Factors associated with late presentation of children under five and pregnant women with malaria for treatment at health units in Bungokho Health Sub District

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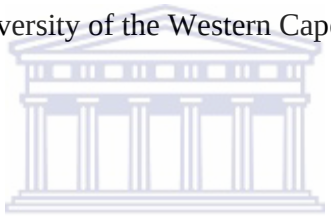

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KEY WORDS

Malaria

Late presentation

Treatment seeking behaviour

Treatment options

Health centre

Under 5 years

Caregivers

Pregnant women

Uganda

Developing country

ABSTRACT

Background

Malaria is the leading cause of death of Uganda's children under 5 years of age and the number-one cause of illness in adults in Uganda. The success of malaria treatment strategies is closely linked to the behavior of patients and caretakers of young children. In the case of malaria this includes accessing appropriate treatment for suspected malaria in time. In Bungokho Sub County, in spite of the efforts by district health workers and the Ministry of Health to implement the malaria control, prevention and treatment strategies, pregnant women and caretakers of children under 5 years of age continue to present late for treatment in the health units resulting in possible avoidable death or disability.

Aim and objectives

The aim of this study was to explore the factors that lead to late presentation of children and pregnant women with malaria for treatment at health units. This was done by exploring the perceptions of caregivers of children under five years and pregnant women on the community's knowledge and understanding of the symptoms and treatment of malaria; and describing perceptions of caregivers and pregnant women on health care provision at the health units and alternative treatment for malaria.

Methods

The study was conducted in Bungokho Health sub-district, in Mbale district, Eastern Uganda over a two month period in 2009. It was a descriptive exploratory study using qualitative research methods. Four focus groups were carried out, two with caregivers of children under 5

years and two with pregnant women, with each focus group consisting of eight participants. Two caregivers and two pregnant women were identified from the focus groups for further in-depth interviews. Four in-depth interviews were conducted with health unit staff from Bungokho HCVI. Notes were taken and observations made during the focus groups and interviews. The proceedings were audio-taped and recordings used to expand and clarify notes. Thematic content analysis was used to analyze the data and identify recurrent themes from the focus group discussions and interviews of the reasons for late presentation for malaria treatment.

Results

All caregivers were women, a significant majority of whom were peasants who had not gone beyond the primary education. Caregivers were aware of the general symptoms of malaria but associated more serious or dangerous symptoms with other causes including witchcraft. Pregnant women, on the other hand, seemed to have sound knowledge of both the general and dangerous symptoms of malaria and were likely to attend the health units timeously for treatment. Religious beliefs and practices, particularly belief in the healing ability of prayers prevented early reporting of malaria cases to health units leading to late presentation. Alternative treatment of malaria from traditional herbalists was also sought by the communities particularly when the intensity of malaria was at its peak during the rainy season.

Poverty in the community seemed to play a big role in shaping community preference for treatment sources, as well as early presentation to the health units. It was found that the anticipated cost of laboratory tests and sundries at the health units deterred caregivers from

taking children under five to health units. There was therefore a strong reliance (and preference for) community medicine distributor's (CMDs) because of free services and easy access. Lack of support from spouses (in particular husbands) coupled with the rude behavior of health workers towards caregivers and pregnant women discouraged visits to health units. The long waiting time and intermittent drug stock-outs also created a negative perception of service at the health units.

Conclusions and recommendations

There is need for further sensitization of communities on the need to seek prompt treatment for children under five years of age at the health units (that is, within 24 hours of the onset of fever). Training and supervision of CMDs should be strengthened to ensure consistent supply of drugs, correct dosage of anti-malarial medication and improvements in the referrals to the health units. In order to improve service delivery at the health units, there is need to review and strengthen human resource management of the health units, including staffing requirements and management practices, such as support and supervision, patient care standards and client feedback mechanisms. It is also important that there are adequate stocks of anti-malarial drugs and laboratory supplies at health units.

DECLARATION

I declare that "*Factors associated with late presentation of children under five and pregnant women with malaria for treatment in Bungokho Health Sub District"* is my own work and that all the sources that I have used have been indicated and acknowledged by means of complete references.

Signed by: KBakunda

Kamaranzi Kaakaabaale Bakunda

This 6th day of December 2010

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I am grateful to the following people who contributed in one way or another towards the success of this study. First of all, I would like to thank the Almighty God for all the protection, guidance and strength during my studies.

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ACRONYMS

CMDs	Community Medicine Distributors
DHO	District Health Officer
FGD	Focus Group Discussions
HSD	Health Sub District
IEC	Information Education and Communication
IPT	Intermittent Preventive Treatment
ITN	Insecticide Treated Mosquito Nets
LBW	Low birth weight
LC1	Local Council 1
MCP	Malaria Control Program
MoH	Ministry of Health
NGO	Non Governmental Organization
PLWHA	People living with HIV/AIDS
RBM	Roll Back Malaria
SSA	Sub Saharan Africa
UNICEF	United Nations International Children's Fund
WHO	World Health Organization

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CHAPTER ONE: INTRODUCTION AND ORIENTATION TO THE STUDY

1.1 Introduction

About half of the world's population (3.3 billion) live in areas that have some risk of malaria transmission and one fifth (1.2 billion) live in areas with a high risk of malaria (more than 1 reported case per 1000 population per year) (WHO, 2008). In 2006, there were an estimated 247 million malaria cases worldwide, of which 91% were due to *Plasmodium falciparum,* and there were an estimated 881,000 deaths due to malaria, 90% of which were in the African region and 85% were children under 5 years (WHO, 2008). The greatest burden of malaria is in sub-Saharan Africa (SSA) where it is estimated that 40% of fever episodes are caused by malaria (Brinkmann & Brinkmann, 1991). A Burden of Disease Study carried out a few years ago indicated that 15.4% of life-years lost to premature death were due to malaria (World Bank, 2003).

In sub-Saharan Africa, malaria continues to be the largest single component of the burden of disease (Don de Savigny *et al,* 2004) and as Shellenberg writes, "young children living in sub-Saharan Africa carry the largest part of this burden" (Shellenberg *et al,* 1999). It is implicated in one of every five childhood deaths in Africa (Adenike *et al,* 2005). In lowland areas that have stable high malaria transmission, children get exposed repeatedly early in life and severe malaria is frequently seen in children under 5 years of age (Idro R *et al,* 2005).

In Uganda, malaria is the leading cause of death in children under 5 years of age and the number-one cause of illness in adults (MoH, 2008). This burden is increasing rapidly; causing enduring and debilitating suffering that affects daily life: for older children, it affects school performance

and attendance; for adults, it causes a decrease in productivity and an increase in household poverty (Byamugyisha *et al*, 2008).

The second most vulnerable group is pregnant women, with malaria in pregnancy being associated with poor maternal, obstetric and infant outcomes (Mbonye *et al*, 2003) Malaria is reported to contribute significantly to maternal mortality, either directly or indirectly (Mbonye, 2003; Ndyomugyenyi, 1999). Malaria infection during pregnancy also has severe consequences for the foetus and infant including; abortion, stillbirths, low birth-weight infants, anemia, and even death. Malaria infection appears to have the most significant effect on low birth weight (LBW) and poor foetal outcomes during the third trimester, but infections earlier in pregnancy may also contribute. (Cotrell *et al*, 2006). Low birth weight is the strongest risk factor for neonatal and infant death, and malaria is thought to be responsible for 62,000 – 363,000 infant deaths associated with low birth weight yearly (Murphy *et al*, 2001).

In Uganda, over 95% of the population lives in malaria pandemic areas, while the remaining 5% live in epidemic-prone areas in the highland areas in southwest and east Uganda. Although all four species of malaria parasite exist in Uganda, *Plasmodium falciparum*, the most harmful and deadly of all species, is responsible for over 95% of cases. (MoH, 2008) In 2006-7, it was found that in high and medium malaria transmission areas, malaria had a case fatality rate of between 5% and 23% with 11% of deaths among under five year olds. Malaria specific deaths in under five year olds is 37/1000 in high endemic areas and 18/1000 in low malaria endemic areas which translates to 70,000 – 110,000 child deaths annually (MoH, 2008). A recent study of 553 Ugandan health care facilities, with an overall maternal mortality rate of 67.1/10,000 live births;

malaria was attributed as a direct or indirect cause of maternal mortality in 65% of the cases (Mbonye *et al*, 2007). In addition to children under five years and pregnant women, people living with HIV/AIDS (PLWHA) are particularly vulnerable to malaria infections. (UNICEF, 2003)

In order to prevent deaths resulting from malaria, the World Health Organization has emphasized the importance of early diagnosis and effective biomedical treatment as one of the key strategies (WHO, 2005). Prompt and effective treatment is a key strategy of Uganda's Roll Back Malaria (RBM) Strategic Plan to address the high burden of malaria in Uganda, where it is reported that in line with global trends, women and children under five are the groups most severely affected (MOH, 2008)

This National Roll Back Malaria (RBM) Strategic Plan (2001/2002-2004/2005) guides malaria control activities in Uganda. This initiative was commenced by the World Health Organization in 1998 as an international effort to control malaria. It aims at halving the 2000 levels of malaria morbidity and mortality by 2010, and reducing the malaria burden by a further 50% by 2015. According to World Health Organization and United Nations International Children's Fund (2005), a summary of the major strategies of RBM include: Prompt and effective treatment; vector control (including Insecticide Treated Net and Indoor Residual Spraying); Intermittent Presumptive Treatment (IPT) during pregnancy; and epidemic preparedness.

1.2 Study setting

Mbale District, in eastern Uganda, had an estimated population of 758,100 in 2004 and is served by a total of 51 health facilities at different levels. Two are hospitals, four are Health Centre IV

(level IV), 28 are Health Centre III (level III), 17 are Health Centre II (level II). The district capital, Mbale, is Uganda's third largest town, with a population of 70,000. The project area, Bungokho Sub-County of Bungokho County, is located just south of the town of Mbale, and has a population of 32,300 (see map below).

Most of the households in Bungokho Sub-County get their livelihood from crop farming with an average monthly income of US$30, which is used to support about six people. On average, household members travel 2 km (for approximately 1 hour) to get to the nearest health centre (Byamugisha, 2008).

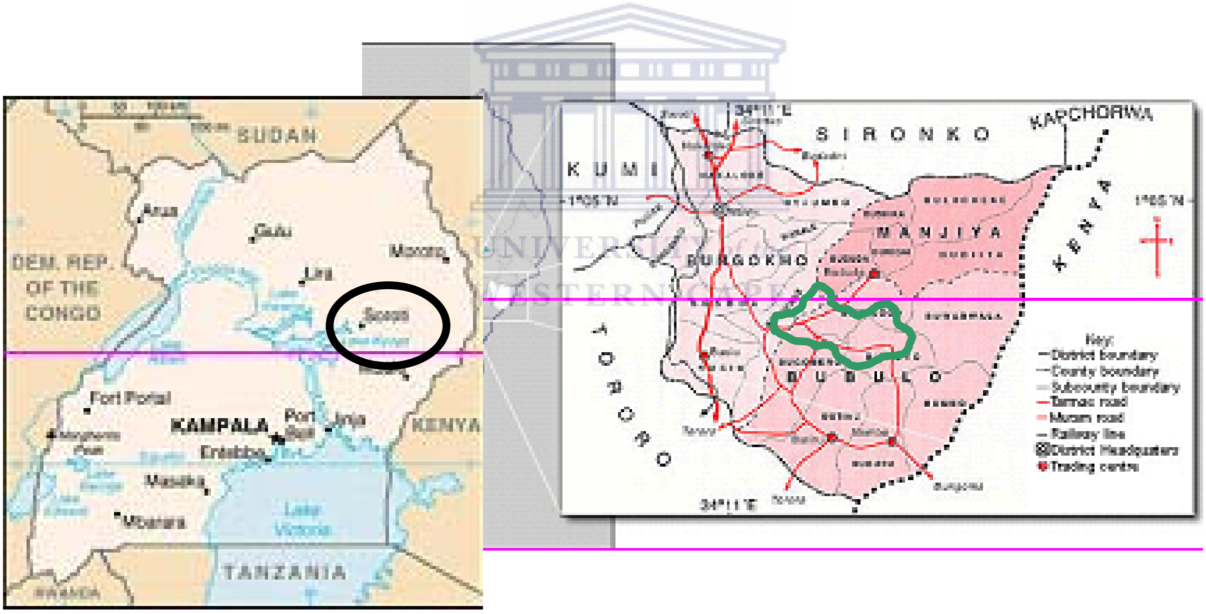

Figure 1: Location of study area in Uganda. Bungokho Sub-County in Mbale District (marked)

In the past, the Ministry of Health (MoH) in Uganda, in collaboration with the WHO and the UNICEF, has applied Roll Back Malaria strategies in Mbale by distributing free Insecticide Treated Nets (ITNs), providing subsidized drugs, promoting Intermittent Presumptive Treatment

(IPT) for pregnant women, and implementing a 'Voucher Scheme' to increase use of antenatal services. However, these government initiatives have had only limited success in reaching rural families in Bungokho Sub-County.

In this area, malaria is treated using herbs, drugs from the health units and drug shops, and in some cases is left untreated. The health units are largely understaffed and sometimes lack the drugs to dispense (Byamugyisha, 2008). Although it is perceived that basic awareness of malaria is widespread through Bungokho, there is no structure or organized system of ensuring that accurate knowledge is spread and that there are accessible means to prevent, treat and control malaria. It is reported that many families still have limited access to simple preventative measures (e.g. free or subsidized ITNs or affordable drugs) and still have inadequate health seeking behaviors (Byamugyisha, 2008)

Mbale District completed the sourcing and training of community medicine distributors (CMDS) for each village in 2005, but the reliability and sustainability of Co-Artem (the drug currently recommended for treatment of uncomplicated malaria) and other supplies remains questionable because the CMDs have not yet been adequately trained in administering these new drugs.

1.3 Problem Statement

The success of malaria treatment strategies is closely linked to the behavior of patients and caretakers of young children (Muller *et al* 2003). In the case of malaria this includes accessing appropriate treatment for suspected malaria in time. In Bungokho Sub County, in spite of the efforts by the district health workers and the Ministry of Health to implement the malaria control,

prevention and treatment strategies, pregnant women and caretakers of children under 5 years of age continue to present late for treatment in the Health Units. This often results unnecessary morbidity and mortality to children and pregnant women. There is therefore need to establish the causes of late presentation and devise means of addressing this problem.

1.4 Aim and Objectives

1.4.1 Aim

To explore the factors associated with late presentation of children under five years and pregnant women, with malaria, at health units in Bungokho Sub-County, Mbale District.

1.4.2 Objectives

1. To explore the perceptions of caregivers of children under five years and pregnant women on the community's knowledge and understanding of the symptoms and treatment of malaria.
2. To describe the perceptions of caregivers and pregnant women on health care provision at the Health Units
3. To describe the perceptions and use of alternative treatment for fevers by caregivers and pregnant women.
4. To assess the perspectives of the caregivers and pregnant women about the barriers to seeking treatment.
5. To describe the perceptions of the health care providers on the factors responsible for late presentation by caregivers and pregnant woman at Health Units.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter reviews the literature related to this study. It includes the ideas and findings of other researchers on what is already known and what still needs to be researched about the research problem of factors affecting late presentation for treatment of malaria in Africa. The literature includes the Ugandan situation with respect to health seeking behavior for malaria treatment and previous studies undertaken that have relevance to the study.

2.1 Malaria in pregnant women and children under five in Uganda

In Uganda malaria is a serious health problem, especially among pregnant women and children under five years of age. Malaria during pregnancy is associated with poor maternal, obstetrical and infant outcomes and a recent survey in Ugandan reported a maternal mortality rate of 67.1/10,000 live births, with malaria being attributed as a cause of mortality in 65% of the cases (Mbonye, *et al*, 2007). Moreover, it is estimated that malaria may account for up to 60% of spontaneous abortions in Uganda (Kiwanuka, 2003).

Most of the deaths among children in low income countries are due to malaria, acute respiratory infections, diarrhea, neonatal disorders and HIV/AIDS (Black *et al*, 2003). Mortality due to malaria and pneumonia is high mostly in resource poor countries with limited access to clinical services (Pandey *et al*, 1991). In 2006 the infant mortality rate in Uganda was 76/1000 live births and child mortality rate at 137/1000 (Population Secretariat, 2007). The overall malaria specific mortality is estimated to be between 70,000 and 100,000 child deaths annually in Uganda, a

death toll that is far exceeds that of HIV/AIDS. (Lynch *et al*, 2005). During the Demographic Health Survey (2006), data collected for children who had presented fever in the previous two weeks showed a percentage of 40.9%. The prevalence was higher in the rural than in the urban areas.

2.2 Health seeking behavior

Health seeking behavior among communities is an important factor in the management of malaria. It is important that malaria treatment is sought promptly if malaria is to be managed effectively. Despite this recognition of the importance of prompt access to effective malaria treatment, it is widely reported that many adults and children access appropriate treatment late (Tanner *et al*, 1998). Of particular concern is the late presentation of pregnant women and children less than 5 years, who have been identified as the most vulnerable groups (Mbonye, 2003). Studies have reported a number of possible factors associated with late presentation of children under five and pregnant women for treatment of malaria including; knowledge of malaria symptoms and treatment; beliefs and perceptions of malaria treatment and symptoms, influence of cultural factors and women's empowerment in decision making; access to health services and perceptions of healthcare provision at health units (Mbonye, 2003; Kamat, 2006; Oladele, 2005).

2.2.1 Knowledge of malaria symptoms and treatment

Timely and appropriate health seeking is important in the management of illness, especially among children. Critical behavioral factors in the management of childhood illnesses include early disease identification, early treatment, persistence with treatment, and quickly opting for

more effective treatment (Caldwell *et al,* 1989). According to Tanner and Vlassof (1998), early treatment depends on prompt recognition of symptoms and signs of malaria in the household, which is mainly the prerogative of women and it has also been argued that the early diagnosis and treatment of malaria is a key component of malaria control (Phan *et al*, 2005).

In malaria endemic countries, several factors have been cited as responsible for the lack of prompt access to treatment. These include the inability by caregivers to know the true cause of malaria (Idowu *et al,* 2007), failure to link danger symptoms, such as convulsions and anemia to malaria illness (Makundi *et al,* 2006) and inappropriate diagnosis and treatment (Opiyo *et al,* 2007).

A number of studies in Uganda have shown that community members' knowledge about the cause of malaria has increased from figures as low as 40-50% in the early 1990s in most parts of the country, to as high as 80-90% by 2001 in several districts (MoH, 2009). The Net Mark survey (2001) indicated that 92% of the respondents in the five districts surveyed knew that mosquitoes cause malaria, although only 21% knew that mosquitoes are the only cause of malaria. A study by Okello (2001) indicated that 77.6% of the respondents in the three districts knew that mosquitoes caused malaria whereas a study done in Kampala by Makanga (1997) showed that 84% of the respondents interviewed knew that mosquitoes transmitted malaria.

Similarly, knowledge about signs and symptoms of malaria is relatively high with most respondents indicating awareness of key symptoms, including raise in body temperature followed by other symptoms like vomiting, loss of appetite and restlessness (Rutebemberwa,

2009). The German Technical Cooperation/Ministry of Health (GTZ/MOH), survey assumed that the households had good knowledge of the symptoms of malaria if they mentioned at least fever plus headache or other pain, but poor knowledge if they mentioned fever plus general weaknesses or dizziness. In Fortportal, an urban area in Western Uganda, 59.1% of households were considered to have good knowledge of the symptoms of malaria as compared with 43.1% in the rural area of Kabarole (Kilian, 1994). A later study by Kilian (2003) showed improvements in knowledge about the symptoms of malaria in the same urban area.

While general knowledge of malaria symptoms was relatively high, reviewed research indicated that symptoms of severe malaria were not well known among community members. (Njama, 2003; Ario, 1997; Rissa, 2000; Fapohunda, 2004). Convulsions as a sign of severe malaria was not widely mentioned by the respondents in most studies reviewed. A study done by Njama *et al* (2003) in Kampala city also indicated that caretakers had a good understanding of how to recognize malaria, with 89% reporting hot body. However, in the same study, the understanding and recognition of severe malaria was very low among the caretakers, with only 20% mentioning convulsions as a sign of severe malaria, 25% lethargy/weakness, and 26% anorexia. The less common symptoms, which require close observation and medical interpretation like jaundice, anemia and splenomegaly, were also not well known (Rutebemberwa, 2009).

Although Shellenberg *et al* (1999) noted that common manifestations of severe malaria in children include cerebral malaria and severe anemia, Twebaze (1998) made observations, based on a study in Rakai district in Uganda, that mothers (as caretakers) appeared not to easily recognize anemia unless told by health workers. In the same study, it was indicated that although

altered consciousness and convulsions were recognized signs (by some caretakers) that the child was unwell, they were often thought to be traditional diseases best managed by traditional means.

A mother's ability to suspect malaria in the presence of fever has been shown to have important consequences for child survival in malaria endemic areas (Ibidapo, 2005; Oladele *et al*, 2005). Onwujekwe *et al* (2008) carried out a study in Nigeria in which he found out that more than half of the respondents used self recognition to know that they had malaria. Self diagnosis could be misleading, especially when there are other diseases with similar symptoms to malaria, and an improper diagnosis may led to irrational drug use and prolonged illness.

In contrast to the relatively good knowledge of malaria signs and symptoms, there appears to be gaps in community members' knowledge and uptake regarding first line anti-malarial therapy, with respect to both the current and previous anti-malarial treatment guidelines. Artemisinin-based combination therapy (ACT) is currently the official first-line anti-malarial for uncomplicated malaria in over forty African countries including Uganda (Bosnan *et al*, 2007). The World Malaria Report (2008) however stated that, between 2006 and 2007, only 38 % of fevers reported among children under five were treated with anti-malarials, and only 3% were treated with ACT. The number of fevers treated promptly and effectively prior to the policy change from mono-therapies to ACT was equally low (Yeng *et al*, 2005).

Studies carried out prior to the new malaria treatment guidelines also found poor knowledge of malaria treatment. A study in Kampala city in 2002 found that only 29% of the surveyed

caregivers knew the correct dose of chloroquine and only 19% knew that chloroquine was best administered orally. Those with higher levels of education had better knowledge. In the same survey Njama, *et al,* (2003) reported that 51% of the caregivers thought that chloroquine alone was the best treatment for malaria and 12% indicated acetaminophen as the best treatment. Kilian (2003) has further indicated that between 81% of the rural mothers and 70% of urban mothers knew the correct dosage of chloroquine treatment for an adult, and between 37% and 30%, respectively, knew the correct dosage for a three year old child.

A study by Mangeni (2003) reported that the common anti-malarial drugs used to treat malaria in pregnancy were: sulfadoxine/pyrimethamine and chloroquine, though some women also (incorrectly) mentioned using Septrin and paracetamol as anti-malarial drugs (Mangeni, 2003). Similarly a study by the Delivery of Improved Services for Health (DISH) II 2002) also reported that most respondents knew about the existence of sulfadoxine/pyrimethamine; however, they did not know its dosage schedules, and in their view, sulfadoxine/pyrimethamine was perceived to be too strong for treatment of malaria in pregnancy. The study by Mangeni (2003) also reported a high tendency for pregnant women with fever to combine herbs with western medicine at the home and health facility level of treatment.

2.2.2 Beliefs and perceptions of malaria symptoms and treatment

Lubkin *et al* (2006) reported that, peoples' beliefs and perceptions of an illness, such as fever and possible treatments, play an important role in their health seeking behavior. The Health Belief Model has been used to describe health behavior and identifies four key triggers for behavior change which include; perceived susceptibility to the illness, perceived seriousness of the illness,

perceived benefits of the preventive action, and the perceived barriers to taking preventive action (Rosenstock *et al*, 1997). This operates within the socio-cultural and physical environment.

Several research studies have been carried out on peoples' perceptions and treatment seeking behavior. In a study by Deressa *et al* (2003), the seriousness of the fever and the benefits of treatment were found to influence health seeking behavior. It was reported that the response to most fever episodes commenced with home treatment, usually with anti-malarial drugs obtained from different sources and this may cause a delay in treatment seeking from formal health facilities. Mahamadou *et al.* (2000) stated that in Yanfolila, Mali, malaria was considered an ordinary disease not requiring a visit to the health centre for more professional advice, at least at the beginning of the illness. This was confirmed by the high percentage of mothers treating their children at home. Furthermore, in a study conducted in Tanzania, Shellenberg *et al.* (1999) found out that a large proportion of the children with malaria never got to the hospital and 80% of childhood deaths occurred at home. This was similar in South Western Uganda, where a study conducted in Mbarara District, revealed that more than 70% of people with malaria did not seek care from public health institutions preferring self medication (Nuwaha, 2002).

Still in rural Uganda, a study revealed that the proportion of mothers seeking care for sick children was low, which seemed to indicate barriers to accessing care (Mbonye, 2003). In addition, in Nigeria, from a sample of 200 mothers, only one mother who had a child with malaria reported to a health facility within 24 hours and 81% had given homecare before taking the children to the health facilities (Adenike *et al*, 2005). The perceptions of the benefits of seeking treatment for malaria were evident in a study carried out in Tanzania in which mothers

recognized the symptoms of fever but delayed in treatment seeking. This was attributed to the fact that mothers feared that on arrival at the dispensary, children would be diagnosed with an illness that was more serious than they had originally expected and the children would then be admitted in the health units. This would mean that the mothers would also have to stay with the children and not be able to return home to care for other children and family members (Kamat, 2006).

2.2.3 Influence of cultural factors on decision making

A number of cultural aspects that have an influence on decision making have been highlighted. In terms of treatment seeking, Kamat, (2006) said that often cultural settings require mothers, who are the primary care givers, to make decisions on the health of the children they take care of, and for themselves in case of pregnancy. In most of the cases studied in Mdafu village in Tanzania, treatment seeking for children at the dispensary was highly gendered and it was up to the mothers to make decisions and deal with their child's illness. It was reported that the males involved in the mothers' life were rarely seen at the dispensary. However, in a study carried out in Kabale, South Western Uganda, which is a strongly patriarchal society, Tumwesigire *et al.* (2002) noted that the children's caretakers, who were the mothers, were not empowered to initiate action, as the fathers, the main income providers, had to approve of when to start or stop a child's treatment. In another study carried out in Malawi, health workers and caregivers highlighted that the absence of family heads or other key decision makers from households often contributed to delays in seeking care (Chibwana *et al*, 2009).

In a similar study done in Nigeria it was noted that first-time mothers tended to consult their husbands before anyone else., whereas multi-gravid women would first go to their friends with previous experience with malaria in children to collect left over tablets before informing the child's father or male relatives. Neighbors and the extended family would then be consulted (Oladele *et al,* 2005). This process would go on before visiting a health facility or making decisions on treatment for the child, resulting in delayed treatment. Oladele (2005) also argued that whereas early diagnosis and treatment of malaria is a key component of malaria control, the decision as to whether a child is treated immediately is in the hands of its parents. This was further affirmed by Giao *et al,* (2005), who, concluded from a study carried out in Vietnam that the success of early diagnosis and treatment depended on health seeking behavior.

2.3 Malaria treatment options

Three treatment options for febrile children were identified by a study on treatment seeking behavior in Sudan, they included, consulting health workers; self medication; and traditional medicines and herbs (Abdalla *et al* 2007). In line with this, Uzochukwu *et al* (2004) argued that the factors which influenced what treatment sources people sought when symptoms occurred, included socio-cultural factors like beliefs and household decision making to seek care, social networks, gender and economic status. Anseso *et al* (1998) also said that the decision as to where to seek health care included many factors such as the availability of a provider within the community, reputation of the provider, perceived quality of the services, perceived cause of the disease, cost of treatment and arrangements for payment.

2.3.1 Self medication

A preference for self medication as the first choice of treatment option was found in studies from a number of African countries. This invariably delayed consultation with the formal health services. Self medication includes anti-malarial drugs sourced from drug shops, and drugs obtained from family members and neighbors. (Safari *et al*, 2009). In a study in Southern Sudan, about half of the people were found to practice self medication before visiting a health facility approximately three days later (Malik, 2006). Similarly, self medication, before seeking appropriate healthcare from health facilities was also reported in Kenya (Nyamongo, 2002) and in Tanzania (Yaneneh *et al* 1993; Comoro, 2003). In Uganda, Ndyomugenyi *et al* (2007) reported that 24.7% (n = 1627) of people who visited health facilities had practiced some form of self medication before visiting health facilities and consequently about two thirds of them reported to health facilities late (more than 24 hours after onset of illness). This finding has also been reported in Uganda by Nuwaha (2002).

Other studies reviewed indicated that there was high preference for home treatment of malaria which resulted in inadequate treatment and/or the use of drugs left over from previous treatment episodes (which in itself was a clear indicator of under-dosing) (Namusobya, 1998). A number of studies have shown that some consumers were taking drugs for periods considerably shorter than specified treatment periods - some as short as one day (Adome *et al*, 1996; Namusobya, 1998; Isabirye *et al*, 1998; Wanyama 1997). Various reasons were given by consumers for such drug use including: feeling recovered, failure to improve in expected time, feeling worse, forgetfulness, unpleasant side effects (especially vomiting and itching for chloroquine), multiple prescriptions and therefore difficulties in remembering instructions, unclear instructions from

drug providers, sharing of drugs at home, and sometimes lack of money to purchase all the prescribed drugs. (Kilian *et al*, 2003)

Namusobya (1998), in a study in Iganga, Uganda, also observed a high incidence of self-medication amongst male adults in the treatment of malaria. Wanyama (1997) and Bakika (1994) reported cases of poly-pharmacy among consumers, with tendencies of combining anti-malarial drugs with antibiotics. In a study in Kenya, a study by Sumba *et al*, (2008) noted that, the tendency of shopkeepers to provide drugs without anti-malarial properties had implications for the effectiveness of malaria treatment. It went on to emphasise that recovery rates among adults and children who initially visited a medical facility for malaria treatment were significantly higher than for those who relied on local shops as their initial source of treatment.

It is evident therefore that self medication contributes to delays in seeking appropriate health care. Self medication can also explain the observed failure to comply with national malaria treatment guidelines which in turn affects treatment outcomes and contributes to development of drug resistance.

2.3.2 Traditional medicines and herbs.

The use of traditional and herbal medicines is another malaria treatment option that has been identified in numerous studies in African countries (Abdalla *et al*, 2007; Oladele *et al* 2005, Shellenberg *et al* 1999). A study in Nigeria reported that self medication in the form of herbal preparations was considered the first line of treatment against malaria (Idowa *et al*, 2008). In Mali a study on malaria treatment seeking found that traditional treatment was widespread and in

the majority of cases it was the mother herself who prepared and administered the treatment (Mahamadou *et al*, 2000).

In a study on herbal medicines in Budiope County, Uganda, by Tabuti (2006), some community members interviewed stated a preference for self medication with herbal medicines. Their preferences were determined mainly by the fact that herbal medicines were free, were readily accessible and/or were also more effective than allopathic medicines. On the other hand, in the same study, traditional knowledge relevant to the treatment of malaria was found to be low and showed signs of declining because only 50% of the respondents claimed knowledge of how to treat malaria. (Tabuti, 2006).

A number of studies have ascribed the widespread use of herbal and traditional medicines to cultural beliefs about the cause and cure of illness (Abdalla *et al*, 2007). Among the Bwatiye of Nigeria, the local belief is that convulsions are not curable in the health facility and a sick child, taken to another village, out of reach of the local enemies, is likely to survive (Oladele, 2005). A similar understanding persists in Tanzania, where a locally defined illness characterized by fever and convulsions called *degedege* was unanimously believed to require traditional treatment (Makemba *et al*, 1996).

Likewise, Adenike *et al* (2005) conducted a study in Nigeria which showed that the caregivers were using alternative sources of health care manned by non professionals but it does not go on to explore the reasons as to why the alternative sources were a preferred method to taking children to the health facilities.

2.3.2 Formal Health Services

Accessing formal health services for malaria treatment is the third option reported in the literature and, as reported in numerous studies, is not usually the first option in most consumers minds (Ndyomugenyi *et al*, 2007). It is most often considered when home treatment is unsuccessful or when the symptoms increase in severity (Malik, 2006). The formal health services include private, government, or non-governmental organization clinics, health centers or hospitals, and private registered medical practitioners and pharmacies.

Of the various health facilities in this category, studies found that private clinics were generally preferred to public sector health centers for a variety of reasons including the availability of drugs and the speed and quality of service provided (Leku, 2000; Riisa, 2000; Lunniale and Rajais, 1996). Kengeya (1994) suggested that there was evidence that most malaria patients in Uganda seemed to be treated by private medical practitioners, with some purchasing anti-malarial drugs from pharmacies and drug outlets. Generally, public health facilities were considered the next alternative, although there is some criticism on the Malaria Control programme strategy that concentrates on health units for malaria treatment (Kengeya, 1994).

Although there is the expectation that formal health services provide appropriate malaria treatment, this is unfortunately not always the case, and in a study by Ndyomugyenyi (2006) it was revealed that the prescription practices of health staff in most health units often did not comply with the guidelines given by the Ministry of Health.

2.4 Community Medicine Distributors 4th option

In recognition of some of the challenges identified in ensuring accessibility and availability of appropriate malaria treatment the Home Management of Malaria (HMM) has been promoted as a strategy for improving accessibility to prompt and appropriate treatment for fever/malaria at community level (WHO/UNICEF, 2004; Winch *et al*, 2005; Kallander and Nsungwa-Sabiiti, 2009; Staedke *et al*, 2009)

This strategy was introduced by the Uganda government in 2002 by formalizing the already common practice of treating fevers without visiting the doctor by introducing the home-based management of fever strategy. The strategy involved teaching the mothers to recognize malaria symptoms at an early stage in their children. Sick children were taken to see a community volunteer, known as a community medicine distributor (WHO 2010). The distribution of antimalarial drugs and antibiotics at community level by community medicine distributors (CMDs) was one of the interventions recommended to reduce mortality from febrile illnesses (Rutebemberwa *et al*, 2009). The presence of community medicine distributors facilitated use of conventional health care but was also considered unreliable on several occasions. (Bakeera *et al*, 2009).

However, one of the challenges is the perception of the anti-malarial drugs distributed by CMDs. Some caregivers regard the drugs as weak (Nsabagasani *et al*, 2007) or ineffective (Malimbo et al, 2006) and some communities,in western Uganda, women did not like the use of pre-packed drugs (Kilian, 2003; Nsungwa-Sabiiti *et al*, 2007).

In conclusion, the CMDs offer the potential to combine accessible and appropriate treatment to the communities. This however requires training, facilitation as regards transport and a consistent supply of the recommended drugs for distribution. They would also require support supervision from the health workers in the communities to ensure that guidelines are being followed.

2.5 Accessibility

Whilst accessibility to malaria treatment is frequently highlighted as one of the factors influencing which treatment option is used by those who are ill or their caregivers (Onwejekwe *et al,* 2008). Several studies, however, have shown that it is only one of the factors impacting on consumer preferences. In the highlands of Kabale, in Southwest Uganda, Tumwesigire (2002) reported that, despite the good distribution of health facilities able to handle malaria patients, families and individuals tended to depend on self treatment or private clinics where drugs may be of doubtful quality. Byamugyisha (2008) goes on to report that, "Despite the fact that 90% of the households are within 2 km from the health facilities, several households do not visit the health facilities blaming it on the long distances".

Rutebemberwa *et al,* (2009) found out that, although both private and public providers were used for managing febrile illness, preferences were made for providers; where there was no waiting, that were open all the time, which were nearby, could give treatment on credit, had drugs and had diagnostic capability. The majority of participants in this study preferred drug shops which were nearby and were able to give treatment promptly, unlike government facilities which they said did not even give special attention to very sick children. This illustrates that accessibility is only one of the considerations when choosing where to access treatment.

Lindblade *et al*, (2000) in a study in Uganda found out that although the shops were not a preferred source of treatment, most respondents said that the shops had the advantage over other treatment sources of being nearby. Having extended opening hours was also mentioned in favor of drug stores (Sumba *et al*, 2008). So despite the vendor's shortcomings, for example, their often limited knowledge of drugs and stocking inferior drugs, they are still the preferred choice of many people due to their proximity (Whyte *et al*, 2002).

2. 6 Cost of malaria treatment

The costs of the treatment and arrangements for payment have been identified as other factors influencing the choice of treatment services (Anseso-Okyere *et al*, 1998). It has been reported that an African household spends approximately 2-25$ on treatment for malaria monthly, sometimes adding up to 5 – 13% of the total household expenditure (WHO, 1999). Byamugyisha (2008), in a study done in Eastern Uganda, observed that some households were not incurring any cost for children under five (1%), while others paid some figure less than 1000/= (0.7US$). The majority paid between 1000/= and 5000/= Uganda shillings (0.7 US$ and 3US$) for malaria treatment. This is a high cost for the poor households in the area. He also observed that during the survey, some of the children with malaria who were referred to Health Centre III for second line treatment did not want to go, citing lack of money, especially the costs of staying at the hospital if they were admitted.

In a study done in Uganda, government hospitals and health centers had an additional advantage over mission hospitals of low cost or no cost at all sometimes. Inspite of this, the cost of

treatment of malaria was seen to remain high. One practice that resulted in increased costs was that of first treating the illness with shop bought drugs with hope that such treatment would be sufficient and still ending up in the health units (Lindblade *et al,* 2000**).** This meant that the delays in seeking treatment from the health facilities was one of the main reasons why cost for the treatment of malaria remained high as opposed to the popular view that the actual cost of treatment at the health centre was high.

In a study carried out in Kenya, it was noted that access to money played a key role in the care seeking behavior of the people. In cases where the mothers did not have sufficient amounts to go to the hospital, they resorted to purchasing over the counter drugs cheaply as they searched for money and the condition worsened (Nyamongo *et al,* 2006). Whereas in a study carried out in Nigeria, there were indications that the introduction of user fees in the public sector resulted in a shift in the utilization of public services, increasing the use of other treatment sources such as private health facilities, drug vendors and traditional healers (Uzochkwu *et al*, 2004). A study in Tanzania, however, carried out by Kamat (2006) found out that it was clear that user fees alone do not deter the indigent, especially mothers from making their preliminary contact with the dispensary.

It was observed that the poorest households are more likely to use traditional medicine healers, patent medicine dealers and community health workers. These health care providers are likely to offer very low quality treatment and it is inequitable because they are the most important source of treatment of malaria for the poorest quartiles (Uzochukwu *et al*, 2004).

2.7 Perceptions of services

Perceptions of the services offered by the provider have already been mentioned as playing a role in the treatment option selected by consumers (Leonard, 2002). The way patients or caregivers are treated is considered important, including staff attitudes, waiting times and availability of drugs. In some settings poor quality of care, shortage of skilled providers, stock outs of essential drugs and long waiting times have also been confirmed by as factors that drove patients to seek care from more expensive non-governmental facilities as well as drug shops (Smith *et al*, 2010).

2.7.1 Health workers attitudes

The attitude of the health workers towards their clients is an important aspect of client satisfaction (Hetzel *et al*, 2008; Smith *et al*, 2010). Caretakers have been shown to bypass certain providers in Tanzania depending on what they consider as good quality of care provided, knowledge of staff, prescription practices and/ or customer care (Leonard, 2002). Smith *et al* (2010) in a study carried out in Ghana, stated that some women reported that they had been treated rudely, had been "shouted at", and at times denied a service when they complained. However, in the same study, others reported that the health workers had a warm attitude towards them when they reported for antenatal visits and treated them with patience and tolerance. This encouraged these women to return for repeat visits. In addition it was noted that the midwives seemed to react negatively towards the complaints from the mothers (Smith *et al*, 2010).

2.7.2 Waiting time

Several studies identified long waiting times as a disincentive to seeking care in government health facilities (Hetzel *et al*, 2008). In addition, long waiting and treatment times at public and

private facilities were recorded as reasons why caregivers use self medication and over the counter services (Nonvignon *et al,* 2010). In some cases the long waiting times at facilities seemed to mitigate the advantages gained by using transport to access facilities more quickly. (Yeboah-Antwi *et al,* 2001).

2.7.3 Drug availability

Lack of anti-malarial drugs or use of ineffective drugs, especially in areas with drug resistance to Plasmodium *falciparum,* causes delay in cure, severe disease or death and will encourage subjects to seek other means of treatment. This was affirmed by results in a study by Abdalla *et al* (2007) which identified that effective management of malaria requires the consumers and the care givers, to seek, obtain and use drugs appropriately. Frequent stock-outs of antimalarials and other essential medicines create a poor perception of the quality of care available from a health facility and have been shown to negatively impact on attendance at the facility (Hetzel *et al,* 2008).

2.8 Conclusion

This chapter reviewed previous research studies related to the malaria burden in Uganda, malaria treatment seeking behavior, knowledge, beliefs and perceptions of malaria symptoms and treatment and malaria treatment options. It also looked at perceptions of services, identified as affecting malaria treatment seeking behavior, such as the attitudes of the health workers, waiting time, and drug availability. The literature clearly shows that malaria is a problem in both pregnant women and under fives in Uganda. There is however need to explore further the reasons why pregnant women and caregivers of children under 5 years are presenting late at

health units. This study will also seek to investigate their current knowledge and understanding of malaria and their perceptions of the available treatment sources available to them.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the methods used to conduct the study are explained. These are: study design, setting of the study, study population, the procedures used in selecting participants for the focus groups and interviews, data collection and analysis, strategies to ensure trustworthiness of data, ethical considerations and study limitations (Burns & Grove, 1995).

3.2 Study design

A descriptive study using a qualitative research methodology was carried out. Qualitative methods were chosen because of their usefulness in exploring people's views and experiences (Kitzinger, 1994). This helped gain in-depth information on the beliefs, ideas, opinions, attitudes and behaviors of pregnant women and caregivers of under fives regarding treatment of malaria.

3.3 Study population

The study population included caregivers of children under five years and pregnant women who had had malaria, served by Busiu HCIV in Bungokho Sub County, Mbale District, and health care providers at Busiu HCIV.

3.4 Sampling and sample size

The study used 'purposeful sampling' to select 'information-rich' caregivers of children under five years and pregnant women who had had malaria. The records from Busiu HCIV general clinic and antenatal clinic were used to identify and select suitable caregivers and pregnant women, respectively. Local community leaders assisted with locating the study participants.

All four health care providers working at Busiu HCIV at the time of the study were included in the study.

This is a type of non-probability sampling in which subjects are selected because they are identified as knowledgeable regarding the subject under investigation (Frankel & Devers, 2000b). The researcher established certain characteristics thought to be representative to the target population and deliberately selected subjects according to the criteria (Burns & Groove, 1993).

3.5 Data collection methods and tools

3.5.1 Data collection methods

In this study, four focus groups were carried out, two with caregivers of children under 5 years who had had malaria, and two with pregnant women. One focus group consisted of caregivers of children who had had malaria and presented late at Busiu HCIV and the second consisted of those who presented early. Similarly, one focus group was carried out with pregnant women who had had malaria and presented late at Busiu HCIV and the second with pregnant women who had presented early. Each of the four focus groups was composed of eight participants. Subsequent to the focus groups, two caregivers and two pregnant women, who could provide information rich data, were identified from the focus groups for in-depth interviews.

Four in-depth interviews were also conducted with the health care providers from Busiu HCVI.

The discussions were held in Luganda, the local language. The focus groups were audio-taped and the recordings used to expand and clarify hand written notes. Each focus group discussion

began with a welcome, brief introduction of the research project and setting of ground rules. After the introduction, the discussions proceeded and each participant was given an opportunity to speak until a time when no new ideas were emerging. The reseacher moderated the focus group discussions, one research assistant took notes and the other did the tape recording. An attendance list capturing the age, sex, and educational level was used in registration. At the end of the focus groups, debriefing was carried out and some questions were asked to ensure clarity and completeness. A similar process was adopted for the four in-depth interviews with caregivers and pregnant women. Each in-depth interview took about one hour and the researcher and one research assistant were present for each of the interviews. The in-depth interviews with the four health service providers followed a similar pattern.

3.5.2 Training and pre-testing tools

Guides for the focus group discussions and in-depth interviews were developed and translated into the local language, Luganda, for use in the study (Appendices I and VII). Two research assistants, who had previous experience in health related surveys, whose role was to take notes and record the interviews, were recruited. A one-day training session on the focus group discussion and the key informant interview guides was carried out with the two research assistants. This introduced the research assistants to the study and helped them understand and internalize the data collection tools. A pretest of the focus group discussions and the interviews was conducted in one of the other health units within the area (Makhonge Health Centre III), serving a community with similar characteristics. The pretest involved one focus group discussion and one in-depth interview. This was done to help in refining the tools for the study. The questions were reviewed and improved for better responses.

3.5.3 Data management and analysis

According to Bailey (1997), qualitative data analysis is the process of systematically organizing any materials used in the survey such as field notes, interview transcripts and taped recorded notes so to be able to address the research questions. Key issues, concepts and themes were categorized accordingly to obtain detailed meaningful data for analysis.

This study used thematic analysis, where analysis was begun immediately after the focus group discussions. This helped in refining questions and identifying new avenues of inquiry. The transcripts were read repeatedly and coded independently by the researcher to capture the range of and the diversity of the participants' perceptions. The researcher analyzed content and elicited recurring themes related to the reasons for late presentation, reading transcripts and study listening to the tape recorded discussions from the focus group discussions.

Themes were based on those identified in the review of literature before the data collection (Bailey, 1997). Themes of interest were as follows; community knowledge and understanding of symptoms of malaria, malaria treatment, control practices and health care provision at health units. The data has been presented in the form of general concepts illustrated with quotations.

3.6 Strategies to Ensure Trustworthiness of Data

In order to ensure that the data were trustworthy, issues relating to the soundness of data were addressed. This included measures that addressed the following: credibility, transferability and confirmability of the data (Lincoln & Guba, 1985). Credibility as the degree to which the

research conclusions are sound was provided through a detailed description of the research setting and methodology. Data were also recorded using a tape recorder. Credibility was enhanced by triangulation using different data collections methods; in-depth interviews and focus group discussions, and with different groups of caregivers and pregnant women as well as health care providers (Mays & Pope, 2000).

Transferability or generalisability relates to the extent to which the findings can be generalized to other settings. In this study the information generated cannot be extrapolated for the general population but can be used to represent communities with similar characteristic to those of the study. It is provided through detailed and rich descriptions of contexts (Smalling, 1992). Clear statements of the theoretical basis of the research were also made so that other readers may determine the extent to which the results might apply to other settings. Dependability refers to the degree to which the reader can be convinced that the findings did occur as the researcher states they did. This was achieved through rich and detailed descriptions that show how certain actions and opinions are rooted and develop out of contextual interactions.

Confirmability refers to the extent to which the data confirms the general findings and are not simply the products of the researcher's bias. This was achieved by comparing the findings and interpretations to the wider literature and was also be done by giving feedback of the findings at the end of the interview to the participants and checking whether they agreed with them. At the end of the focus group discussions and in-depth interviews, the key points were summarized by the research assistants and presented to the participants to allow them to check whether the

information they had given was in line with what was recorded. Any changes and adjustments to the information were made immediately.

3.7 Study limitations

The study sample was small due to limited time and funds for the research. Usually, data collection would have continued until no new information is generated by the FGD's or interviews. The sample in this qualitative study is neither random, nor representative and whilst the information generated cannot be extrapolated to the general population, it can be used to represent communities of similar characteristics.

Some caregivers were suspicious of the implications of their participation in the study and expected a reward for participating in the study. This may have inhibited their level of participation especially at the beginning of the discussions when they came to know that they would not get any material compensation for their time.

Even though the health centre staff and records were used to identify pregnant women, it was still difficult to identify women in early stages of pregnancy (either because pregnancy may not be physically visible or they may have not disclosed it) and so women in the early stages of pregnancy may have been poorly represented in the sample.

The presence of tape recorders may have had an effect on the behavior of some of the participants who may have felt inhibited in the presence of recording devices. However, training

and practice was done to ensure that the researcher and assistants were able to put the participants at ease and encourage free and open participation.

3.8 Ethical considerations

The study involved human subjects but was not invasive. Permission to conduct the research was obtained from relevant ethical committees, political leaders and participants themselves. Ethical approval to carry out the study was obtained from University of the Western Cape Ethics Committee and permission was also obtained from the District Health Officer of Mbale District, the District Local Council and the Medical Officer in-charge of the concerned Bungokho Health sub-district (Appendix VI). Participation in the study was voluntary for the identified care givers, pregnant women and health care service providers and written informed consent was obtained after explaining the objectives and the benefits of the study..The participants were assured of confidentiality of the information shared during the focus group discussions and in-depth interviews and assured that their participation in the study would not affect their treatment in any way. The right of participants to withdraw at any point during the study was ensured. The identity of the participating health unit staff would be kept confidential unless they agreed to reveal it in the report (Appendices II, III, IV, V and VII).

The findings of the study will be disseminated to the District Health Officer, Mbale District and the District Health Team to enable them use the information gathered in this study to plan improvements in health service delivery in the district and community interventions regarding control and treatment of malaria.

CHAPTER 4: RESULTS

4.1 Introduction

This chapter presents the findings of the study exploring the factors associated with late presentation by caregivers of children under 5 years and pregnant women with malaria at their health unit. Focus groups and in-depth interviews were conducted with caregivers of children under 5 years of age and pregnant women, and in-depth interviews with health care providers, at the Busiu Health Centre IV.

The demographics of the four focus group participants are shown in Table 1. All the focus group participants were female and 31% (10) were in the 20-24 years age group. 63% (20) of participants had only primary level education, while two had tertiary education and so it was not surprising, therefore, that 75% (24) of the participants were peasants, dependant on small scale agricultural farming.

Subsequent to the focus groups, two caregivers and two pregnant women were selected for in-depth interviews, one from each of the focus group discussions held. These participants were identified during the course of the focus group discussions as being knowledgeable on the subject of discussion. All four health workers who worked in the unit were selected for in-depth interviews, two of the health workers were midwives working with the pregnant women but also doing outreach work in the community, and two were nurses working on the ward and outpatient area of the health unit. The demographics of the in-depth interview participants are shown in Table 2.

In all the focus group discussions, participation was active and participants freely shared their opinions and experiences. The women in these groups were knowledgeable on the subject and seemed interested in dealing with malaria in their communities. The in-depth interviews were also carried out in a relaxed environment and participation was good.

Table 1: Demographic profile of the focus group participants (N=32)

Demographic profile of focus group participants					
Age Group (years)	**Caregivers of children under 5 years**		**Pregnant women**		**Total n (%)**
	Late presenters	**Early presenters**	**Late presenters**	**Early Presenters**	
20-24	4	2	2	2	10 (31%)
25-29	0	1	3	2	6 (19%)
30-34	0	3	2	3	8 (25%)
35-39	2	1	1	0	4 (13%)
40-44	0	1	0	1	2 (6%)
45-49	2	0	0	0	2 (6%)
Sex					
Female	8	8	8	8	32 (100%)
Male	0	0	0	0	0 (0%)

Religion					
Catholic	3	0	2	3	8 (32%)
Protestant	3	5	4	4	16 (50%)
Pentecostal	2	1	2	0	5 (15%)
Moslem	0	2	0	1	3 (9%)
Education					
Primary	5	5	7	3	20 (63%)
Secondary	1	2	0	1	6 (19%)
Tertiary	0	1	0	1	2 (6%)
No education	2	0	1	1	4 (13%)
Occupation					
Peasant	7	7	8	2	24 (75%)
Business	1	0	0	5	6 (19%)
Formal employment	0	1	0	1	2 (6%)

Table 2: Demographic profile of the in-depth interview participants (N=8)

Category	Age	Religion	Education level	Occupation
Caregivers	22	Catholic	Tertiary	Teacher
	44	Catholic	None	Peasant
Pregnant women	29	Catholic	Primary	Peasant
	35	Protestant	Secondary	Business
Health Workers	25	Protestant	Tertiary	Nurse
	32	Moslem	Tertiary	Midwife
	40	Protestant	Tertiary	Nurse
	52	Protestant	Tertiary	Midwife

4.2 Malaria in Bungokho Sub County

During the focus group discussions with both the caretakers for the children under 5 years and the pregnant women, malaria was reported as being a very common problem in the community. They said it was most common during the rainy season - the months of April, May and June. Participants were concerned about the continued presence of malaria in the community;

> *"Malaria is too common, we are badly off, and malaria has caused a lot of death, moreso of our children. Malaria is too high in children; we are experiencing a lot of 'musujja' (fever)" (Care-giver)*

One caregiver whose children have suffered from malaria said;

> "*My children below three years are always falling sick because of malaria at least three times every year"*

In the in-depth interviews, the health care service providers said that the children under five and the pregnant women were the groups most commonly affected with malaria. One health care giver said;

> *"The major problem affecting pregnant women is malaria. This sometimes may cause bleeding in pregnancy, severe anemia, and the baby may die inside the womb or be born with a big spleen"*

4.3 Malaria control practices

The malaria control practices identified by the caregivers during the discussions included sleeping under insecticide treated mosquito nets (ITNs), general cleaning of the compound, spraying and creating drainage channels, personal hygiene, closing of doors and windows early, dressing young children appropriately and covering pit latrines. These were considered to be the friendliest measures although there was a complaint that the ITNs were expensive and that the organizations supplying them to the communities were not consistent. Some of the participants complained that the drug in the nets made their bodies itch and that they could not breathe well while sleeping under the nets. Although there were some complaints, all the participants said that if they owned mosquito nets, they would use them to control the spread of malaria in their homes.

In addition to the control measures identified by caregivers, both focus group discussions with pregnant women mentioned the taking of preventive drugs and house spraying as ways of controlling malaria. Drugs for spraying the houses were usually purchased from the pharmacies and preventive drugs were sometimes bought from the drug shops. However, these two control measures were considered expensive and although the participants knew about them they were rarely practiced.

In exploring the factors affecting late presentation at the health units, a number of key areas were investigated including knowledge and understanding of malaria symptoms and treatment, malaria treatment options and perceptions of care provision at the health units.

4.4 Knowledge and understanding of malaria symptoms

Symptoms of malaria identified in the focus group discussion with caregivers of children under 5 years who had presented early identified the symptoms of malaria as; vomiting, diarrhea, cough, high body temperature, body rash, body aches and sweating. In the focus group discussion with caregivers who presented late, some additional symptoms identified were fainting, sores around the mouth and convulsions.

Pregnant women in both focus group discussions identified similar malaria symptoms - high body temperatures, loss of weight, miscarriages, low appetite, vomiting, diarrhea and general body weakness. The pregnant women said that at times malaria causes bleeding during pregnancy and this could be a sign of danger.

The health care service providers identified similar symptoms and confirmed that the pregnant women and caretakers were able to correctly identify the symptoms of malaria in themselves and their children. The health care providers said that although patients knew what the symptoms of malaria were, they waited until the condition *"was very bad before coming to the health unit"*.

It was clearly seen in these discussions that the most affected by malaria were the children under five years old and the pregnant women, the young adults were also seen to be affected by malaria in this health sub district.

4.5 Malaria Treatment

In all the focus groups several areas where malaria treatment could be accessed were identified. These included; hospitals, health centres, clinics, drug shops, and community medicine distributors. Treatment for malaria was generally sought from the health units and some of the drugs identified as used at these unit included; Coartem, quinine, Panadol, Fansidar, Piriton and Septrin. With the caregivers who presented late, on several occasions when the sick were taken to the hospitals, they were put on 'drip' (given intravenous treatment) especially if they were in a serious condition. One of the participants from the focus group discussion of caregivers that presented early said that if one did not take all the drugs given at the health unit, then one would fall sick again and have to come back to the health unit. On whether everyone knows what malaria is and what treatment is offered, the members in both of the pregnant women focus groups said there had been outreaches to the community by the health workers, where they would educate the communities about malaria, so it was believed that everyone had the knowledge of malaria and its dangers as well as its treatment.

All the focus groups reported that there is a lot of self medication and people relied on the community medicine distributors to treat them using Coartem. Participants from both focus group discussions of caregivers said they prefer treatment from the community medicine distributors because they did not have to pay for it and the CMDs live within their communities and are easy to reach. They also said that they often buy drugs from the drug shops and keep them at home for use in case they get malaria and the CMDs have run out of stock.

In all the focus groups participants said they did not visit traditional healers for malaria treatment. However, in the in-depth interviews some of the caregivers and pregnant women revealed this was a practice in the area especially during the rainy period when there was a lot of malaria. The medicine men gave the patients concoctions that reduced the temperature and some believed they also treat malaria. In addition, some women said they knew of some herbs that treat malaria although these herbs were scarce in this village.

Caregivers of children who presented late said that some people visit churches first for prayers in the hope that they will improve and then when they do not improve that is when they go to the health unit. This was also confirmed in the in-depth interviews with the health workers who said that some emerging religious sects that do not believe in seeking medical care also prevent some of their members from attending hospitals until they are very ill and dying. One health worker said;

> *"They delay with the children and bring them when they are at the extent of putting on drip".*

4.6 Health care at the health units

4.6.1 Utilization of health units by pregnant women

Most of the pregnant women said they had attended the antenatal clinic at the health unit. The majority of the women in the focus group discussion of mothers who presented late said they had been to register, but only returned to the health unit when they had problems during the pregnancy. On further inquiry, six out of the eight women said they had come to the health unit for malaria treatment during the current pregnancy.

In the focus group with pregnant women who presented early, however, the majority of the women said they attended antenatal clinic regularly and had received prophylaxis for malaria during their regular visits. One of the participants complained about the medicine she had received for prophylaxis:

> *"the problem with the medicine is that it makes you vomit when you take it and you end up feeling weak"*

Pregnant women who presented early said they visited the health units as soon as they thought they might have malaria and they voiced their fears of an abortion if they stayed home.

> *'the warmth of the malaria in the womb will force the child to come out" they said.*

Some other reasons given as to why they visited the health units were that it was near, they could walk there and they also expected to get good treatment from the health unit which was usually free.

4.6.2 Utilization of health units by caregivers of children under five

The caregivers in both focus group discussions said they preferred to give some treatment, like paracetamol, to the children in the hope that the fever would reduce before they take the children to the health unit. This would usually be obtained from community medicine distributors. They said that having to pay for laboratory investigations prevented them from taking their children to the health unit.

Health workers confirmed that although caregivers are aware of the symptoms of malaria, they often waited until the children were in critical condition before they brought them to the health unit or hospital. They said that caregivers seemed to prefer self medication and treatment given to them by the community medicine distributors or nearby clinics. Unfortunately they are often given incomplete courses and the treatment is not successful. It is only when children had not improved using these treatments that caregivers brought their children to the health unit. Health workers felt this was largely due to the fact that the local community was very poor and did not have even the small amount of money required to pay for medicines or health services..

4.7 Barriers to utilizing the health units

There were several factors that were identified during the focus group discussions and in-depth interviews that seem to prevent the pregnant women and the caregivers from utilizing the health services available in the community. There are mainly two aspects and these are to do with access to care and the quality of the services provided.

4.7.1 Access

4.7.1.1. Lack of support from spouses and other family members

Some of the pregnant women reported that there was lack of support from their spouses when they became ill and they had to get to the health unit on their own. This was mentioned by both pregnant women who presented early and those that presented late.

Caregivers of children under 5 said they often did not have anyone to look after other children at home whilst they took and stayed with a sick child at the health unit. One caregiver who had presented early said:

> *"I have other children so I have to arrange how I leave them before I take the sick one to the health unit. One time, I even had to go with two children because I failed to get someone to stay at home with them"*

4.7.1.2 Cost of treatment

Participants from all the focus groups stated that there were costs attached to visiting the health unit. This was sometimes for laboratory tests, syringes, and sometimes drugs. Caregivers of children that presented late said they did not have money to pay at the health unit when sickness struck and they needed to first *"look for it"*. They said that whilst they were trying to find the money, the children would often got worse and by the time the children were taken to the health unit they were very sick.

4.7.2 Quality of service

4.7.2.1 Rudeness of staff

The pregnant women were not satisfied with the services they received at the health unit. They complained of rude health workers who seemed to be overworked and had very little time for them individually.

4.7.2.2 Long queues

All focus group participants commented that they thought malaria was managed well at the health units. They were, however, discouraged by the long queues at the unit which they felt was due to the small numbers of health workers working at the unit.

"Sometimes the line is so long and the child just gets worse when you are waiting"

Both pregnant women and caregivers appeared to be afraid of health workers at the unit. When asked why they did not approach the health worker as soon as they got to the unit when their child was very sick, a caregiver of children under 5 who had presented late had this to say about the health workers.

"They already seem tired in the morning and I fear that they will bark at me, besides it is the order at the unit to wait in the line until it is your turn."

Health workers said that they are understaffed and overworked. This was the reason for the long queues at the health unit which they recognized sometimes discouraged pregnant women and caregivers from coming to the health unit.

4.7.2.3 Lack of drugs

Care-givers, pregnant women and health workers all said that lack of drugs at the health unit often discouraged the caregivers and pregnant women from coming to the health unit.

> *"We often have stock outs and require the patients to purchase some of their drugs from the pharmacies outside the hospital"(Health workers)*

Pregnant women pointed out the lack of drugs at the health unit. They said they are often told to buy the prescribed drugs from the pharmacies outside the health unit or in the town. As a result some of the women said that they thought it was a waste of time to try to get to the health unit only to be told to buy drugs at the drug stores.

> *"Every time I go to the health unit I am told to buy drugs from the clinic. That is why if I know what drug they always give me I first buy it unless the 'musawo' (health worker) is going to change the treatment."*

The health workers during the in-depth interviews said that patients were open to treatment given to them at the health unit although they seemed to prefer self medication and treatment given to them by the community medicine distributors. Patients often visit the health unit if they have not improved on the treatment received.

4.8 Conclusion

This chapter covered the results and findings of the study. The next chapter will present a detailed discussion on the research findings comparing them to what is already known on the

study topic. A subsequent chapter follows with the conclusions and recommendations drawn from the main issues of the study.

CHAPTER FIVE: DISCUSSION

5.1 Introduction

The study established that late presentation by caregivers and pregnant women at health facilities seemed to revolve around caregivers and pregnant women's knowledge and perceptions of malaria symptoms and treatment; and perceptions related to the health facilities and service delivery. Community medicine distributors were major sources of malaria treatment in this community and their role in the provision of malaria treatment seemed to be an area that requires further investigation.

5.2 Knowledge and perceptions of malaria symptoms and treatment

The study found that caregivers of children under five, and pregnant women had good knowledge of the general symptoms of malaria, although there appeared to be a lack of knowledge of severe symptoms and understanding of the urgency associated with them .This as supported by other studies in Uganda that indicated improved knowledge of symptoms and treatment of malaria Makanga (1997), MOH (2009), Okello (2001), and one done in Fortportal, an urban area in Western Uganda (Kilian, 1994). According to Tanner (1998), early treatment depends on prompt recognition of symptoms and signs of malaria in the household, which is mainly the prerogative of women. An interesting finding of this study was that, although caregivers of children in this community were predominantly women, they more likely to delay in consulting health facilities for treatment of their children than pregnant women were for their own care.

5.2.1 Caregivers

The main reasons why caregivers of children delayed presenting at health facilities were two-fold. First of all, caregivers tended to think that malaria was commonplace and something to deal with themselves at home (self-care), rather than by visiting a health facility This is similar to a report by Adenike *et al*. (2005) from Nigeria which revealed that from a sample of 200 mothers, only one mother who had a child with malaria reported to a health facility within 24 hours and 81% had given homecare before taking the children to the health facilities. Another study carried out in Mbarara District in South Western Uganda revealed that more than 70% of people with malaria did not seek care from public health institutions preferring self medication (Nuwaha, 2002). The practice of self medication, using drugs obtained from drug stores or left over drugs from previous malaria episodes often contributed to delays. An issue related to these sources is the high possibility of incorrect treatment. Studies from Tanzania, Kenya and Uganda reported that there was high preference for home treatment of malaria which resulted in inadequate treatment and/or the use of drugs left over from previous treatment episodes. Studies also showed that some consumers were taking drugs for periods considerably shorter than specified treatment periods. (Adome *et al* 1996, Namusobya 1998, Isabirye and Wendo 1998, Wanyama 1997). Similarly self medication, before seeking appropriate healthcare from health facilities was also reported in Kenya (Nyamongo, 2002). More recently, in this community, CMDs have become an important source of home treatment in the community.

Unfortunately, it was reported that severe malaria symptoms, such as convulsions and anemia, are associated with causes such as witchcraft and this seemed to impact negatively on early presentation of children under five to health units. These symptoms were believed to be treatable

by traditional herbalists and witch doctors and caregivers took children to the traditional healers for treatment which delayed visits the health units. This phenomenon was similar to that in Tanzania reported by Makemba et al (1996) where belief in witchcraft contributed to significant delays in seeking treatment from the health units. In this study, the health workers confirmed that the caregivers often visited the traditional healers before visiting the health units for treatment. Children were therefore often delayed and only taken to the health facilities when they are in critical condition.

5.2.2 Pregnant women

In this study, pregnant women seemed better able to link dangerous signs and symptoms with malaria, rather than witchcraft or other cultural or spiritual causes. The current antenatal programs by the Ministry of Health Uganda include health education on all the possible dangers related to pregnancy and malaria is given prominence (MOH, 2009). However, this study seemed to indicate that it was not only the knowledge of malaria acquired through antenatal visits, but fear of the consequences of malaria on themselves and their unborn children such as abortion which motivated them to present early at health units. This may be because the pregnant women experience the malaria symptoms themselves, which makes them different form the caregivers of the children under five. Health workers in this study confirmed that pregnant women visited the health units for antenatal visits often and were given the intermittent presumptive treatment (anti-malaria drugs given twice at three month intervals during pregnancy)as long as the drugs were in stock. Therefore, it appears that pregnant women tend to be more motivated to protect their unborn children, which drives them to seek for more knowledge and in the process improve their

presentation to health units for both intermittent preventive treatment (IPT) and treatment in case of malaria compared to the non-pregnant health caregivers.

5.3 Health facilities

The second major area that contributed to late presentation concerned the actual health facilities themselves. This included both concrete factors and perceptions and included access to treatment; the cost of drugs and sundries, as well as the quality of care, provided at the health units. In addition, poverty in this community appeared to be a large contributor in shaping community preference for treatment sources, as well as influencing early presentation to the health units for treatment of malaria.

5.3.1 Access

Easy access to advice and treatment of malaria has been identified as important in treatment seeking behavior. In this study, the travel time to health units created a negative perception of service at the health units and provided an additional disincentive for prompt treatment seeking. Although distances to the health units in the study area ranged between 2km to 5km and therefore within walking distance by pregnant women and caregivers of children under five, they still seem to discourage visits to the health units in search of treatment for malaria. In order to avoid walking to the health units both caregivers and pregnant women incur costs of transport. They often use hired motorcycle transport which costs between Uganda Shillings 2000 to 5000 (USD 1 to 2.5) for a return journey. This is too expensive for most households in the study area to afford and often discourages early treatment seeking. This seems to be a common problem not only in Uganda but also in other African countries. Several studies have identified long travel

time as a disincentive to seeking care in government health facilities. For instance Hetzel *et al*, (2008) reported the existence of similar conditions in Tanzania. Accessibility was also emphasized in a study by Lindblade *et al* (2000) in Uganda where the advantage of the short distances to the drug shops in the community had patients seeking treatment from the nearby drug shops.

It was clear in this study that lack of support from spouses to take pregnant women to health facilities when they were sick and to take care of the rest of the family in case a mother had to take her child to the health facility, prevented mothers from taking their children to health units when they had malaria. These study findings were in harmony with Kamat (2006) in which mothers recognized the symptoms of fever, but delayed in seeking treatment because they feared that on arrival at the dispensary, children might be diagnosed and admitted with an illness that was more serious than they had originally expected. This would mean they would have to stay at the dispensary leaving no-one at home to care for the rest of the family. This lack of support from spouses appears to seriously impact on late presentation at health facilities as mothers have to take time organizing for alternative care and support from relatives and neighbors before taking the sick children to hospital. The foregoing suggests that men's involvement and cooperation is important in the improvement of access to prompt treatment of malaria. In order to encourage prompt treatment seeking behavior for pregnant women and children under five, any such interventions would have to include measures that emphasize spouse/men's involvement in health management at household level.

5.3.2 Cost

Another aspect which contributed to late presentation at the health units was associated with the costs incurred at the health units. It was established that health units sometimes charged fees for laboratory tests when a child was brought to the health unit. Caregivers reported that when illness struck they would have to first find the money to cater for the costs for sundries and laboratory tests in case they were requested to pay for them, before taking their children to health units. Therefore, these charges discouraged early presentation of malaria cases because caregivers were not prepared for illness and therefore had to take time to look for the money to cover these unexpected costs. This is in agreement with a study by Anseso-Okyere *et al* (1998) that identified the cost of the treatment and arrangements for payment as a major factor influencing the choice of treatment services.

The issue of poverty in the community was also a big contributor to shaping community preference for treatment sources as well, as a deterrent to early presentation to the health units. Low household incomes evidently reduced the caregivers' abilities to afford costs related to treatment seeking at public health units. Health workers in this study seemed to think that poverty in the community contributed significantly to late presentation for treatment. As earlier reported, caregivers and pregnant women are required to pay for laboratory test, sundries and drugs whenever stock outs occur. In case of admission, pregnant women as well as caregivers of children under five have to meet all the living costs at the health unit including food, water, and drinking water while receiving treatment at the health units. This increases the cost of obtaining treatment from the public health units which was confirmed by the health workers that delayed treatment was largely due to the fact that the local community was very poor. Uzochkwu *et al*

(2004) also observed that children from households with lower socio economic status were more likely to delay in receiving treatment from the public health facilities.

The foregoing underlines the fact that access to and utilization of treatment services at public health units is related to the household incomes in the community. Since improvement of household incomes is very important yet a long term measure in the improvement of treatment seeking, there is need to improve malaria control in the community members, at their current income levels, by involving them in clearing the environment to rid it of mosquito breeding areas. The use of mosquito nets (ITNs) should also be emphasized through community sensitization and free distribution of nets. There is need for free treatment for malaria including free laboratory tests which would improve access and utilization of public health units

5.3.3 Quality of Care

Perceptions of the quality of services provided at the health units appeared to influence presentation of pregnant women and children at the units for treatment of malaria. The main concerns were included health workers attitudes and behaviors, waiting times and drug availability.

5.3.3.1 Attitude and behavior of health workers

The study participants reported that health workers were sometimes rude to the caregivers and the pregnant women when they visited the public health facilities for treatment. This discouraged them from visiting health units, whereas more friendly behavior would have encouraged them. Some said that fear of being “barked at” kept them from visiting the health centers until they had

exhausted all other possible alternatives. In other countries, such as Tanzania, Leonard (2002) reported that caregivers bypassed certain health care providers partly in consideration of, among other factors, the attitudes of staff and the quality of customer care.

Similarly, Smith (2010) also reported that attitudes of health workers were probably the most significant influence on client and patient satisfaction and choice of health care providers. Therefore the negative attitude among health workers reported in this study seems to have a lot of influence on treatment seeking behavior. Although this negative attitude may be related to general understaffing and the stress arising from work overload, health workers generally lack adequate training in customer relation skills. There is also a general laxity in the enforcement of patient care standards among frontline health workers. This was, from personal observation, exacerbated by the absence of channels through which patients or their caregivers could report on the behavior of public health workers to their relevant authorities in order to bring about positive change. Health workers in this study agreed to the fact that they were understaffed and often overworked but did not commit to the notion that they were rude to the patients. They said that if at any time they showed their displeasure at the caregivers and pregnant women for reporting late, this was interpreted as being rude. They however welcomed suggestions of improvements including support supervision and improved staffing.

Improvement of the performance of frontline health workers in patient care practices would require interventions to improve patient relation skills and enforcement of patient care standards which would need to be combined with constant review of staffing requirements of the health units. Introduction of client and patient feedback mechanisms could also be a necessary part of

such interventions. Health units therefore require improved management practices as a way of improving the overall quality of patient care experience so that the care givers and pregnant women can be encouraged to present early for malaria treatment.

5.3.3.2 Waiting time

The long waiting times at health units also contributed significantly towards the negative perception of service at the health units. Within the study area, as reported during the focus group discussions, the minimum waiting times for the treatment of malaria at health units ranged between 2-6 hours depending on the length of the queue. Rutebemberwa *et al* (2009), in another study in Uganda established that in malaria treatment seeking, preferences were made for providers where there was no waiting. The problem of long waiting times seemed to be due to a general understaffing in health units that resulted into a low staff patient ratio as well as persistent late reporting to work by health workers. For those who could afford hired motorcycle transport, the long waiting times at health units negated the time savings generated by use of faster means of transport.

As previously indicated, introduction or strengthening of improved management practices in health units that cover support supervision, constant review of staffing requirements and client feedback mechanisms and enforcement of patient care standards also seem to be a key element in mitigating the effect of long travel and waiting times experienced by pregnant women and caregivers of children under five seeking malaria treatment.

5.3.3.3 Drug availability

Health workers identified frequent stock outs of drugs in the health units as negatively influencing treatment seeking for malaria. The problem of intermittent stock-outs seems to be pervasive in public health units and in some cases has been the cause of preference for private health units, because private health units often have a steady supply of drugs and all the necessary sundries required for proper medication (Kengeya, 1994).

In public health units, supplies of laboratory reagents, drugs and sundries are made by one sole government agency, the National Medical Stores (NMS), however, steady supply requires timely ordering by the health units so that the NMS can also supply on time. It has been reported, by the Ministry of Health supervision teams, that in many cases, requests for supplies are not made on time, and as deliveries by the NMS are demand driven and require the necessary paperwork to be processed (DELIVER, 2009) . The problem of lack of timely submissions may be related to the general problem of understaffing in public health units, although this was not confirmed from this study. Ensuring uninterrupted supplies of essential drugs, laboratory reagents and sundries to public health units is important to build the confidence of the communities and reassure them of malaria treatment services without requesting them to pay for such sundries since stock outs will not occur (Leahy *et al*, 2009). Communities will consequently be motivated to bring their patients more promptly because of the assurance of a reliable free service.

5.4 Community Medicine Distributors

In this study, it was revealed that the caregivers and pregnant women preferred home treatment and relied heavily on CMDs for treatment. This is similar to what was reported in a study by

Bakeera *et al*, (2009) that the presence of community medicine distributors facilitated use of conventional health care, improving accessibility to prompt and appropriate treatment for fever/malaria at community level (Kallander and Nsungwa-Sabiiti, 2009; Staedke *et al*. 2009). Although the CMDs were introduced to promote home management of malaria in recognition of some of the challenges identified in ensuring accessibility and availability of appropriate malaria treatment, as a recommendation by the WHO/UNICEF (2004), they have tended to replace the formal health workers in the public health units.

Preference for the CMDs by the communities is legitimate because their services are community based, free and save the caregivers travel costs and waiting time experienced at the health units. However, while the CMDs are given doses for first line early treatment cases of malaria, all cases including severe malaria cases are taken to the CMDs who are not capable of effectively handling them. In order to improve early presentation for treatment of malaria, definition of the role of CMDs should be clarified in the communities, referrals emphasized during their training and support supervision from health workers strengthened. Emphasis should also be made on the need for correct dosages and problems of stock outs addressed (MASCIS, 2009).

5.5 Conclusion

This chapter covered the discussion of findings of the study. The findings focused on the caregivers and pregnant women's knowledge and perceptions of malaria symptoms and treatment and factors influencing their choice of treatment. The next chapter will present conclusions and recommendations drawn from the main issues of the study.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The key conclusions of this study were that whilst caregivers were aware of the symptoms of uncomplicated malaria, they frequently associated more severe and dangerous symptoms with other causes including witchcraft. This resulted in them seeking help from traditional medicines and healers, rather than formal health services. Pregnant women, on the other hand, seemed to have sound knowledge of the symptoms of both uncomplicated and more severe malaria and, in general, sought help from the formal health services for treatment.

Religious beliefs and practices, particularly beliefs in the healing ability of prayers, and seeking alternative treatment of malaria from traditional herbalists, seemed to have a significant negative influence on prompt malaria treatment seeking behavior. Further investigations are required to inform public health interventions that counter such religious views in the study area.

There was a reported lack of support from spouses (in particular husbands) which prevented mothers from taking their children to health units promptly. It is important that any interventions to increase early presentation of malaria cases to health units should pay special attention to sensitizing communities on the need to seek prompt treatment for children at the health units within 24 hours of the onset of fever during the rainy seasons, without waiting for the danger signs. These interventions should also include measures that emphasize spouse/men's involvement in health management at household level.

There appeared to be a strong preference for CMDs in this community, mainly because of the free services and their easy access. This was emphasized by the poverty in the community which seemed to be a big contributor in shaping community preference for treatment sources, as well as early presentation to the health units. There was therefore need for the definition of the role of CMDs in the communities. It was also noted in this study that the cost of laboratory tests and sundries at the health units prevented caregivers from taking children under five to health units. The rude behavior of health workers, long waiting time as well as intermittent drug stock-outs also created a negative perception of service at the health units and discouraged visits to health units.

Health units also require improved management practices as a way of improving the overall quality of patient care experience so that the care givers and pregnant women can be encouraged to present early for malaria treatment. Introduction or strengthening of improved management practices in health units that cover support supervision, constant review of staffing requirements and client feedback mechanisms and enforcement of patient care standards seem to be a key element in mitigating the effect of long travel and waiting times experienced by pregnant women and caregivers of children under five seeking malaria treatment.

6.2 Recommendations

In order to improve the presentation for treatment of malaria at health units by pregnant women and caregivers of children under five, a variety of areas need to be addressed. The following recommendations are made:

1. Sensitization of communities on the need to seek prompt treatment for children under five years of age at the health units (that is, within 24 hours of the onset of fever). Issues around severe symptoms, traditional and cultural beliefs and practices should particularly be addressed.

2. Interventions, including community education and mobilization programmes, to increase spousal involvement in treatment-seeking at household level should be implemented in the district.

3. Training and supervision of CMDs should be strengthened to ensure correct dosage of anti-malarial medication; strategies to mitigate medicine stock outs; and improvements in the referrals to the health units.

4. Expansion of CMDs services to all areas within the district to improve access to malaria treatment.

5. Ensure adequate stocks of anti-malarial drugs and laboratory supplies at health centers.

6. Review and strengthen human resource management of the health units to improve quality of service delivery, including staffing requirements and management practices, such as support and supervision, patient care standards and client feedback mechanisms.

REFERENCES

Adenike, A.E., Olagun, O.A., Olayinka, O.A., Abayome A. and Folasade O. (2005). Home-management of childhood febrile illnesses in a rural community in Nigeria. *Australian Journal of Rural Health,* 13: 97 – 101.

Alinafe, C.I., Mathanga, D.P., Jobiba, C. and Campbell, C.H.Jr. (2009). Socio-cultural predictors of health seeking behaviour for febrile under-five children in mwanza-neno district, malawi. *Malaria Journal,* 8: 219.

Amuyunzu-Nyamongo, M. & Nyamongo, I.K. (2006). Health seeking behaviour of mothers of under-five-year-old children in Slum communities of Nairobi, Kenya. *Anthropology & Medicine.* 13(1): 25-40.

Ario, F. (1990). *Knowledge, Attitudes and Practices About Malaria Prevention Among Community Members In Tororo District.* (Unpublished paper). Makerere University Institute of Public Health.

Bakeera, S.K., Wamala, S.P., Galea, S., State, A., Peterson, S., and Pariyo, G.W. (2009). Community perceptions and factors influencing utilization of health services in Uganda. *International Journal for Equity in Health,* 8:25.

Bakika, J. (1994). *Management of malaria within households in Mpigi district, women behaviour, attitudes and practice in initial management of malaria.* (Unpublished). Child Health Development Centre: Makerere University, Kampala.

Barat, L.M., Palmer, N., Basu, W.E., Hanson, K., Mills, A. (2004). Do malaria control interventions reach the poor? A view through the equity lense. *American Journal of Tropical Medicine and Hygiene*. 71:174-178.

Bosnan, A. & Mendis, K.N. (2007). A major transition in malaria treatment: The adoption and deployment of artemisinin based combination therapies. *American Journal of Tropical Medicine Hygiene*, 77: 193-197.

Brinkmann, U. & Brinkmann, A. (1991). Malaria and Health in Africa: the present situation and epidemiological trends. *Tropical Medicine and Parasitology*, 42:204-213.

Budhathoki, C.B. (2008). Perceptions of Malaria and patterns of treatment seeking behaviour among Tharu and Pahari communities of Jhalari. *Journal Nepal Health Research Council*, 6(13): 84 -94.

Burns, N. & Grove, S.K. (2005). *The Practice of Nursing Research; conduct, critique and utilization.* Missouri, Elsevier.

Byamugyisha J. & Walakira E. (2008). *Local Area Malaria Programme Support, A Baseline Study*. Makerere University.

Caldwell, J.C., Gajanayake, I., Caldwell P., & Peiris, I. (1989). Sensitization to illness and the risk of death: an explanation to Sri Lankas approach to good health for all. *Social Science and Medicine*, 28(4):365-379.

Comoro, C, Nsimba, S.E.D., Warsame, M., Tomson, G. (2003). Local understanding, perceptions and reported practices of mothers/guardians and healthworkers on childhood malaria in a Tanzanian district-implications for malaria control. *Acta Tropica.* **87:**305-313.

Cottrell, G., Deloron, P., Fievet, N., Sow, S., Gaye, O., Le Hesran, J.Y. (2006). Prediction of Plasmodium falciparum placental infection according to the time of infection during pregnancy. *Acta Tropica.* 98(3):255-260.

D'Souza, R. M. (2003) Role of health seeking behaviour in child mortality in the slums of Karachi, Parkistan. *Journal of bio-Social Science,* 35: 131-144.

DISH II (2002). *Home management of fever in under five and pregnant women in Uganda: A qualitative research.* DISH II, Kampala.

Don de Savigny, Mayombana, C., Mwadeni, E., Masanja, H., Minhaj, A., Mkilinde, Y., Mbuya, C., Kasale, H. and Reid. G. (2004). Care seeking patterns for fatal malaria in Tanzania. *Malaria Journal* . 3:27.

Duffy, P.E., Fried, M. (2005). Malaria in the pregnant woman. *Curr Top Microbiol Immunol.* 295:169-200.

Frankel, R.M. & Denvers, K.J. (2000b). Study Design In Qualitative Research-1: Questions And Assessing Research Needs. *Education for Health.* 13: 251-261.

Giao, P.T., Peter J. de Vries, Binh, T.Q., Nguyen, V. N. and Kager. P.A. (2005). Early diagnosis and treatment of uncomplicated malaria and patterns of health seeking in Vietnam. *Tropical Medicine and International Health*, 10 (9):919-925.

Goldstein, S., Coulson, N. and Ntuli, A. (1998). *Promoting Health in South Africa. An Action Journal*. Heinemann. 63-64.

Hetzel, M.W, Dilip, A., Lengeler, C., Obrist, B., Msechu, J., Makemba, A., Mshana, C., Schulze, A., and Mshinda, H. (2008). Malaria treatment in the retail sector: Knowledge and practices of drug sellers in rural Tanzania. *BMC Public Health,* 8:157.

Hossain, S. M., Bhuiya, A., Rasheed, S., (2001). Correlates of perceived malarial episodes and treatment seeking behaviour in a malaria endemic rural area in Bangladesh. *South East Asia Journal of Tropical Medicine and Public Health*, 32(4) 707-719.

Ibidapo, C.A. (2005). Perception of causes of malaria and treatment-seeking behaviour of nursing mothers in a rural community. *Australian Journal of Rural Health*, 13:214–218

Idowu, O.A., Mafiana, C.F., Luwoye, I.J., Adehanloye, O. (2007). *Perceptions and home management practices of malaria in some rural communities in Abeokuta, Nigeria:* Department of Biological Sciences, University of Agriculture, Abeokuta, Nigeria.

Idro, R., Bitarakwate, E., Tumwesigire, S. and Chandy C.J. (2005). Clinical Manifestations of Severe Malaria in the highlands of South Western Uganda. *The American Journal of Tropical Medicine and Hygiene*, 72(5) 561-567.

Kallander, K., Nsungwa, S.J. (2009). Home based management of malaria in the era of urbanization. Lancet. May 9;373(9675):1582-4

Kamat V.R. (2006). "I thought it was only ordinary fever!" cultural knowledge and micropolitics of therapy seeking for childhood febrile illness in Tanzania. *Social Science and Medicine*, 62 (2006)2945-2959.

Kengeya, K.J.F., Seeley, J.A., Kajura, B.E., Kabunga, E., Mubiru, E., Sembajja, F., Mulder, D.W. (1994). Recognition, treatment seeking behaviour and perception of cause of malaria among rural women in Uganda. *Acta Tropica*. 58 (3-4):267 -73.

Kilian, A. H., Tindyebwa, D., Gulck, T., Byamukama, W., Rubaale, T., Kabagambe, G., & Korte, R., (2003). Attitude of women in Western Uganda towards pre-packed unit-dosed malaria treatment for children. *Tropical Medicine and International Health*, 8:431-8.

Kilian, A.D.H. (1993). *Malaria situation analysis in Kabarole and Bushenyi Districts.* (Unpublished), GTZ basic Health Services Project, Fortportal.

Kitzinger, J. (1995). Qualitative Research: Introducing Focus Groups. *British Medical Journal*, 11:299-302. [Online], Available: http:www.bmj.com/cgi/content/full/311/7000/299 [9/19/2000 11:56AM]

Kitzinger, J. (1995). The methodology of focus groups: the importance of interactions between research participants. *Sociology of Health and Illness*, 16:103-121.

Kiwanuka, G.N. (2003). Malaria morbidity and mortality in Uganda. *Journal of Vector Borne Diseases.* 40(1-2):16-19.

Lalloo, D.G., Olukoya, P. and Olliaro, P. (2006). Malaria in adolescence: burden of disease, consequences, and opportunities for intervention. *Lancet Infectious Diseases.* 6:780-93.

Leahy, E. and Akitobi, E. (2009). *A case study of Reproductive Health Supplies in Uganda*. Population Action International.

Lincoln,Y.S., Guba, E.G. (1985). *Naturalistic inquiry.* Beverly Hills: Sage

Lubkin, I.M. and Larsen, P. (2006). *Chronic Illness: Impact and Interventions*. Jones and Bartlett Publishers Inc. Masssachusetts.

Lynch, K.I., Beach, R., Asamoa, K., Adeya, G., Nambooze, J. and Janowsky, E. (2005).

MACSIS. (2009). Counting Malaria out in Partnership with CSOs. A final draft report on the process and outcomes of the Fresh Air Malaria Technical Update and Coodrination Workshop held at Hotel Africana, Kampala, Uganda. 31st march to 2nd April 2009.

Makanga, L.M.K. (1997). *Malaria control methods used by the community in peri-urban area Ndeeba parish, Kampala* (Unpublished). Makerere Medical School- Makerere University Kampala.

Makemba, A. M., Winch, P.J., Makame, V.M. (1996). Treatment practices for degedege, a locally recognized febrile illness, and implications for strategies to decrease mortality from

severe malaria in Bagamoyo District, Tanzania. *Tropical Medicine and International Health* 1:305-313.

Makundi, E.A., Malebo, H.B., Mhame, P., Kitua, A.Y., Warsame, M. (2006) Role of traditional healers in the management of severe malaria among children below five years of age: the case of Kilosa and Handeni Districts, Tanzania. *Malaria Journal* . 5 :58.

Malik, E.M., Kamal, H., Salah, H.A., Eddirdieri S.A., Khalid A.M. (2006). Treatment seeking behaviour for malaria in children under five years of age: implication for home management in rural area with high seasonal transmission in Sudan. *Malaria Journal,* 5: 1186/1475.

Malimbo, M., Mugisha, E., Kato, F., Karamagi, C., & Talisuns, A.O., (2006). Caregivers perceived treatment failure in home based management of fever among Ugandan children aged less than five years. *Malaria Journal.* 5:124.

Mangeni, J.B.W. (2003). *Analysis of acceptance and compliance with intermittent presumptive treatment (IPT) in Busia district, Eastern Uganda.* (Unpublished). Dept of Sociology Makerere University Kampala.

Mbonye, A.K. (2003). Prevalence of childhood illnesses and care taking practices in rural Uganda. *Scientific World Journal*. 3: 721 – 730.

Mbonye, A.K., Asimwe, J.B., Kabarangira, J., Nanda, G., Orinda, V. (2007). Emergency obstetric care as the priority intervention to reduce maternal mortality in Uganda. *International Journal Gynaecology Obstetrics.* 96(3):220-225.

MOH 2003. *Policy and Strategy for ITNs. Malaria Control Program*. MOH Kampala

MOH 2008. Ministry of Health Uganda. http://www.health.go.ug

Murphy, S.C.& Breman, J.G. (2001). Gaps in the childhood malaria burden in Africa: cerebral malaria, neurological sequelae, anemia, respiratory distress, hypoglycemia, and complications of pregnancy. *American Journal of Tropical Medicine & Hygiene.* 64(1-2 Suppl):57-67.

Namusobya (1998). *Factors awith high morbidity and mortality due to malaria in Iganga district – Uganda* (Unpublished). District Medical Office. Iganga.

Ndyomugenyi, R., Magnussen, P., Clarke, S. (2007). Malaria treatment seeking behaviour and drug prescription practices in an area of low transmission in Uganda: Implication for prevention and control. *Transactions of the Royal Society of Tropical Medicine and Hygiene.* **101:**209-215.

Net Mark 2001. *Net Mark baseline survey on insecticide treated materials in Uganda*. Net Mark/AED Kampala.

Njama, D., Dorsey, G. (2003). Urban Malaria: primary caregivers' knowledge, attitudes, practices and predicators of malaria in a cohort of Ugandan children. *Trop and Int Health* . 8 (8):685-692.

Nonvignon, J., Aikins, M.K.S., Chinbuah, M.A., Abbey, Mercy M., Gyapong, B., Garshong, S.F. and Gypong, J. (2010). Treatment choices for fevers in children under five years in a riral Ghanaian district. *Malaria Journal*. 9:188.

Nsabagasani, X., Nsungwa, J.S., Kallander, K., Peterson S., Pariyo G., & Tomson, G., (2007). Home based management of fever in Rural Uganda: community perceptions and provider opinions. *Malaria Journal*, 6, 11.

Nsungwa-Sabiiti, J., Tomson,G., Pariyo, G., Ogwal Okeng, J., Petzold, M.G., & Tomson, G., (2007). Home-based management of fevers and malaria treatment practices in Uganda. *Trans R Soc Trop Med Hyg*. 101:1199-207.

Nuwaha, F. (2002). People's perception of Malaria in Mbarara Uganda. *Tropical Medicine and International Health*, 7(5):462-470.

Nyamongo, I.K. (2002). Health care switching behaviour of malaria patients in a Kenyan rural community**.** *Social Science and Medicine*, **54**(3)**:**377-86.

Oberlander, L. & Elverdan, B. (2000). Malaria in the United Republic of Tanzania: cultural considerations and health seeking behaviour. *Bulletin of the World Health Organisation.* 78:1352-1357.

Obinna, O., Uzochukwu, B., Eze, S., Obikeze, E., Chijioke, O. and Ogbonnia, O. (2008). Improving equity in Malaria treatment: Relationship of Socio-economic status with Health seeking as well as with perceptions of ease of using the services of different providers for treatment of malaria in Nigeria. *Malaria Jounal.* Available from http://www.malariajournal.com/content/7/1/5

Okello, O. F. (2001). *Knowledge, Attitudes and Practices Related to Malaria and Insecticide Treated Nets in Uganda* (Unpublished report). CMS- Uganda

Oladele B.A. and Kauna K.J. (2005). Illness related practices for the management of childhood malaria among the Bwatiye people of north-eastern Nigeria. *Malaria Journal*, 4:13.

Olaf, M., Traore, C., Becher, H. and Kouyate, Bocar. (2003). Malaria morbidity, treatment seeking behaviour, and mortality in a cohort of young children in rural Burkina Faso. *Tropical Medicine and International Health*, 8(4):290-296.

Opiyo, P., Mukabana, W.R., Kiche, I., Mathenge, E., Killeen, G., Fillinger, U. (2007) An exploratory study of community factors relevant for participatory malaria control on Rusinga Island, Western Kenya. *Malaria Journal*, 6 :48

Presidents Malaria Initiative (PMI) Uganda. (April 2010). *Country Profile*. *President's Malaria Initiative, Rapid Assessment Report* – Uganda. http://www.fighting malaria.gov/countries/profiles/Uganda.html

Rissa, F. (2000). *KAP regarding presentation of Malaria by mother / caretakers in Bumozi parish, Mpigi district* (Unpublished dissertation) Dept of Nursing, Medical school. Makerere University.

Rutebemberwa, E., Nsabagasani, X., Pariyo, G., Tomson,G., Peterson, S., Kallander,K., (2009). Use of drugs, perceived drug efficacy and preferred providers for febrile children; implications for home management of fever. *Malaria Journal* 8:131.

Safa, I.A., Malik, E.M. and Kamil, M.A. (2007). The burden of Malaria in Sudan: incidence, mortality and disability- adjusted life- years. *Malaria Journal*, 6:97.

Shellenberg, R., Menendez, C., Kahigwa, E., Font, F., Gdo, C., Acosta, C.,. Schellenberg, J.A., Aponte, J.J., Kimario, J., Urassa, H., Mshinda, H., Tanner, M. and Alonso, P. (1999). African children with malaria in an area of intense Plasmodium falciparum transmission:

features on admission to the hospital and risk factors for death. *American Journal of Tropical Medicine and Hygiene*, 61(3): 431 -438.

Smalling, A. (1992). Varieties of methodological intersubjectivity- the relations with qualitative and quantitative research, and objectivity. *Quality and Quantity*, 26:169-180.

Smith, L.A., Jones, C., Adejei, R., Antwi, G.D., Afra, N.A., Greenwood, B., Chandramohan, D., Tagbor, H. and Webster, J. (2010). Intermittent screening and treatment versus intermittent preventive treatment of malaria in pregnancy: user acceptability. *Malaria Journal*, 9:18.

Staedke, S.G., Mwebaza N., Kamya M.R., Clarke T. D., Dorsey g., Rosenthal P.J., & Whitty, C.J. (2009). Home management of malaria with artemether-lumefantrine compared with standard care in Urban Uganda children: a randomized controlled trial. *Lancet,* Apr 9.

Strecher, V. J., and Rosenstock, I. M. (1997). "The Health Belief Model." In *Behaviour and Health Education: Theory, Research, and Practice*, eds. K. Glanz, F.M Lewis, and B. K. Rimer. San Francisco: Jossey-Bass.

Sumba, P.O. Wong, L., Kanzaria, H.K., Johnson, K.A, and Chandy C.J**. (**2008). Malaria treatment-seeking behaviour and recovery from malaria in a highland area of Kenya**.** *Malaria Journal*. 7: 245. [Published online 2008 November 26. doi: 10.1186/1475-2875-7-245.]

Tanner, M. and Vlassof, C. (1998). Treatment seeking behaviour for malaria: A typology based on endemicity and gender. *Social Science and Medicine*. 46 (4-5):523-532.

Thera, M.A., D'Alessandro, U., Thiero, M., Adama, O., Packou, J., Deida, O., Souleymane, A., Moussa, F., Alvez, G.F. and Ogobara, D. (2000). Child malaria treatment practices among mothers in the district of Yanfolila, Sikasso region Mali. *Tropical Medicine and International Health,* 5 (12):876-881.

Tumwesigire, S. and Watson S. (2002). Health seeking behaviour of families suspected to have malaria in Kabale, Uganda. *African Health Sciences*. 2(3):94-98.

Twebaze, D. (1998). *Mothers' perceptions, recognition and treatment of childhood malaria at community level, in Rakai District – Uganda* (Unpublished). Institute of Public Health, Makerere University, Kampala

Uganda Demographic Health Survey Report UDHS (2006)., Uganda Bureau of Statistics.

UNICEF (2003). Malaria Technical Note # 6.

USAID DELIVER. (2009). Task Order 1 Uganda Final Report.

Uzochukwu, B.S.C. and Obinna, O.E. (2004). Socio-econonmic differences and health seeking behaviour for the diagnosis and treatment of malaria: A case study of four Local government area operating the Bamako initiative programme in South East Nigeria. *International Journal for Equity in Health*. 3:6. www.pubmedcentral.nih.gov/articlerender.

Wakgari, D., Chibsa, S., Olana, D. (2003). Treatment seeking of Malaria Patients in East Shewa Zone of Oromia, Ethiopia. *Ethiopian Journal of Health Development*; 17(2):9-15.

Wanyama, S. K. (1997). *A Survey of community drug use in Rakai District* (Unpublished), Institute of Public Health, Makerere University, Kampala

WHO. (2006). World Malaria Report, 2005. Geneva, Switzerland: World Health Organization.

WHO. (2010). Treating malaria at home in Uganda. http://www.who.int/bulletin/volumes/84/10/06-021006/en/print.html

WHO. World Health Organisation. (2009). *World Malaria Report.*

WHO/UNICEF (2004). *WHO/UNICEF joint statement: Management of pneumonia in community settings*, Geneva.

Whyte, S. R., Van Der Geest, & Hardon, A. (2002). *Social lives of Medicines,* Cambridge University Press, Cambridge.

Williams, H.A., & Jones, C.O. (2004). A critical review of behavioral issues related to malaria control in sub-saharan Africa: what contributions have social scientists made? *Social Science and Medicine*. 59: 501-23.

Winch, P.J., Bagayoko, A., Diawara, A., Kane, M., Thiero, F., Gilroy, K., Daou, Z., Berthe, Z. & Swedberg, E. (2003). Increases in correct administration of chloroquine in the home and referral of sick children to health facilities through a community based intervention in Bougouni District, Mali. *Transactions of the Royal Society of Tropical Medicine and Hygiene*. 97:481-90.

Yeboah-Antwi K, J.O., Gyapong, I.K., Asare, G., Barnish, D.B., Evans, & S. Adjei. (2001). Impact of prepackaging anti-malarial drugs on cost to patients and compliance with treatment. *Bulletin of the World Health Organisation*, (5) 79.

Yeneneh, H., Gyorkos, T.W., Joseph, L., Pickering, J., Tedla, S. (1993). Antimalarial drug utilization by women in Ethiopia: a knowledge-attitudes-practice study**.** *Bulletin of the World Health Organisation*, **71**(6)**:**763-72.

Yeng, S., White, N.J. (2005). How do patients use anti-malarial drugs? A review of evidence. *Tropical Medicine and International Health*. 10: 121 -138

APPENDIX I: FOCUS GROUP DISCUSSION/KEY INFORMANT GUIDE

Introductory steps

Topic/Step	Comments/Action points
Introduction	• Facilitator introduces self, the participants and the research topic • Explain duration of the session
Focus group/Key informant objectives	• Briefly explain the objectives of the discussion
Participants Consent	• Read the consent statement to participants and proceed with the questions

1A: Focus Group Discussion Guide (Caregivers of children under 5 years and pregnant women)

A. Assessment of the magnitude of the malaria problem

1. Which months or periods are people most affected in the area?
2. Categories of people most affected?
3. How are they affected? Give examples…
4. What causes malaria?
5. What are the symptoms?
6. Where can malaria treatment be obtained?
7. What do most of the people do about malaria? How about the preventive options?

8. What are people doing to control the spread of malaria? What special measures to protect children?
9. The attitudes towards use of mosquito nets; what are the limiting factors?
10. Any plants used to repel mosquitoes?
11. What about spraying? What do people mostly use? Opinions about spraying? Any controversies regarding some of the spray chemicals?
12. What type of activities would people feel most interested to participate in malaria control?
13. Common drugs used?
14. Any local herbs people use to treat malaria?
15. What are the attractions of people to go to health facilities?
16. What are some of the disincentives?
17. How quickly or fast do people seek malaria treatment?
18. How about treatment for children under five? When do you take a child with fever to the Health unit?
19. Assessment of the cost of treating malaria, affordability, accessibility…
20. Assessment of the adherence to treatment/provided medication?
21. Difficulties in taking drugs, compliance etc.
22. How easy is it for people to acquire mosquito nets?
23. What are some of the traditional views regarding people who are affected by malaria? What are the biases or wrong information that people have about malaria preventive options like use of mosquito nets?

1B: Key Informant In-depth Interviews (Health workers and selected Caregivers and pregnant women)

1. Assessment of the problem of malaria in the area
2. Assessment of people's health seeking behavior
3. Management of malaria at household level
4. Assessment of the capacity of medical facilities to handle malaria cases
5. Achievements
6. Limitations
7. Assessment of availability of drugs
8. Is there any community outreach conducted?
9. What messages are being delivered in the communities about malaria in under fives?
10. How best can they work with civil society organizations to control malaria?
11. What are the attitudes of people towards seeking medical attention from qualified practitioners?
12. Does the work of traditional healers interfere with malaria treatment?
13. What are some of the disincentives that discourage people from seeking treatment from health facilities?
14. How best can we control malaria in the communities? What practical consideration can be suggested regarding mobilization of community residents?, fostering volunteerism, commitment etc?
15. What incentives are necessary for health workers to work closely with civil society organizations?

APPENDIX II: INFORMATION SHEET FOCUS GROUP PARTICIPATION

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-9592809, Fax: 27 21-9592872

INFORMATION SHEET
FOCUS GROUP PARTICIPATION

Project Title: Factors associated with late presentation of children under five and pregnant women with malaria for treatment at health units in Bungokho Health Sub District

What is this study about?
This is a research project being conducted by Kamaranzi Bakunda from the University of the Western Cape. We are inviting you to participate in this research project because you live in this area, have a child below five years in your care or you are pregnant and you access care from Bungokho Health Centre IV. The purpose of this research project is to explore factors responsible for late presentation of children under five and pregnant women with malaria for treatment at health units in Bungokho Health Sub District

What will I be asked to do if I agree to participate?
You will be asked to participate and share your knowledge and perceptions in a group discussion. You will also be tape-recorded so that we do not miss all the relevant information you share. The discussions will take about 1-2 hours with short break in between. You are free to accept to participate or decline from participating. If you agree to participate, you can also withdraw anytime in the course of the discussions. If you refuse to participate or withdraw, you will continue to receive the care you normally receive from the health unit without any problems.

Would my participation in this study be kept confidential?
We will do our best to keep your personal information confidential. To help protect your confidentiality, all interview notes and audio recording will be kept locked after analysis and will only be accessed by the researcher. No names will be used in the final research report. If we write a report or article about this research project, your identity will be protected to the maximum extent possible.

What are the risks of this research?
There are no known risks associated with participating in this research project. Participation will **not** expose you to any health hazard.

What are the benefits of this research?
This research is not designed to help you personally, but the results may help the investigator learn more about reasons why children and pregnant women do not present early for malaria

treatment. We hope that, in the future, other people might benefit from this study through improved knowledge and access to treatment.

Do I have to be in this research and may I stop participating at any time?
Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

Is any assistance available if I am negatively affected by participating in this study?
There are no immediate advantages or benefits to you personally if you participate in this study. But other families with similar problems might benefit in future as a result of what you will share. Sometimes people feel relieved when they share their concerns. If this happens to you, it might be of benefit. Since sharing information that is private and talking about health workers and services runs a risk of feeling guilty once other people access the information, in this study all the information will be kept confidential. No names will be used during the focus group discussion.

What if I have questions?
This research is being conducted by Kamaranzi Bakunda from School of Public Health at the University of the Western Cape. If you have any questions about the research study itself, please contact Kamaranzi Bakunda at 0772 647676 or email kbakunda@gmail.com.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Head of School of Public Health: Professor David Sanders
Dean of the Faculty of Community and Health Sciences: Prof Rati Mpofu
University of the Western Cape
Private Bag X17
Bellville 7535
Telephone : +27-21-959-2809

This research has been approved by the University of the Western Cape's Senate Research Committee and Ethics Committee.

APPENDIX III: **CONSENT FORM FOR FOCUS GROUP PARTICIPATION**

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-9592809, Fax: 27 21-9592872

CONSENT FORM FOR FOCUS GROUP PARTICIPATION

I have been told of this study and I understand the objectives of the study as the eventual improvement in the health of our people. I also understand that participation in this study is by choice, without coercion and agreed to audiotaping.

I have understood that I am allowed to withdraw from the study at anytime I fell like and my withdrawal will not affect my right of access to information and health services in the district.

I also understand that I should keep information discussed in this focus group confidential and that I should not share it outside of this group so as to respect the privacy of my fellow focus group participants.

……..	……
Witness's signature (Research Assistant)	Participant's signature/thumbprint
Researcher……..	Date……..

Kamaranzi Bakunda at 0772 647676 or email kbakunda@gmail.com.

Head of School of Public Health: Professor David Sanders
Dean of the Faculty of Community and Health Sciences: Prof Rati Mpofu
University of the Western Cape
Private Bag X17
Bellville 7535

APPENDIX IV: INFORMATION SHEET IN-DEPTH INTERVIEWS

UNIVERSITY OF THE WESTERN CAPE

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INFORMATION SHEET
IN-DEPTH INTERVIEWS

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What will I be asked to do if I agree to participate?
You will be asked to participate and share your knowledge and perceptions in a group discussion. You will also be tape-recorded so that we do not miss all the relevant information you share. The discussions will take about 1 hour. You are free to accept to participate or decline from participating. If you agree to participate, you can also withdraw anytime in the course of the discussions. If you refuse to participate or withdraw, you will continue to receive the care you normally receive from the health unit without any problems.

Would my participation in this study be kept confidential?
We will do our best to keep your personal information confidential. To help protect your confidentiality, all interview notes and audio recording will be kept locked after analysis and will only be accessed by the researcher. No names will be used in the final research report.
If we write a report or article about this research project, your identity will be protected to the maximum extent possible.

What are the risks of this research?
There are no known risks associated with participating in this research project. Participation will **not** expose you to any health hazard.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about reasons why children and pregnant women do not present early for malaria treatment. We hope that, in the future, other people might benefit from this study through improved knowledge and access to treatment.

Do I have to be in this research and may I stop participating at any time?
Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

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There are no immediate advantages or benefits to you personally if you participate in this study. But other families with similar problems might benefit in future as a result of what you will share. Sometimes people feel relieved when they share their concerns. If this happens to you, it might be of benefit. Since sharing information that is private and talking about health workers and services runs a risk of feeling guilty once other people access the information, in this study all the information will be kept confidential. No names will be used during the focus group discussion.

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APPENDIX V: CONSENT FORM FOR IN-DEPTH INTERVIEWS

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CONSENT FORM FOR IN-DEPTH INTERVIEWS

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I have understood that I am allowed to withdraw from the study at anytime I fell like and my withdrawal will not affect my right of access to information and health services in the district.

…….. ……

Witness's signature (Research Assistant) Participant's signature/thumbprint

Researcher…….. Date……..

Kamaranzi Bakunda at 0772 647676 or email kbakunda@gmail.com.

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Dean of the Faculty of Community and Health Sciences: Prof Rati Mpofu
University of the Western Cape
Private Bag X17
Bellville 7535

APPENDIX VI: PERMISSION TO CARRY OUT RESEARCH

Bakunda Kamaranzi
Central Public Health Laboratories
Ministry of Health
P.O. Box 7272
Kampala
Uganda

The District Health Officer, Mbale

Dear Sir,

RE: APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY IN MBALE DISTRICT

I am a Master Degree student in my final MPH year at the University of the Western Cape, South Africa. As a requirement for the study, I am expected to carry out research study and I have chosen *exploring the factors responsible for late presentation of children under five and pregnant women with malaria for treatment at health units in Bungokho Health Sub District*. My target population will be caregivers of children under five years, pregnant women and health care service providers at Bungokho Health Centre IV.

Since I am dealing with an important and widespread problem – malaria, confidentially will be ensured and I will share with you the outcomes and recommendations to inform your policy and guidelines. I humbly request your office to grant me permission to conduct the study. Attached is a copy of the research proposal, which has been approved by the Research Committee at the University of the Western Cape. Your kind response will be highly appreciated.

Yours sincerely

Bakunda Kamaranzi

APPENDIX VII: TRANSLATIONS

Focus group Discussion and Key Informant Guides

Introductory steps

Topic/Step	Comments/Action points
Introduction	• Facilitator introduces self, the participants and the research topic • Explain duration of the session
Focus group/Key informant objectives	• Briefly explain the objectives of the discussion
Participants Consent	• Read the consent statement to participants and proceed with the questions

1A: Focus Group Discussion Guide (Caregivers of children under 5 years and pregnant women)

A. Assessment of the magnitude of the malaria problem

1. Bisera ki oba mwezi ki abantu bomukitundu kino mwebasinga okulwalira?
2. Bikka bya bantu ki abasing okulwala?
3. Bakosebwa batya nga balwadde?. Wa ebyokulabirako…..
4. Omusujja gwensiri guva kuki?
5. Bubonero ki kwolabira?
6. Obujjanjabi bwomusujja gwe nsiri busangibwa wa?
7. Abantu abasing bakolaki eri omusujja gwensiri? Era bagwekuma batya?
8. Abantu bakolabatya okwewala omusujja guno? Bakola batya okukuma abaana bato obutalwala musujja?
9. Mungeri eyokukozesa obutimba bwensiri, miziziko ki gyenusanga?

10. Mulina ebimera ebigoba ensiri? Bimera ki?
11. Mufuyira ensiiri? Kiki kyemusinga okukozesa? Kiki kyemulowoza kwekyo? Waliwo ekibuzabuza ku dadalla erikozesibwa mukufuyira ensiri?
12. Ngeri ki abantu jebasinga okwetanira nga bagezako okuziyiza omusujja gwe nsiri?
13. Dagalla ki elyomusujja elisinga kukozesebwa?
14. Waliwo edagalla lyekinansi abantu ryebakozesa okuziyiza omusujja gwensiri?
15. Bikii ebisikiriza abantu okugenda mu malwaliro?
16. Bikii ebilemesa abantu okugenda okufuna obujjanjabi mumalwaliro?
17. Bwanguki abantu bwebagira okufuna obujjanjabi?
18. Ate abato wansi wemyaka etaano, bo mubatwala mukiseraki nga bafunye omusujja mu dwaliro?
19. Bwoba ogerageranya obujjanjabi bwo musujja bwangu okufuna era busoboka tebuserebwa?
20. Bwe bakuwa edaggala nga oina omusujja walimira era wagoberera abasawo bye bakugamba?
21. Buzibu ki obuli mukumila eddagala?
22. Bwanguki abantu mwebayinza okufunira obutimba bewnsiri?
23. Ndowoza ki eyekusa kubyobuwangwa gwomuntu alwadde omusujja gwensiri, era nsongaki enkyamu abantu jebawa nga bakozesa obutimba bwensiri mukuziyiza omusujja?

1B: Key Informant In-depth Interviews (Health workers and selected Caregivers and pregnant women)

1. Assessment of the problem of malaria in the area
2. Assessment of people's health seeking behavior
3. Management of malaria at household level
4. Assessment of the capacity of medical facilities to handle malaria cases
5. Achievements
6. Limitations
7. Assessment of availability of drugs
8. Waliwo abajja mukitundu kino okubasomesa kubyokuziyiza omusujja?
9. Bubaka ki bwe babawa ku musujja mu baana abali wansi we myaka etaano?
10. Basobola batya okukola obulungi nebibiina ebirala okuziyiza omusujja?
11. Abantu betanira batya okufuna obujjanjabiokuva ewa basawo?
12. Abasawo bekinansi batataganya obujanjabi bwomusujja?
13. Bi ki ebilemesa abantu okwetanira obujanjabi okuva mu basawo?
14. Tusobola tutya okwetangira omusujja gwensiri? (What practical consideration can be suggested regarding mobilization of community residents? fostering volunteerism, commitment etc?)
15. Ki ki ekyetagisa abasawo okusobola okola ne bibiina ebirala mu kifo kyamwe?

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E-mail:

INFORMATION SHEET
FOCUS GROUP PARTICIPATION

Project Title: Factors associated with late presentation of children under five and pregnant women with malaria for treatment at health units in Bungokho Health Sub District

Okunonyereza kunno kuli kuki?What is this study about?
Okunonyerezibwa kunno kukolebwa Kamaranzi Bakunda nava mu University of the Western Cape. Tukwaniriza okwetaba mu kunonyereza kunno kuba obeera mu kitundu kiinno atenga oyina omwaana nga wamyaka etaano obanga oli lubuto atenga ofuna obujanjabi okuva mu Bungokho Health Centre IV. Okunonyerezibwa kunno kuli ku nsonga eziletera abaana nabakyala abembuto okukerwa okunonya obujanjabi mu dwaliro nga bayina omusujja ogwensiri.

Kiki kyemunjagaza mukunonyereza kunno?
Oja kusabibwa okutubulira ku byomanyi ne ku byoriwooza nga tuli mu kibiina. Edobozi lyo lija ku kwatibwa ku lutambi kitusobozese obutafirwa bimu ku byo noyogera. Okugabana ku bilowoozo kuja kutwala esawa emu.. Oli wa dembe okukiriiza oba okugaana okwetaba mu kudamu ebibuzo byaffe. Bwonoba okiriza okwetaba mu meetingi eno, oli wa dembe esawa yoona okukivaamu. Bwonobanga tokiriza okudamu ebibuuzo byaffe, tkija kukukosa, ojakuba nga ofuna obuyambi ku dwaliro lino nga bulijjo.

Okwetaba kwangw kujakukuumibwa ng ka kyaama?
Tujja kugezako ng bwekisooboka okukuuma byoona byetwogera mukibiina kiino nga bya kyaama. Byoona byetunawandika tujja kubisibira mu office nga omusomi yekka yasobola okubikozesa. Amanya go tegagenda kukozesibwa mu reporta gye tuna fulumya kunsonga enno. Na tuwandiikda tuja kukuuma amanya go mu kyaama.

Buzibuki obuli mu kwetaba mukunonyereza kunno?
Tewajja kubeerawo okukosebwa kwona byonoyetaba mu kuteasa kunno.Obulamu bwo tebuja kukosebwa mungeri yoona.

Nunamu ki mukunonyerezza kunno?
Omusomo guno sigwakuyamba gwe ngo muntu naye omusomi agezaako okutegera lwali abaana na'bakyara abembuto bakerewa okugenda mulariro nga bayina omusujja owensiri. Tuyina

obwesige nti, bye tunayiga bija kuyamba abantu bengeri zino okufuna obujanjabi obwa mangu nga bakafuna omusujja.

Nsobola okuva mu kunonyereza kwona oba nina okuberamu?
Okwtaba kwomu kiteso kiino kwa kyeyagarire.Osobora okusarawo obutetaba mu kuteesa kunno. Bwo salawo okwetaba mu kuteesa kunno osobora okukivaamu esawa yoona. Okwo bwekuba okusalaawo kwo tekigeda kukusa mungeri yoona.

Waberawo okuyambibwa kwona singa nkosebwa okwetaba mukunonyereza kunno?
Toyina kyogenda okufunirawo nga oyetabey mu kuteesa kunno. Naye gwe nabomuka yawe nabarara abomumbeera ngeno gyolimu oba abayina obuzibu nga buno bajja kuyambibwa. Olusi abant abamu bawulira nga baganyibwamu bwebogera ebintu ebibaluma. Kiino bwekinakuyamba ojakuba kyogobeemu. Biino byetwogera bijakukuumwa ng byakyaama oleme okukosebwa oba okulowooza nti abantu abalala baja kubitegera. Tetujja kukozesa amaanya go mu kuteesa kunno.

Bwemba nina kyembuuza?
Okunonyereza kunno kukolebwa Kamaranzi Bakunda okuva mu Department of Community Health okuva mu University of the Western Cape. Bwoba oyina byobuuza ku kunonyereza kunno osobola okutukirira Kamaranzi Bakunda at 0772 647676 or email kbakunda@gmail.com. Bwoba oyina kyobuuza ku kunonyerezza kunno oba ngofunye obuziibu bwoona obuva kukunonyerezza kunno osobola okutukirira supervisor.

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CONSENT FORM FOR FOCUS GROUP PARTICIPATION

Nyinyonyoledwa ate ntegela bulungi nti okunonyereza kunno kujja kuyamba abantu baffe okubeera nobulamu obulungi. Nkitegera nti okwetaba mukunonyereza kunno kwa kyeyagarire ate nkikiza nga sikakidwa. Okukwta edobozi lyange kulutambi.

Ntegera bulungi nti nsobola okuvaamu esawa yoona nga bwenakyagalaate kino tekigenda kunkosa mungeri yoona omukufuna obujanjabi bwoona bwenabanetaza.

Ntegera bulungi nti nina okukuuma bukikimu ekinayogerwa mu kuteesa kunno nga byakyaama kunze ate sigenda kubyogera nga tuvude mukuteesa kuno nga teeka ekitiibwa mubilowoozo bya banange.

……..	……
Witness's signature (Research Assistant)	Participant's signature/thumbprint
Researcher……..	Date……..

Appendix II

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INFORMATION SHEET
IN-DEPTH INTERVIEWS

Project Title: Factors associated with late presentation of children under five and pregnant women with malaria for treatment at health units in Bungokho Health Sub District

Okunonyereza kunno kuli kuki?What is this study about?
Okunonyerezibwa kunno kukolebwa Kamaranzi Bakunda nava mu University of the Western Cape. Tukwaniriza okwetaba mu kunonyereza kunno kuba obeera mu kitundu kiinno atenga oyina omwaana nga wamyaka etaano obanga oli lubuto atenga ofuna obujanjabi okuva mu Bungokho Health Centre IV. Okunonyerezibwa kunno kuli ku nsonga eziletera abaana nabakyala abembuto okukerwa okunonya obujanjabi mu dwaliro nga bayina omusujja ogwensiri.

Kiki kyemunjagaza mukunonyereza kunno?
Oja kusabibwa okutubulira ku byomanyi ne ku byoriwooza nga tuli mu kibiina. Edobozi lyo lija ku kwatibwa ku lutambi kitusobozese obutafirwa bimu ku byo noyogera. Okugabana ku bilowoozo kuja kutwala esawa emu.. Oli wa dembe okukiriiza oba okugaana okwetaba mu kudamu ebibuzo byaffe. Bwonoba okiriza okwetaba mu meetingi eno, oli wa dembe esawa yoona okukivaamu. Bwonobanga tokiriza okudamu ebibuuzo byaffe, tkija kukukosa, ojakuba nga ofuna obuyambi ku dwaliro lino nga bulijjo.

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…….. ……

Witness's signature (Research Assistant) Participant's signature/thumbprint

Researcher…….. Date……..