropes] which the campaigners carried with them to facilitate hanging up in households with unused nets Moreover, village leaders complained that their role was undermined as they were bypassed by campaign organisers. Otherwise, they would have sensitised their

villagers and give necessary support to campaigners during the campaign. Apparently, the campaign was perceived to have been so disappointing among the district level that they were unlikely to fully cooperate with same organisers in future. Some flaws in the organisation an implementation of hang up campaigns are summarised in Panel 2

Questionable data from hang up campaign

There was obvious disagreement in the arguments of CHMT members, supervisors and campaigners who visited households on the data generated during hang up campaign. The campaigners in both districts complained that one day seminar which they attended was too short to understand the content. Some campaigners gave their own and fellows' experience of having struggled to fill the forms properly in situations where local supervision was unavailable. At the end of exercise meetings were held to reconcile data without mechanisms to verify on the ground. While district level coordinators thought data was reliable those who actually visited households and some village leaders said they were questionable in terms of actual number of households visited, given time constraint.

Panel 2: Flaws in the organisation an implementation of hang up campaigns

- *Sorry if I may sound like blaming VVVV [name of international NGO] for the aftermath of that hang up campaign. For instance, when we attended training at YYYY [name of a town in the same zone] we agreed in presence of the Director of that organization that there would be some top up allowances on our salaries. However, after that campaign they came to collect reports which we prepared for them and since then there has not been any communication with them. After we worked hard, many of us have been calling several times but the contact person doesn't answer. At least keeping contacts is very important and not ignoring us as those people did to us. Imagine, they have not even brought the outstanding payments for those who assisted us in the villages. They do not see our value any more after we helped them to achieve their goals. Certainly, if they come again, they may not get good cooperation.*

- *I received an invitation letter from our division secretary to attend training [on hang up campaign] at his office. After training, Mr XXX [CHMT Member] who conducted training gave each of us 16 Nails and a few pieces of ropes to use in the households which had not yet hanged their nets. Such supplies would only carter for 3 beds, but I tried to use in six households. Others received four or nine nails only. (Hang up Campaigner in District 1)*

- *We were not paid fairly and it seems that on the last day a dirty game was played as we signed more amount than what we actually received from the organisers. We received Tshs 18,000/= on training day and 50,000/= at the end of the exercise. In contrast, we signed three papers that we would receive a total amount of Ths 190,000, in three instalments; Tshs 20,000/=, 50,000/= and Tshs 120,000/= (Hang up Campaigner in District 1)*

- *The campaigners visited households without advance notice and therefore missed the owners in many houses. Unfortunately, it seems that those involved did not have time to revisit such houses. (FGD, Female in District 1)*

- *Coordinator from district hospital informed us during seminar that the division secretary (Katibu Tarafa) would be our leader. I do not know where that idea came from. It could have been far better to be supervised by Village Executive Officer (VEO because he could help in mobilizing villagers as well as following up our rights. (Hang up Campaigner in District 1)*

- *Five days for implementation were unrealistic either to revisit all households in the village and revisiting where the owners were absent? (Hang up Campaigner in District 1)*
- *It is true that some houses were followed up after distribution of free nets. However, the exercise was unsuccessful because those people did not seek our guidance (Village leaders in district 1)*

- *Hang up campaigner in this village was successful for 45% but failure was 45%. Why failure? (Leaders in village B, District 2*

- *I only managed to visit 382 out of 520 households which are in our village. (Hang up Campaigner in District 1)*

- *The exercise was not participatory oriented. Surprisingly, we saw someone walking in the streets to conduct that exercise (Hang up). There was no prior village assembly where people could have been sensitized about the exercise and schedule in each hamlet. (Village Leaders in District 2)*

3.6 Explanations for differences in net use in between two districts

The October/November 2009 household survey results were presented to respondents in search for explanations on variations in net use between and within the districts and village. This section presents results which emerged from low use district that were as important in the high use district.

Most respondents in district 1 including mothers, village leaders, health workers and CHMT members concurred that low use in their areas was inevitable given the timing of the survey. Many respondents argued that the survey took place at the peak of dry season when mosquitoes were uncommon. There was a general impression that the findings would be higher, had the survey been conducted during the rainy season locally termed as *Kifuku*. It was reported that *Kifuku* normally starts from the end of November until June, accompanied by more mosquitoes. Some respondents confirmed that they and other residents in their areas would rarely sleep under mosquito nets after *Kifuku* i.e. heavy rains season.

> *Is there any one who dares not to sleep under mosquito net during Kifuku (rainy season?) in these areas? I am not surprised, because usually there are no mosquitoes during October and November (Nurse at a dispensary in District 1).*

Majority in district 2 argued that most people in their areas were using nets following free nets distribution campaign and efforts done to educate on the importance protecting children against malaria. However, the influence of seasonality on the use of mosquito nets emerged in the high use district as well.

> *Whether we agree or not, many of us usually do not use until during mosquito season between April and June (Village leaders, district 2)*

> *There are people who do not use nets until they hear "ngurumo ya mbu" i.e. mosquito's thunder during rainy season (DCCO and village leaders in District 2)*

3.7 Remaining existing barriers to uptake of nets in general;

Responses from both districts suggested a possibility of non use of nets, regardless of seasonality and willingness to use mosquito nets in both districts. While carelessness featured in both districts, the respondents in each district mentioned varying barriers to uptake of nets in their areas.

A commonly reported barrier to utilization in district 1 was incompatibility of the local beds (made of wood and ropes) with mosquito nets. While some respondents argued that the nets were free size which could fit on any bed, others reported that the nets bought using HP and those distributed free of charge were too small to fit on their beds. In the same district, respondents talked about mothers who might have received free nets but not been using because of carelessness or inconveniences while away from their houses for social or cultural events.

> *Most people in this district sleep on local beds made of wooden materials and ropes and cannot afford mattress. Mosquitoes can easily penetrate from underneath because it is not easy to hang a net on such beds properly. That is why some mothers avoid covering their children with mosquito nets in this area (Group Interview with Health Workers in District 1).*

> *We normally don't bring our mosquito nets with us to events such as mourning/funerals, "ngoma" i.e. (traditional dance) or weddings which normally lead us to stay there overnight. Even if we bring the nets, we cannot hang them in air!! How can we be safe from malaria mosquitoes which bite at midnight then? (FGD, Mothers in village 1, District 1)*

There was also an impression that some households might not have afforded subsidised nets even after introduction of upgraded vouchers. Unfortunately, such households might as well not benefit from free nets and retreatment campaigns because of complex social and economic circumstances.

For example, respondents in FGD session held in district 1 talked about a fellow woman in their village who was not using mosquito net at all, despite being pregnant and having children who were eligible for free ITNs. The fellow women in FGD claimed that because of her carelessness she had short intervals in child spacing and therefore felt shy to appear in public including gatherings where free nets distribution and net retreatment campaigns took place. During a follow up interview at her home, the mother admitted failure to get either free or subsidised nets. She cited constraints including lack of money to top up on the pregnancy voucher and unawareness about her child's eligibility to free ITN distribution campaign. Nevertheless, she talked about her household using shabby

untreated mosquito nets for preventing illness and mosquito nuisance, especially during rainy seasons.

In district 2, village leaders and mothers indicated remaining barriers to perceived harm from using the insecticide as remaining barriers to net use in their areas:

> *There are some people who do not know that mosquitoes can bite and cause malaria, a deadly disease. Others suspect they get similar symptoms or die because of being bewitched. (Leaders in village B, District 2)*
>
> *Several mothers have not yet used the nets after some people spread rumours that the government distributed free treated nets as a weapon for reducing children. (FGD, Female in village B, Centre, District 2)*
>
> *Some of us hesitated to use the nets from free distribution campaign after we heard that in a certain village many people died after they ate some food which was cooked while covered by a plastic paper bag which had been used to wrap a treated mosquito net. (FGD, Female in village B, Centre, District 2)*
>
> *Others exposed the nets (from catch up campaign) outside the houses so that the insecticide could be washed out. (FGD, Female in village B, Centre, District 2)*
>
> *Some people have complained of itching, swelling or difficult breathing, while or after sleeping under treated net. (FGD, Female in village B, Centre, District 2)*
>
> *Some people hate the insecticide for mosquito nets because of words such as hatari (danger) use gloves while washing. It is not easy to expose a net under such net because it can harm if inhaled or tasted. (Leaders in village B, District 2)*
> *I know my neighbour who hangs up a net without covering the bed because she claims that the insecticide is strong enough to repel mosquitoes even if it is not used to cover the bed (FGD, Female In village B, Centre District 2)*

3.8 Decision making by pregnant women for timing of attendance at antenatal services

Most women in FGDs reported to have heard from health workers on the importance of seeking ANC services early, especially in case they prolonged period without experiencing menstrual periods. Others specified two or three months after last menstrual period as ideal period for attending clinics. Early attendance was generally perceived among mothers as helpful for health of the unborn babies and pregnant mothers and also

for scheduling next visits during pregnancy as well as preparing mothers for safe delivery. Despite positive remarks about early and regular attendance to ANC services, many women reported that they usually started clinic late after 5th or 6th months or near the time of delivery. A commonly reported reason, regardless of distance from health facility, was avoidance of many visits to clinic which were perceived as boring.

Seeking ANC services from a neighbouring country

More than half of FGD participants (attended by 12 women) in one district had sought ANC services from a clinic in neighbouring country during their last pregnancy. This clinic was reported to be nearer than any other health facility in Tanzania. Interestingly, they expressed great satisfaction with ANC services received in that country because they were equally attended like nationals, including receiving free mosquito nets. Similarly, most respondents in all areas expressed positive impression about health workers at their areas. However, shortage of staff was a main concern among health workers, mothers and village leaders. For example, two dispensaries each had one nurse whose absence meant closure of dispensary.

4. Discussion, conclusions and recommendations

The report has presented findings from a qualitative study which made an in-depth investigation in two districts of Southern and Lake zone in Tanzania, into attitudes and behaviours affecting the decision making process around different delivery systems for bednets and uptake of ITNs. The study assessed several process issues from service providers and community perspectives in these districts where a preceding household survey found major variation in coverage of net use, despite similar intensive activities which might have improved situation in both areas. The emerging salient issues presented are summarised below:

Perceptions, understanding and use of the pregnant women and infant vouchers (Upgraded)

- There was a high understanding of pregnant women and infant vouchers, pieces of papers to redeem subsidised nets for the two groups. A top up amount on the voucher was mostly recalled than other features on the vouchers. However the terms Hati Punguzo and mosquito nets were synonymously used in both districts.

- There was a crisis in accessing both vouchers and subsidised nets, particularly in the distant villages from district headquarters. Health facilities experienced prolonged stock outs of vouchers.
- The received vouchers had not been used because local agents perceived the upgraded vouchers to be less profitable and therefore many of them were no longer selling nets.
- Despite availability at health facilities many upgraded infant vouchers had not been issued or demanded because the eligibility criteria (age at which infant should receive such voucher) was not clear among health workers and mothers especially in the district with high net coverage.

Perceptions and uptake of the free ITN distribution and retreatment

- There was a strong positive impression towards free ITN distribution which had been implemented in both districts and popularly termed as *"Hati Punguzo za Kikwete"*.
- The free ITN distribution was reported to have boosted the use/ownership? in both districts.
- There were some unsubstantiated rumours that some nets from free ITN distribution campaign had leaked to people who sold them.
- Net retreatment took place on the same day with and at the same points where free ITN distribution took place. Net retreatment was less successful because the public treatment points were unfavourable to people with either shabby or dirty nets. Moreover, there was a distorted communication and perceptions that retreatment was only meant for nets from households with children under five years.
- There were some rumours on the harmful effect of insecticide which had discouraged the use of pre treated nets. It is worth following this up in future household surveys.
- In one district, some NGOs had distributed free nets for children and elders. It might be worth tracking these sources of nets in household surveys in relation to nets use.

Hang up campaign

- Hang up campaign was implemented in both districts.
- It was not clear why some CHMT members including a DMO could not exactly know who among them coordinated the campaign in their district.
- Overall, the campaign was less successful because of short time for training and actual implementation as well as insufficient hanging materials.

- The campaign left dissatisfaction among some implementers at district and village levels in terms of unsettled due allowances.

Remaining existing barriers to uptake of nets in general

The most explanation could be on the timing of the household surveys. Otherwise, during rains it was unlikely if a household might avoid using nets if available.

Decision making by pregnant women for timing of attendance at antenatal services

- Despite positive attitudes towards ANC services, most pregnant women started clinics after 3rd month, unless they had previously, or during current pregnancy experienced complications.
- Long distance to better ANC services and perceived inconveniences to visit clinics many times were major barriers to ANC service utilization.
- It was common in one of the districts for pregnant women to seek ANC services from clinics neighbouring country because of relatively shorter distance and existing social networks between the border communities. Mothers who crossed borders also benefited from free nets entitled to pregnant women and children. The impact of free nets from neighbouring countries on the net coverage and use needs to be further substantiated. Likewise, it is also worth investigating the effect of such nets on the uptake of pregnant and infant vouchers

Suggestions for improving HP

The following suggestions were raised **by respondents** in this study.

- There is a need to encourage all local shops in the villages to be the agents for selling subsidized nets. *(DCCO District 2)*
- Regular availability of discount vouchers should be guaranteed.
- Whoever issues the vouchers [health facilities] to mothers should also have mosquito nets *(FGD Female in village B, Centre)*
- Provide written information materials/guidelines for health workers and community on eligible age to upgraded infant voucher
- Need to encourage local arrangements for those who cannot afford even a subsidised price.

Suggestions for improving net retreatment campaigns

- If it is going to happen, it is better for re treatment to be done at hamlet (kitongoji) level in order to encourage those who might feel shy to expose their shabby nets in a large audience. (Village leader in District 2)
- There is a need to improve sensitisation campaigns in ways which can minimise distortion of information.
- Need to consider multiple options for those who would prefer either self treatment or public points.

Areas of improvement in hang up campaign

1. Increase training days up to three days instead of one or two

2. Five days are not enough for one person to visit the whole village; they should be increased for the exercise to be successful.