



**SCHOOL OF MEDICINE AND HEALTH SCIENCES**

**ASSESSING THE KNOWLEDGE ATTITUDES AND PRACTICES ON MALARIA  
INTERVENTIONS AMONG MANSA RESIDENTS IN LUAPULA PROVINCE**

**BY**

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**A research report submitted to the University of Lusaka in partial fulfilment of the  
requirements of a Degree in Bachelor of Science in Public Health**

## DECLARATION FORM

**Tom Mwape Mwewa BSPH18213661**

I declare that this proposal is my creative work and to the best of my acquaintance has not been presented for a degree in any other institution.

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This dissertation has been submitted with my approval as a University of Lusaka (UNILUS) supervisor.

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## **ABSTRACT**

In Zambia, Northern, North Western, Muchinga, and Luapula Province are the region's most susceptible to the disease due to the excessive rainfall they have in those seasons. The prevalence in the province of Luapula is 600 to 700 cases per 1000 population annually. The highest rate of malaria in Luapula Province has been recorded in Mansa and it was found that Mansa had a total population of 257,517 with a total of 189,407 cases of which 86% were laboratory confirmed and recorded in the year 2015. The qualitative research was conducted with a case study design and data was collected through in-depth interviews and questionnaires (N = 20) focused on pregnant women, mothers of under-five children. The results showed that most participants had knowledge about Malaria prevention intervention and positive attitudes towards them. In spite of this few participants were still not aware and had prioritized other means of dealing with malaria. The majority of study participants had awareness of malaria or were well informed about it, however some participant's attitudes and practises were contrary to the matter. Health institutions offer free malaria treatment and routine IRS spraying, but because of unfavourable experiences and a lack of awareness, the initiative has not been able to get the necessary full coverage.

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## **LIST OF ACRONYMS**

<b>ANC.....</b>	<b>Antenatal Care</b>
<b>CDC.....</b>	<b>Center for Disease Control and Prevention</b>
<b>COVID-19.....</b>	<b>Coronavirus disease</b>
<b>DDT.....</b>	<b>Dichlorophenyltrichloroethane</b>
<b>HMIS.....</b>	<b>Health Management Information System</b>
<b>HPs.....</b>	<b>Healthcare Providers</b>
<b>IRS.....</b>	<b>Indoor Residue Spraying</b>
<b>ITN.....</b>	<b>Insecticide Treated Nets</b>
<b>IPT.....</b>	<b>Intermittent Presumptive Treatment</b>
<b>KAP.....</b>	<b>Knowledge Attitudes and Practices</b>
<b>LLIN.....</b>	<b>Long Lasting Insecticidal Nets</b>
<b>MOH.....</b>	<b>Ministry of Health</b>
<b>NMEP.....</b>	<b>National Malaria Elimination Plan</b>
<b>NMEC.....</b>	<b>National Malaria Elimination Centre</b>
<b>RDT.....</b>	<b>Rapid Diagnostic Test</b>
<b>UNICEF.....</b>	<b>United Nations International Child Emergency Fund</b>
<b>WHO.....</b>	<b>World Health Organization</b>
<b>ZNPHI.....</b>	<b>Zambia National Public Health Institute</b>

# CHAPTER ONE

## 1.0 INTRODUCTION

Malaria continues to be one of the major health problems globally. The 2021 World Malaria Report indicates that the global estimation of malaria had 14 million more malaria cases plus 47,000 more deaths in comparison to 2019 due to the disruption of health care in the time of the corona virus pandemic. The WHO African region has a big share of the global malaria burden and in 2020 it was home to 95% percent of malaria cases and 96% of deaths. Zambia is part of the top 20 countries with high malaria incidence in the world and Malaria still rests to be one of the major leading causes of mortality and morbidity in the country. Zambia has 2% of the worldwide malaria case burden and 5.2% in east and southern Africa (WHO, 2018).

The wet season, which commencing in November to April, and the hot season around October is often when malaria incidence and prevalence are at their highest. In Zambia, Northern, North Western, Muchinga, and Luapula Province are the region's most susceptible to the disease due to the excessive rainfall they have in those seasons. The prevalence in the province of Luapula is 600 to 700 cases per 1000 population annually. The highest rate of malaria in Luapula Province has been recorded in Mansa and it was found that Mansa had a total population of 257,517 with a total of 189,407 cases of which 86% were laboratory confirmed and recorded in the year 2015 (ZNPFI, 2019)

Through the bite of a female anopheles mosquito carrying the disease, malaria is transmitted. Plasmodium falciparum is the most dangerous and widespread parasite in sub-Saharan Africa and Zambia, where it is one of four types of parasites that cause malaria in humans. This parasite has been the lead cause of malaria cases around the world and the groups with a high risk of contracting malaria are pregnant mothers, under five children and people with HIV due to their low immunity.

The main strategy in efforts to manage and eradicate malaria worldwide is vector control (WHO, 2019). In Zambia, the distribution of insecticide-treated nets (ITNs), indoor residue spraying (IRS), rapid diagnostic tests (RDT), and the combination of therapeutic medications are the main strategies for the prevention of malaria. Malaria control has been given top priority by the Zambian government, and as a result, high coverage of effective preventative, curative, and supporting interventions has been achieved, along with a noticeable decrease in malaria cases and deaths (Chanda E, et al, 2012). Studies on knowledge attitudes and practices have revealed that certain people's levels of education are related to their participation in the fight against malaria. (Foreo DA, et al, 2014).

Mansa is a high malaria burden location Luapula province therefore the basis of determining the levels of knowledge, attitudes and practices towards malaria control is crucial and of great importance in the identification of the informative gap in the community that has influence on the uptake of Malaria control interventions.

## **1.1 STATEMENT OF THE PROBLEM**

In Zambia, particularly in regions where the disease is prevalent, malaria is a major source of morbidity and mortality, as well as among expecting women and small children. In 2014, the National Health Management Information System received reports of 5.8 million cases (HMIS). Luapula province had the highest incidence among pregnant women (131/1000, 207/1000, 177/100) from 2013 to 2015 respectively. Children below five years of age had more incidence rates compared to children above five years of age (756/1000) to (275/1000). These two groups have been the most vulnerable to the disease and the effects.

The Zambian Ministry of Health has a part called the National Malaria Elimination Centre (NMEC) that has various partners which have been working with in efforts towards malaria control. The Zambian National Malaria Elimination strategy has a visualization of a “Malaria free Zambia by 2030” and has implemented a number of interventions including the Universal Insecticide Treated Nets (ITNs) coverage, extended Indoor Residue Spraying (IRS) in high burden areas, the improvement of malaria case management through improving the rapid diagnostic testing capacity and quality with the increase in the coverage of the Drugs used for treatment.

Despite the fact that the nation has made substantial progress in controlling malaria, there was a decline in cases of 26.8% in the middle of 2016 and 2019, going from 202 to 147 per 1000 of the populations at risk. (WHO, 2019). Zambia still remains a highly endemic Country which calls for further implementation of interventions to reduce the disease incidence in Mansa for it has been of the highest prevalence in Luapula Province. The knowledge attitudes and practices of people have an impact in the utilization or adherence to the Malaria control measures. There is need to conduct research to determine the levels of knowledge, attitudes and practices towards malaria interventions which will help in the construction of methods to enhance the control of behaviors and acceptability of malaria control interventions within Mansa. Having designed ways of delivery on the existing interventions towards pregnant women, under five children and other high risk groups would save a lot of lives.

## **1.2 Justification of Study**

Malaria continues to be a major contributor to morbidity and mortality mostly in children under five and pregnant women in Zambia. Therefore this study on the assessment of the levels of knowledge attitudes and practices in Mansa will be useful in the redesign of the efforts to control malaria not only in Mansa but the highly endemic areas of Zambia.

This study will help in the determination of levels of knowledge in the communities which will be of use to key decision makers for possible policy interventions in the direction of malaria prevention, increasing the acceptability of measures. It will improve the Malaria elimination practice and add knowledge to the existing body of disease prevention programs within the country. The research findings will also improve malaria control implementation at district level and ultimately help reduce the malaria incidence.

## **1.3 General research Objectives**

To Assess the Knowledge, Attitudes and practices towards Malaria Interventions in Mansa district

### **1.3.1 Specific Objectives**

1. To determine the levels of knowledge on malaria control interventions
2. To assess the attitudes towards the acceptance of Malaria control measures
3. To determine the key practices that are done for Malaria control.

## **1.5 Research Questions**

1. What are the levels of knowledge on malaria control interventions?
2. How do the attitudes influence the uptake of malaria control measures?
3. What key practices are done for malaria control?

## CHAPTER TWO

### 2.0 Literature Review

#### 2.1 Global Context of Malaria

Malaria has been a significant cause of illness and death in many undeveloped countries, making it one of the furthestmost critical public health problems in the world. About 42% of the world's population is affected by it, and it claims approximately one million lives per year in the tropical and subtropical regions of the globe. Pregnant women and young children, typically under five, who have not yet gained partial immunity to malaria, are the most vulnerable groups to the disease. (CDC, 2016).

Many countries in the world suffer from an ongoing malaria epidemic. The majority of instances occur in sub-Saharan Africa, but they also affect large portions of Asia, Latin America, the Middle East, and Europe. In the year 2010, there were 216 million cases of malaria worldwide in 106 widespread countries and territories, with children under five making up 86 percent of the victims. There were also 655,000 malaria-related deaths recorded worldwide. (Kassile, 2012).

Martens and Hall (2006) showed that the world's population is at threat to some 41%, with individuals in the poorest regions being the most vulnerable. 90% of deaths in 2010 were in Africa, where 600,000 children, mostly under five years old.

In 2020 malaria cases were estimated to be 241 million, and fatalities were 627 000, compared to 2019 where they were 227 million cases and deaths less by 69,000 in that year (WHO, 2021). In a Study conducted by Heymann, in 2008 he concluded that the two most prevalent plasmodium parasites worldwide are Plasmodium vivax and Plasmodium falciparum, with Plasmodium falciparum being regarded as a severe public health risk due to its severity and typical fatal outcome.

On the other hand the human and economic costs associated with consultations, treatments, hospitalizations, prevention measures and other events for malaria are enormous and have led to low productivity and lost incomes (CDC, 2016). Malaria has a detrimental impact on economic development worldwide and continues to harm the world's poorest and growing nations, particularly in Africa, where it causes more than 50% of hospital admissions and approximately 65% of visits in areas with a high prevalence of the disease.

## **2.2 Malaria Burden in Africa sub Saharan region**

Africa still stands as the continent with the highest weight of malaria cases and deaths around the world. According to WHO (2010) emphasis was placed on the fact that malaria is still one of the leading roots of deaths and disease in sub-Saharan African developing countries. Studies have also shown that even in areas initially believed to be malaria-free, malaria is still a problem over most of Africa due to resurgence and weather. According to the World Health Organization's 2021 Malaria Report, Nigeria (31.9%), the Democratic Republic of the Congo (13.2%), Tanzania (4.1%), and Mozambique (3.8%) were the four African nations that contributed the majority of all malaria deaths globally.

Malaria has been prevalent in sub Saharan Africa and the tropical regions due to the combination of factors like the climatic conditions and temperatures that facilitate the growth of the predominant parasite *Plasmodium falciparum*, scarce resources and economic instability that may have hindered the effective activities for malaria control (CDC, 2014). *Plasmodium falciparum* is estimated to cause 300 to 500 million cases and above One million deaths in under five children. Other than the dominant parasite called that has led to a tremendous number of malaria cases and deaths in Africa, an Invasive species from Asia called *Anopheles Stephensi* has recently led to Malaria Outbreak in the horn of Africa and has spread over Sudan, Somalia, Djibouti and mostly Ethiopia.

In 2019 WHO released an awareness statement to urge African countries on the spread of the *Stephensi* in Ethiopia and also advised Public Health specialists to be vigilant. This parasite can persist through dry season due its nature of breeding in urban water sources and is resistant to insecticides. Further spread of it across Africa could make the elimination of Malaria quite a challenge (Mnzava A, et al, 2022).

The WHO (Factsheet No.180) has estimated that malaria kills a child every 30 seconds and about 3000 kids daily in Africa. The rate of malaria in young children is the highest in Africa compared to the other malaria endemic parts of the world.

A Roll Back Malaria report states that children who survive may suffer from long-term physical and mental effects of infection. These effects may involve some periodic phases of fever and ailment lessened appetite, limited play, and learning opportunities that contribute to underdevelopment in African nations. An estimated 2% of children that recover from malaria experience some cognitive effects (Cerebral Malaria) learning impairments and some

disabilities due to part damage on the brain. While those who survive a severe malaria attack, end up suffering from serious mental (RBM)

### **2.3 Malaria Burden in Zambia Local perspective**

Malaria remains the leading cause of mortality and morbidity across Zambia with a seasonal transmission of moderate and high peaks between December and April. According to MOH (2007/2009). Other than Zambia being malaria endemic itself it is also endemic in all eight neighboring countries. Malaria is a severe public health threat accounting for 2.9 million Out Patient Department cases per year in 2009 representing 60% of outpatient attendances, 65% of hospital and health centre admissions and 50% under five children.

According to a 2015 study by Chaponda and colleagues in the two malaria-endemic regions of Luapula province, Nchelenge and Kashkishi, it was found that 46% of HIV-positive individuals in both health centers surveyed had a high threat of contracting malaria, and 81% of pregnant women in Nchelenge had increased danger to malaria transmission. Malaria is still endemic, however the prevalence of infection varies greatly between provinces and areas (Malaria Indicator Survey, 2012). 90% of the population in all ten provinces of Zambia is at risk for malaria, however the northern regions, including Luapula, Northern, North Western, and Muchinga, are the most endemic because of the substantial amounts of rain they receive each year. At the peak of transmission season, the malaria prevalence in these regions is 20% in children under five. (Nawa M, et al, 2019).

Eliminating malaria is one of the Zambian government's top priority for public health. Various national development plans and national health strategy plans have emphasized this. Since 2000, the government has created five-year strategic plans through the National Malaria Elimination Program (NMEP). The most recent plan is the National Malaria Elimination Strategic Plan 2017–2021 (NMESP), which outlines Zambia's goal of stepping up malaria elimination interventions to realize the country's vision of "a malaria-free Zambia. Through coordinated efforts among other partners, Ministry of Health and Roll back Malaria there has been a scale up of interventions for the control and eradication of malaria in Zambia. The most important measures to lessen the impact of malaria are : Vector control through the use of Long-lasting insecticide treated nets (LLIN'S) Use of Insecticide Treated Nets (ITN's), IRS conduction where ITN's are not distributed, improving the access to prompt and effective treatment through disease recognition from Rapid Diagnostic Tests (RDT's), Combination of drugs therapy, preventive treatment during pregnancy through IPT (Intermittent Presumptive

Therapy) and Social behaviour Change (SBC), the increase in awareness through information education and communication (MIS, 2021).

#### **2.4 The Use of Insecticide Treated Nets (ITNs)**

The Use of ITNs has been the primary prevention strategy for the reduction of malaria transmission mostly in rural areas of Zambia. The Zambian 2011 – 2015 Countrywide Malaria Strategic plan calls for Universal net coverage and defines it as confirming all sleeping spaces in targeted areas are protected by a net. To achieve high coverage the ministry of health has conducted various activities just to reach out to most affected areas of Zambia including Bulk supply campaigns, malaria in pregnancy, equity to target high risk groups (children, persistently ill), Community Malaria Booster Response, Malaria school health program and commercial market supplies. They have been conducted in all 10 provinces of over the past several years as funding for ITNs has been available from various donors (ZMIS, 2012).

#### **2.5 Households with ITNs and Correct usage**

From 2019 to 2021 the Ministry of Health through NMEP distributed over 2 million ITNs in the 10 provinces of Zambia. ITN ownership in rural areas was 55.1% and 49.9% in urban areas Luapula province has 47.9% among 461 households (ZMIS, 2021). WHO commends that the Universal coverage for LLNs is for all individuals in the household not just vulnerable groups (pregnant women and under five children).

A study was on conducted to review strategies to grow ownership and use of ITNs and the authors stated that the provision of ITNs for free or at a subsidized price does increase the number of people owning ITNs however it doesn't merely increase the usage of them. They further alluded that education on the use and importance of ITNs will increase the number of people who will actually sleep under bed nets compared to those without knowledge on net usage or importance for the prevention of malaria transmission LA Polec, et al (2015)

Kanmiki and colleagues conducted a study on the possession and use of ITNs in northern Ghana they concluded that in the area, they were notable variations in the ownership and use of ITNs by socioeconomic and demographic traits. It was also discovered that among reproductive-aged women in the area, occupation, religion, district of residence, and wealth index all influenced both ownership and utilization of ITN.

For instance a mass distribution of LLINs was conducted in Senegal in 2009 and Net ownership increased from 76% to 82% then the data revealed that 60% of nets were hanged and

only 41% of targeted the populated were sleeping under the net at that night (Berthe et al, 2014).

Jumbam and colleagues conducted a cross sectional KAP study on malaria interventions in rural areas of Luangwa and Nyimba districts that revealed that most households in the study used ITNs for malaria prevention however the misperceptions between mosquitoes and protection from bites was still existing among the households they surveyed.

## **2.6 Indoor Residue Spraying**

According to WHO (2015) Indoor Residue Spraying is the act of applying a long-term, residual insecticide to possible malaria vector resting surfaces, such as internal walls, eaves, and ceilings of all homes or buildings (home and animal shelters included), where such vectors may come into contact with the insecticide on the surface. When done well this is a very effective strategy to reduce malaria transmission vector density, longevity and overall vector control. Two vector control strategies IRS and the use ITN's are essential for the widespread prevention of malaria.

In a survey carried out in Kaoma on the effectiveness of indoor residue spraying by Phiri and Miller it showed that, the places with a higher percentage of the people more than 60% have a lower number of new cases at the onset and the end of the malaria spread season (82 cases per 1000 and 400 cases per 1000 population) in comparison to areas that were not sprayed (398cases per 1000 and 773 cases per1000 population).

According to the Zambia Malaria Indicator survey of 2021 in the 2017 to 2018 mass campaign IRS has been prioritized as the primary vector control intervention and ITNs as a gap filler. Since IRS has a long and successful history in the management of malaria, it has contributed to the elimination of malaria from significant portions of Asia, Russia, Europe, and Latin America. IRS programs have also been successfully implemented in the majority of Africa (Pluess B, et al, 2010).

Many malaria-threatening vectors are endophilic (WHO, 2015), which means they go into human residences or animal shelters and they repose on walls, ceilings, and other interior surfaces earlier or after feeding on people, IRS is useful as a malaria control measure. Once the target vectors are prone to the insecticide to be used, IRS will work more effectively. DDT is the only insecticide regularly used for public health (WHO, 2006) it has been cost effective and of substantial duration in the residue efficacy against malaria vectors (6 – 12 months based on dosage and application).

One significant use of IRS and the use of ITN's is the point at which each measure works to the utmost result .A study conducted to quantify the impact of indoor residue spraying the authors concluded that IRS appeared to be more protective compared to ITN's in areas of stable malaria transmission and ITN's seemed to be more protecting than IRS in unstable areas of high transmission (less frequent occurrence or high prevalence)

## **2.7 Community Involvement in Malaria prevention**

Community participation is a really vital factor in the success of Malaria prevention measures and members of the target community must be asked to take part in the contribution and implementation of the various measures. NMCC (2011) provided evidence that where a community is sensitized and engaged before the start of health programs the success rate is high. The Ministry of Health (2011) stated that the information and communication, community mobilization play a major role in the decrease of malaria disease cases and deaths. These approaches increase the knowledge, formation of request in malaria measures and the utilization of IRS services.

A systematic review of various literature conducted by Addo E, et al 2014 revealed that health education interventions have an influence in the usage of community-based malaria prevention and control measures, as they boost the knowledge about malaria and generally reduce malaria prevalence and mortality in children under five and pregnant Women.

Research further shows that malaria prevention and control measures like IRS, ITNs and IPTP that utilize health education often involve the community members that later become reformers in the spread of information about measures in the community as it increases the uptake of the interventions to be implemented. Arogundabe et al 2009 reports that the use of health education in the promotion of ITNs led to an increase in the ITN usage among pregnant women in Nigeria.

The Ministry of health further stated that for the acceptance and appreciation of key interventions Public health authorities must provide quality prior information to improve the knowledge, change the attitudes, influence behavior patterns, gain approval and enhance practices for malaria management at individual households and community levels.

### **2.7.1 Knowledge, Attitudes and Practices of Malaria Intervention**

The existing cases of malaria in pregnancy was in the middle of 15.4% and 55.4% among ANC participants in the survey carried out in 17 districts by MOH/WHO/UNICEF (Mufubenga P et al 2001), while the frequency of severe anemia during pregnancy was 18.%. In the same survey,

malaria-related pregnancy outcomes included stillbirths (3.4%) with incidence highest in northern and central Uganda, abortion (4.2%) with incidence highest in western and central Uganda, and low birth weight 2.5 kgs (12.3%) with incidence highest in northern Uganda (22.4%) and among teenagers. These outcomes were among 2316 pregnancy records examined at health units.

In a prevalent study conducted by Flatie et al, 2021 in Ethiopia concluded that people still have misunderstandings about the source, signs and symptoms, ways of transmission of malaria as it affected the practices towards the prevention of malaria. Another study done on the knowledge, attitudes and practices.

In a study by Yaya and colleagues in 2017 in Burkina Faso concluded that there was a difference in the Knowledge levels about malaria burden between rural and urban locations the urban women were found to be more aware that malaria was caused by mosquito bites. They further asserted that the misconceptions among rural dwellers on the causes of malaria that were seen to be related to infinite factors such levels of education in rural areas, access to media or behavior communication from the ANC. This provides more basis to achieve the objectives of this study for it would identify the gap in knowledge that people have affecting the adoption of practices for malaria prevention in Mansa.

## **2.8 GAP**

In spite of the vast array of information about Malaria causes, treatment and prevention interventions, many people in rural areas of Zambia are still lacking this knowledge. Studies by Yaya et al., 2017 and Flatie et al., 2021 highlight the prevalence of people still having misconceptions of Malaria. Thus it was vital that this study carried on to unveil knowledge, attitudes and practices in relation Malaria prevention intervention in Zambia to help bridge this gap of knowledge.

## **2.9 THEORETICAL FRAMEWORK**

In this research the theory employed was the Health Belief Model, which Irwin Rosenstock created in 1966 and is regarded as one of the first and most prominent models for programs promoting health and disease prevention. This Model has four constructs which are:

1. **Perceived Susceptibility:** the subjective assessment of how a person looks at getting sick and the threat of the condition.
2. **Perceived Severity:** the seriousness of the medical condition and its magnitudes.

3. Perceived benefit: the potential benefits one may get from taking the health action to avoid or prevent the disease.
4. Perceived barriers: the barriers that are stopping on from taking action

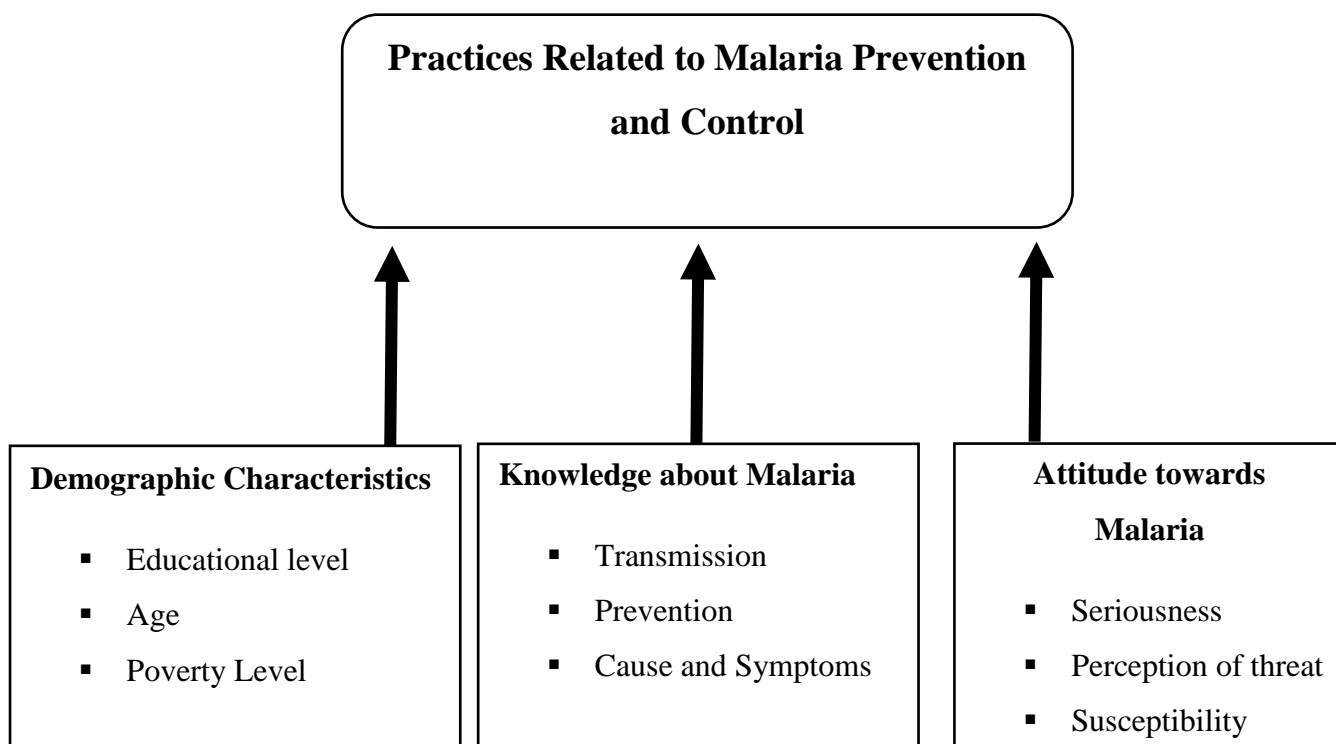
Other than the four main constructs there two more those act as drivers to take action

5. Cues to Action: these are factors that prompt action or determine the readiness of one to take action
6. Self-efficacy: an individual belief in the capacity to take the health related action.

HBM has been found to be one of the most useful in the guide for health promotion and disease prevention programs. One of the main advantages of the health belief model is that it relatively understands health behaviours and why people do not take any. It demonstrates the relevance of individual beliefs about health, the costs and benefits of actions in the protection or improvement of health. It promotes changes in beliefs so that people can adopt behaviours and attitudes that can lead to improved health status.

The Model will assist in the understanding of the perceived threats of getting malaria by the knowledge of transmission and illness symptoms. It will also help in the identification the barriers to positive health action towards malaria intervention can come in form of ignorance, self-regard and fear of inconvenience from certain interventions e.g. Indoor Residue spraying, distribution of nets therefore this will be able to explain why people have poor attitudes which ij turn affect the practices towards malaria prevention. This is in line with the caregivers and residents attitudes towards malaria prevention measures as they look at the costs, benefits and barriers to the expected outcomes for the actions to be taken. Self-efficacy among these people will enable them to take action in the practice of prevention measures in Mansa mainly the use of ITN's, LLN's and IRS acceptance.

## 2.9.1 CONCEPTUAL FRAMEWORK



The diagram above shows the relationship among the dependent and independent variables. Where the social demographic characteristic have an influence on the peoples knowledge and also the attitudes that in turn affect the practices done towards malaria control. It demonstrates the factors that influence the adoption of malaria prevention practices.

## **CHAPTER THREE**

### **3.0 METHODOLOGY**

#### **3.1 Introduction**

This Chapter gives details on the methods to be used in the collection of data. It covers the research design, demographics, sample size, data collection processes, analysis methods and the ethical considerations.

#### **3.2 Study Approach**

This study used a qualitative research design as it sought to examine and understand the attitudes, the levels of knowledge the people have including the peoples practices towards malaria prevention.

#### **3.3 Study Design**

The study made use of a Case study type. It has been selected for this research because it will be useful in getting an in-depth understanding of the knowledge people have about malaria and the interventions from the various views and responses. Case study research can produce detailed descriptions and thorough comprehensions of social situations that are important and meaningful in social contexts (Macpherson et al, 2010). The Case study will help in the identification of why people have certain attitudes that affect the various practices for malaria prevention.

#### **3.4 Research Setting/Area**

The Mansa district in the province of Luapula was the site of the study. The district has an estimated population of about 606,147 people (CSO, 2018).

#### **3.4 Study Population/ Target Population**

The Study was conducted in Mansa district among pregnant women in the age range of 16 to 40, households with under five children and households that have received resources for malaria prevention.

The Inclusion Criteria to be used for selection of participants:

- Pregnant Women of age 16 to 40.
- Households with children under the age of five years.

- Households that received ITNs.
- Households that have been sprayed.

Exclusion Criteria included:

- Households with single males only.
- Households without ITNs.
- Households that have not been sprayed.

### **3.5 Sample Size**

The sample size to be used will be 20 people. The target population of interest pregnant women attending ANC, mothers with under five children, some residents and healthcare workers. When similar segments are being built in a population, the general recommendation for in-depth interviews is a sample size of 20 to 30 participants (Inter-Q, 2021). The selected number of participants was ideal for the study to avoid saturation of responses and information.

### **3.6 Sampling strategy**

The identified strategy for this qualitative research was purposeful sampling as it is ideal in the identifying and assortment of information relevant to malaria interventions for the selected population.

### **3.7 Data Collection Tool**

In depth interviews and focus group discussions with participants were held for data collection. An interview guide aided in capturing relevant responses to provide a greater understanding of the respondent's knowledge, attitudes and practices towards malaria control as it would also get relevant socio-demographic information. This provided specific information about individuals and the population furthermore it gave a better interpretation to them due to variation in levels of literacy.

### **3.8 Data Analysis**

The data collected was analysed using a thematic and content analysis. These are used to create codes from the repeated responses and later formulate themes for further analysis. Taped and transcribed interviews were conducted.

### **3.9 Ethical Considerations**

Ethical approval for the conduction of the research was requested from the University of Lusaka and the National Health Research Authority and approval District health Office. This study maintained the following ethics:

**Confidentiality:** it ensured anonymity of the participants and would not disclose any personal information revealed during the study.

**Beneficence:** the research was done for the benefit others and promoting their own safety and upholding their welfare.

**Informed Consent:** The study intended to make all the people have full information on what the study seeks before they can participate.

## CHAPTER FOUR

### 4.0 RESULTS

#### 4.1 Introduction

This chapter provides the key findings of the study as it presents the results that were obtained from the research conducted. The research used a qualitative study approach as the data was presented and analysed using themes. The data analysis was in line with the objectives and key aims set for the study. In depth-Interviews were used to carry out the research and the interviews were recorded to capture key responses. The data analysis provides a basis to assess the knowledge, attitudes and perceptions on malaria interventions among residents of Mansa district in Luapula province.

##### 4.1.1 SOCIO DEMORGRAPHIC CHARACTERISTICS OF PARTICIPANTS

CHARACTERISTICS	FREQUENCY
Age Group	16 – 25
	26 – 35
	36 – 45
	45 - 50
Educational Background	Primary
	Secondary
	Tertiary
Sex	Male
	Female
Occupational Status	Employed
	Unemployed
Marital Status	Married
	Single

#### 4.1.2 FIGURE 4.1 AGE-GROUP AND FREQUENCIES OF PARTICIPANTS

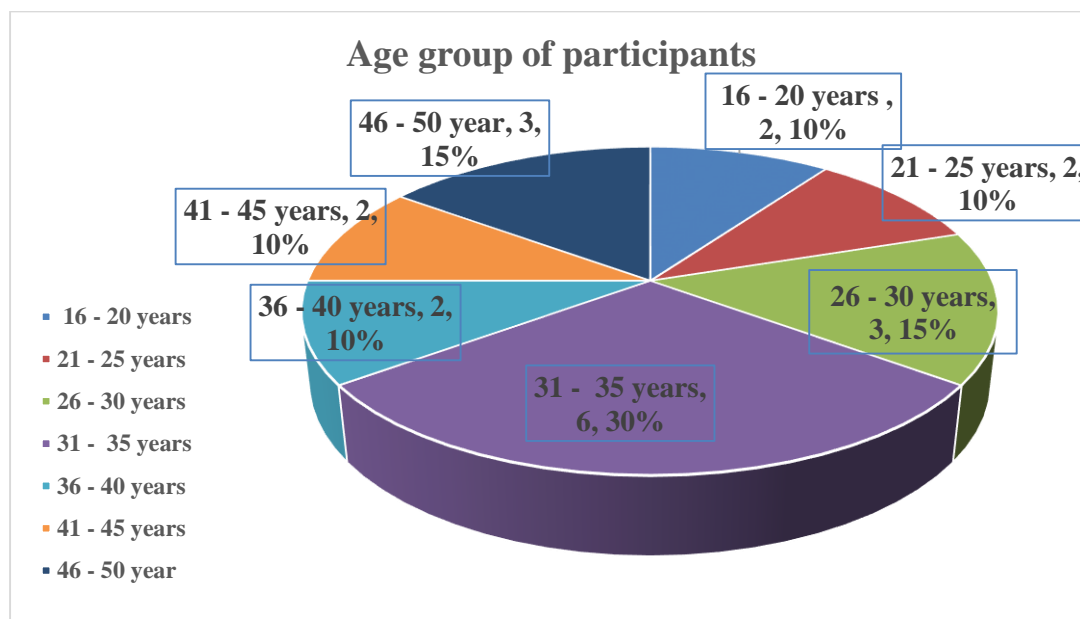


Figure 4.1 shows the Age of the respondents, the results revealed that majority of the respondents were aged between 31 and 35 with 6 respondents representing 30%, 2 respondents representing 10 % between 16 to 20 years, 2 respondents representing 10% between 21 and 25 years, 3 respondents representing 15% between 26 and 30 years, 2 respondents representing 10% between 36 and 40 years, 2 respondents representing 10% between 41 and 45 years. The last Age-group was between 45 to 50 years as it had 3 respondents that represented 15%. The age indicated as a factor in the attitudes and knowledge they had on malaria prevention practices.

#### 4.1.3 FIGURE 4.2 SEX CHARACTERISTICS OF PARTICIPANTS

Sex	Frequency	Percentage %
Male	8	40%
Female	12	60%
<b>Total</b>	<b>20</b>	<b>100</b>

Figure 4.2 shows the Sex of the participants, out of the total 20 respondents 8 represented the males with 40% and 12 represented the females accounting for 60%.

#### 4.1.4 FIGURE 4.3 EDUCATIONAL CHARACTERISTICS OF PARTICIPANTS

Level	Frequency	Percentage %
Primary	10	50%
Secondary	7	35%
Tertiary	3	15%
<b>Total</b>	<b>20</b>	<b>100</b>

Figure 4.3 shows the educational characteristics of the participants and based on educational levels majority of the respondents (50%) stated they only attended primary school, 35% of them reached secondary and the remaining few 15% have been to tertiary school to attain certificates, diplomas and degrees. There was a significant difference in the levels of knowledge between those who have been to the stated levels of education above as it also had an effect on the health seeking behaviours.

#### 4.1.4 FIGURE 4.4 OCCUPATIONAL CHARACTERISTICS OF THE PARTICIPANTS

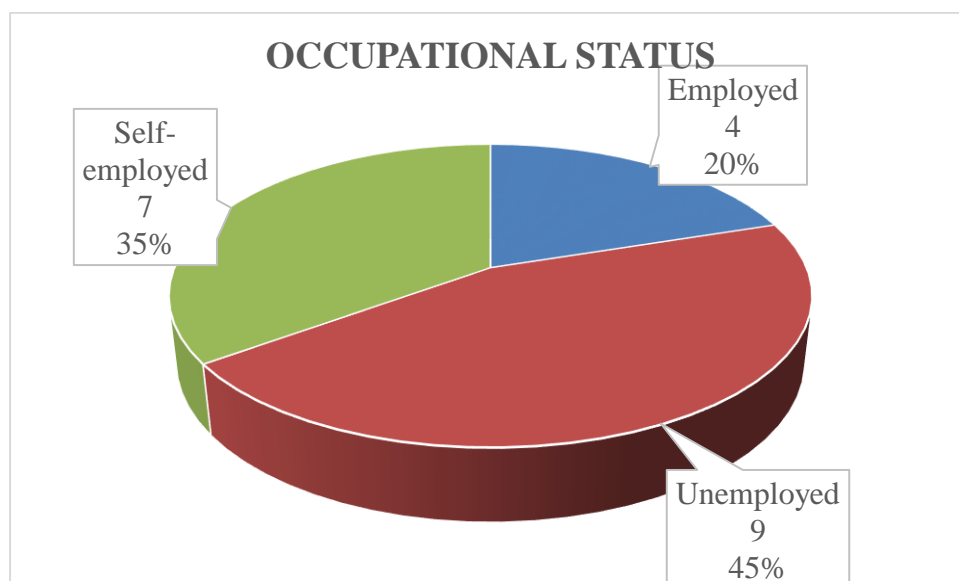


Figure 4.4 shows the occupational status of the participants. Findings revealed 4 respondents were employed accounting for 35%, 7 of respondents were self-employed and majority of the respondents were unemployed accounting for 45% of the total 20 participants. This showed the importance of occupation in seeking health care and meeting health costs due to income levels.

#### 4.1.5 FIGURE 4.5 MARITAL STATUS OF THE PARTICIPANTS

Status	Frequency	Percentage
Single	5	25%
Married	15	75%

Figure 4.5 shows the marital status of participants and out of the 20 interviewed 25% of them were single and 75% of the respondents were married. This had an impact on the household decision making in terms of seeking health care upon experiencing some malaria symptoms and uptake of interventions.

#### 4.1.6 Baseline

### 4.2 ORGANIZATION OF FINDINGS

The predetermined and emerging themes of assessing the knowledge attitudes and practices on malaria interventions among residents of Mansa district, Luapula province were the themes under consideration. The table below shows the themes and their specific objectives.

**Figure 4.2.1 Emerging Themes**

Specific Objectives	Themes
<ul style="list-style-type: none"> <li>To determine the levels of knowledge on malaria and control interventions</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge about malaria (causes, treatment, severity)</li> </ul>

<ul style="list-style-type: none"> <li>• To assess the attitudes towards acceptance of malaria control interventions</li> </ul>	<ul style="list-style-type: none"> <li>• Attitudes towards acceptance of malaria control interventions</li> </ul>
<ul style="list-style-type: none"> <li>• To determine the practices done for malaria control</li> </ul>	<ul style="list-style-type: none"> <li>• Practices done for malaria control</li> </ul>

### **4.3 THEME 1: KNOWLEDGE ABOUT MALARIA (CAUSES, TREATMENT, SEVERITY)**

More than half of the participants (n = 17) knew that malaria is caused by mosquitoes, although some were unsure of the cause or treatment options. A participant made the claim that the environment conditions contributed to an increase of malaria-causing mosquitoes. *“When there is grass and stagnant water, dirt around the houses, mosquitoes are produced in the stagnant water”* (female participant). Majority (n = 17) the participants stated that the bites from Mosquito was the main cause of malaria.

Out of all the participants, however, only one (n = 1) had minimal ideas on malaria transmission. The participant stated, *“To be honest there is not much I know about Malaria apart from Mosquito”* (Female participant). Participants also shared their malaria knowledge about the signs and symptoms *“It [malaria] comes with various effects such as loss of appetite, fever, body pains, vomiting, and in some instances severe stomach pains”* (Multiple participants).

With regard to prevention of malaria majority of the participants stated the use of mosquito nests, Indoor residue spraying and cleaning or keeping the environment clean to avoid pools of stagnant water. One (1) participant was well informed on the aspect of how to specifically prevent malaria for a Sickle cell patient, she stated:

*“Nets do avoid bites and specifically for a sickle cell patient you need to keep them warm.”*

Another participant, still with regard to prevention of malaria, stated:

*“The most commonly used prevention intervention is the use of mosquito nets even though people have a habit of using them as fishing nets”* (Health worker).

According to the participants’ responses, it was concluded that the most vulnerable group was children. *“Children mainly under five years of age are the most vulnerable especially if they’re not well taken care of and having low levels of immunity.”* (Female participant). In spite of that information the health workers who were interviewed stated other prominent groups that were also at risk of contracting malaria, included; pregnant women and sickle cell patients. The workers were also keen to state how often they disseminated information about malaria, and they stated:

*“We don’t often give much information about malaria because of being busy, we mainly focus on diagnosis and treatment and don’t spend much on teaching them how malaria can be prevented.”(Health Worker).*

#### **4.4 THEME 2: ATTITUDES TOWARDS ACCEPTANCE OF MALARIA CONTROL INTERVENTIONS**

Participants were asked on how serious they thought malaria was and some had this to say, *“Yes, Malaria is a serious disease we have seen many people experience the worst of it and even die in our eyes”* The health workers also agreed that people do take Malaria seriously and that it was free to treat people for malaria. Furthermore, with regard to Indoor residue spraying, participants had different views but the most prominent was the fact that most participants attested that the chemical used left a terrible odour after spraying.

*“Some of us vomit and lose our appetite because of the spray, we tend to refuse when they come to the community to spray”* (Female participant)

*“The good part is apart from reducing the number of mosquitoes it kills cockroaches and insects, though it causes a lot of itching and takes time to fade off”* (Male participant).

Most participants denied the fact that there are people who cannot get sick of malaria without giving further reasons as to why they thought so. When it came to the aspect of accepting if someone can heal from malaria minus getting any treatment, the response was similar majority of the participants just stated there was need to go to the hospital or clinic as they all agreed to malaria being a serious disease. All of the participants stated that the nearby public HP was their first option for medical treatment. Because of their proximity, accessibility, and availability of pharmaceuticals, participants chose public health facilities.

*“At first we will go to the health post. If the treatment is not done there [public health post] then we will go to a referral (District Hospital). People, who cannot afford, can get free malaria treatment at the health post”* (female participant)

According to the health workers interviewed, they stated that most people delay in seeking for treatment because of various reasons. *“Distance, long queues, some assume it’s another disease, others self-medicate traditionally e.g. traditional tattoos ‘Ndembo, collect herbs used for steaming’.”*

#### **4.5 THEME 3: PRACTICES DONE FOR MALARIA CONTROL**

The majority of the participants stated that the most effective malaria intervention was use of insecticidal nets. *“During rainy season there is a lot of water that gives room for mosquitoes to breed and increase, thus without the mosquito nets you can get malaria”* (Female participant). *“Many of our patients don’t know the most effective intervention; the majority just stick to the mosquito nets which are also a very good prevention intervention for malaria”* (Health worker).

Pregnant women do receive preventive treatment according to the health workers. *“Yes, they are given Fancida as prophylaxis, depending on the trimester.”* (Health Worker). The measures that the participants preferred were stated as follows; *“Going for check-ups, mosquito nets, spraying even though it is not common here”* (Female participant). In the survey, we discovered that the vast majority of participants reported using mosquito nets and having their homes sprayed. All of the individuals admitted that they conducted their IRS from home. They reported that the spraying had killed every insect in the homes, including mosquitoes and cockroaches, and they thought this had reduced the number of malaria cases. Participants did note a number of negative effects of IRS, however, which led some people to oppose or decline the application of insecticide to their homes.

## CHAPTER FIVE

### 5.0 DISCUSSION OF RESULTS

In this study, the knowledge, attitudes, and conduct of the Mansa residents with regard to malaria prevention were examined. According to our findings, a large number of participants had a high degree of current knowledge about the prevention and treatment of malaria. Long lines, travel time to the medical facility, and seniors' decision-making power all had an impact on community health seeking behaviour. This study will contribute to the sparse body of knowledge on malaria in Mansa and provide guidance to the local health facilities in developing plans to overcome community-level obstacles to malaria prevention and treatment.

The difficulty of malaria prevention and treatment in rural areas is influenced by the interaction of social and economic factors. Few participants were found to be unaware of the causes of malaria, despite the fact that the majority of participants in this survey correctly identified the causes of malaria. Comparable to our outcomes, Togbay et al. (2013) found that participants in Bhutan believed that hard work in unfavourable weather (heat and rain), cooking with firewood, filthy and unhygienic conditions inside the home and around it, dirty water, and people sleeping outside during harvesting were the main causes of malaria.

According to this survey, participants favoured public health facilities over private and traditional healers for the diagnosis and treatment of malaria. According to the health workers in the study, malaria treatment is likewise free in these public health institutions. It's interesting to note that the participants continued to visit the hospital for illnesses other than malaria. The participants emphasised the importance of using hospital or clinic medication to treat malaria. This is a change in behaviour for the better, indicating adoption of western-style healthcare professionals. Our findings stood in contrast to those of other nations where traditional healers continue to be involved in the diagnosis and treatment of malaria. Matsumoto et al. (2018) discovered that people in rural indigenous communities in the Philippines have a strong propensity to turn to Albularyos (traditional healers) for assistance with malaria treatment. Choices were influenced by strong cultural and traditional norms as well as scepticism about the care given by medical experts (Matsumoto et al., 2018). The healthcare professionals should investigate the factors that led to this shift in perspective and duplicate it in other high-risk locations where traditional healing is still practised.

Participants reported a number of problems, including distance, lengthy lines at the facility, and the presence of traditional and self-medication treatments that impede prompt access to therapy. We warned that self-medication might lead to improper treatment. For instance, it has been reported that people treat their own malaria using traditional steamed herbs. Results from different studies have different relationships between demographic variables and knowledge, attitudes, or practises related to self-medication with antibiotics (Auta et al., 2013). These discrepancies could result from changes in setting or culture.

Free malaria treatment is an opportunity for equitable and early care, reducing the severity of malaria. To avoid and eliminate all health care payments are out-of-pocket (OOP), Zambia has gradually converted to a universal health insurance system. Uzochukwu et al. (2018) found an association between participants' physical conditions, such as weakness brought on by disease or old age, and altered health care seeking behaviours. Long walking commutes have been shown to delay seeking treatment in rural locations with little to no transit infrastructure (Uzochukwu et al., 2018; Urama et al., 2021). Delays in the diagnosis and treatment of malaria can lead to focused epidemics and limited transmission. Active case identification utilising mobile health workers in the Mekong region has made sure that the weak and vulnerable are tested and treated locally, reducing travel worries and preventing outbreaks (Lim et al., 2017; Dondorp et al., 2017). Due to limited access, high costs, and logistical challenges, national malaria programmes frequently underserve rural, difficult-to-reach areas with this approach (Lim et al., 2017).

## **CHAPTER SIX**

### **6.0 CONCLUSION**

#### **INTRODUCTION**

Our research in Mansa, Luapula province, Zambia, revealed that a number of variables, including local customs, travel time, resident knowledge and attitudes, influence the choice of malaria treatment and healthcare. In addition, although public HPs are the best option for malaria treatment and medical care, individuals in rural regions of Zambia still have to deal with issues including inconsistent malaria information dissemination and a lack of prompt access to diagnostic and treatment services. The majority of study participants had awareness of malaria or were well informed about it, however the attitudes and practices of some participants were contrary to the matter. Health institutions offer free malaria treatment and routine IRS spraying, but due to unfavourable experiences and a lack of awareness, the initiative has not been able to get the necessary full coverage. The healthcare professionals need to be aware of these obstacles to prepare and put into action solutions to get around them and facilitate transformation. This would ensure that the preventative strategies being used to stop the spread of malaria in rural areas are as effective as possible and result in long-lasting behaviour change.

#### **6.1 RECOMMENDATIONS**

- Increased malaria outreach programs
- Increase Malaria prevention sensitization to aid increase knowledge and inversely improve behaviour towards malaria prevention interventions
- Upscale Malaria prevention treatment (Prophylaxis) to help reduce the malaria case
- Healthcare providers should Engage traditional healers to reduce issues of self-medicating in terms of malaria

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**APPENDIX I: GANTT CHART TIME PLAN**

<b>ACTIVITY</b>	<b>September</b>	<b>October</b>	<b>November</b>	<b>December</b>	<b>January</b>	<b>March</b>
Proposal writing and editing						
Proposal presentation						
Data collection						
Analysis comparison and compilation						
Printing of project						
Final project submission						

## APPENDIX II: BUDGET

	ITEM	DESCRIPTION	AMOUNT ZMW
1.	Airtime	All Network	K250
2.	Stationary	• 2 Pens	K20
		• 1 Note Book	K50
		• printing and binding 3copies of the proposal	K300
		• Printing and Binding Final Copy	K300
3.	Miscellaneous		K2000
		Research Assistants	1000
<b>Total</b>			<b>K3,920</b>

## **APPENDIX III: CONSENT SHEET**



**SCHOOL OF MEDICINE AND HEALTH SCIENCE DEPARTMENT OF PUBLIC HEALTH**

**TITLE: KNOWLEDGE ATTITUDES AND PRACTICES ON MALARIA INTERVENTIONS AMONG RESIDENTS OF MANSA DISTRICT**

Dear participants I am a student from the University of Lusaka. I am here to carry out a study on the knowledge attitudes and practices on malaria interventions among Mansa district residents.

In order to carry out this research study I will need your participation in answering the questions in the questionnaire to find out what your knowledge, attitudes and practices are on malaria prevention. If some questions come out to be sensitive you may choose not to answer them.

**Please note that:**

1. Participation in this research is voluntary and not mandated.
2. You may withdraw at any particular point if you feel uncomfortable with the research being conducted.
3. If there is any need of recording your responses your permission will be requested for.
4. The information gathered will be kept confidential and used for research purposes only.
5. You may choose not to answer some questions that prefer not answering.

## **APPENDIX IV: CONSENT FORM**

Consent Form for the participant

The above information regarding my participation in the study is clear to me. I have been given a chance to be asked questions and have been answered to my satisfaction. I understand that my enrolment will be secure and that the information I give will not affect me in anyway. I now consent voluntarily to be a participant in this project and understand I have the right to leave the interview at any time. My signature below shows that I am willing to participate in this research:

Participant name: .....

Participant's signature: ..... Date: .....

Researcher conducting informed consent: .....

Signature of researcher: .....

Date: .....

## APPENDIX V: INTERVIEW GUIDE

### INSTRUCTIONS TO PARTICIPANTS

Please answer the following question by your own appropriate reasoning for we would like to know the Knowledge, Attitudes and practices of malaria prevention. Your responses will help in designing measures that will help in further prevention.

Interview Date: .....

#### Demographics

1. Age.....
2. Gender.....
3. Marital Status.....
4. Educational level.....
5. How many people in your house are younger than 5 years of Age.....

#### Knowledge on Malaria

1. What do you know about Malaria? Have you ever received information on Malaria?  
.....  
.....  
.....
2. What do you think Causes Malaria?  
.....  
.....  
.....
3. What are the most common symptoms of malaria?  
.....  
.....  
.....
4. How do you think Malaria can be prevented?  
.....  
.....  
.....
5. Do you think there is a group of people who are more affected by malaria than others? If yes who are those and Why?  
.....  
.....  
.....

**Attitudes towards Malaria Prevention**

1. Do you think malaria is a serious disease? If Yes Why?  
.....  
.....  
.....
2. Where do you often prefer to seek care when you experience common malaria symptoms?  
.....  
.....  
.....
3. What are your views about Indoor Residue Spraying?  
.....  
.....  
.....
4. In your Opinion do you think there people who cannot get sick of Malaria? Why so?  
.....  
.....  
.....
5. Can someone heal from malaria without getting any treatment? How?  
.....  
.....  
.....

**Practices for Malaria Prevention**

1. In your own view what are the things you can do to protect you and your family from malaria? What do you think is most effective?  
.....  
.....
2. What Measures do you prefer and why?  
.....  
.....
3. Does your house have any mosquito nets? How many people in your house sleep under a mosquito net? What do you think are the benefits for using mosquito nets?  
.....  
.....
4. Has your house been sprayed? Where you charged for it?  
.....  
.....
5. What do you think every household needs to prevent malaria well?  
.....  
.....

## APPENDIX VI: INTERVIEW GUIDE FOR HEALTH WORKERS

### Knowledge Attitudes and Practices towards Malaria Prevention

1. What are the key signs and symptoms of Malaria? Who is more vulnerable to Malaria? Why the ones mentioned?  
.....  
.....
2. Do pregnant women receive preventive treatment for Malaria? What is given to them?  
.....  
.....
3. Do people take Malaria seriously? Do they come for treatment at the health center? How much does it cost to treat Malaria?  
.....  
.....
4. What Malaria drugs are used for treatment? Are drugs always available at the health center? Who provides the health center with malaria treatment drugs?  
.....  
.....
5. On average, how often do people seek treatment on Malaria? In like a month (between 30 days)  
.....  
.....
6. How often do you give people Malaria related information? What are the peoples preferred sources of receiving information about Malaria?  
.....  
.....
7. What do you think are some of the causes that lead delay to seek treatment after onset of symptoms?  
.....  
.....  
.....
8. What do the people perceive as the most effective intervention for Malaria vector control and prevention?  
.....  
.....

## **APPENDIX VII: PERMISSION LETTER**

RE: Permission to conduct Research study- Mansa General Hospital

Dear Sir/ Madam,

My name is Tom Mwewa and I am writing in request for permission to conduct a research study at your Facility. I am currently enrolled at the University of Lusaka under the BSc Public Health Program and in the process of writing my Bachelors Thesis in partial fulfillment for my Degree. The study is titled “Knowledge, Attitudes and Practices on Malaria Interventions among residents of Mansa district”.

I hope that your administration will allow me to recruit participants who would volunteer to participate in the study, for they will be each given a consent form to be signed (copy attached) for full awareness and will be returned to the primary researcher.

Once permission is granted all participants will be given questionnaires and guided through each question for good response. The survey results will be pooled for the thesis project and individual results of this study will remain absolutely confidential in record for the school and the National health research authority. No costs will be incurred by your facility or the individual participants.

Your approval will be highly appreciated. If there any further questions or concerns I would be glad to answer any of them. You may either call me or contact me through email: [Tommymwewa7@gmail.com](mailto:Tommymwewa7@gmail.com)

If you agree kindly sign below and return the signed form in the enclosed self-addressed envelope. Alternatively you may assign a signed letter of permission on the institution letter head acknowledging your consent and granted permission for the conduction of the study at you Institution.

Yours sincerely,

TOM MWEWA, University of Lusaka

Phone: +260972746355

Approved by: .....

## APPENDIX VIII: CLEARANCE UNILUS

**SCHOOL OF MEDICINE AND HEALTH SCIENCES  
LEOPARDS HILL CAMPUS**  
Plot No. 37413, Off Alick Nkhata Mass Media. P. O Box 36711,  
Lusaka.  
Phone: +260211258505, 258409 Fax +260211233409; Cell +26097607585/0961917862,  
E-mail:unilus@zamnet.zm,ictar@zamnet.zm

<p><b>SCHOOL OF MEDICINE AND HEALTH SCIENCES RESEARCH ETHICS COMMITTEE</b></p>
------------------------------------------------------------------------------------

Ref no: IORG0010092-2023/073

Date: 15<sup>th</sup> DECEMBER, 2022

TOM MWAPE MWEWA - BSPH18213661

**Re: RESEARCH TITLE: ASSESSING THE KNOWLEDGE ATTITUDES AND PRACTICES ON MALARIA INTERVENTIONS AMONG MANSA RESIDENTS IN LUAPULA PROVINCE**

The above research was submitted to the research ethics committee for review. The study has no major ethical problems and is approved subject to the following:

1. The study cannot be changed without express permission of the UNILUS Research ethics committee
  2. Approval from the Lusaka District health Management or equivalent health authorities should be sought.
  3. The study tools should be added.
  4. An informed consent form should be attached and filled by all study participants (If dealing with primary data)
  5. The risks and benefits should be included in the consent form.
  6. Ensure before commencement that approval is sought from ZNHRA
- Congratulations and the committee wishes you success in your work.

Prof Kasonde Bowa  
MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)  
Chairman- UNILUS REC  
Professor of Urology and Consultant Urologist  
Executive Dean  
University of Lusaka and University Teaching Hospital School of Medicine and Health Sciences.



**SCHOOL OF MEDICINE AND HEALTH SCIENCES LEOPARDS  
HILL CAMPUS**

Plot No. 37413, Off Alick Nkhata Mass Media. P. O Box 36711, Lusaka.  
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E-mail:unilus@zamnet.zm,ictar@zamnet.zm

Date: 15<sup>th</sup> DECEMBER, 2022

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.....  
.....  
**PERMISSION FOR TOM MWAPE MWEWA - BSPH18213661 TO CONDUCT A  
RESEARCH STUDY AT YOUR FACILITY/ INSTITUTION/ORGANIZATION**

Reference is made to the above subject matter

The University of Lusaka, School of Medicine and Health Sciences here by requests for permission for **TOM MWAPE MWEWA** Public Health Student to conduct research at your facility/ institution/ organization, entitled; **ASSESSING THE KNOWLEDGE ATTITUDES AND PRACTICES ON MALARIA INTERVENTIONS AMONG MANSA RESIDENTS IN LUAPULA PROVINCE**. The research is in partial fulfillment of the requirements for the degree of Bachelor of Science Public Health. This is purely for academic purposes and information gained in such a way will not be used in the public domain without prior authorization from the institutions/ organizations involved.

The research topic has been cleared by the University of Lusaka, School of Medicine and Health Sciences Research Ethics Committee as per the attached copy. Data collection is expected to be done from **1<sup>st</sup> January, 2023 to 31<sup>st</sup> March, 2023**.

The University of Lusaka avails itself of this opportunity to review to your office the assurances of its highest considerations and looks forward to your timely and favorable response.

Prof Kasonde Bowa  
MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)  
Chairman- UNILUS REC  
Professor of Urology and Consultant Urologist  
Executive Dean University of Lusaka and University Teaching Hospital School of Medicine and Health Sciences.

**APPENDIX IX: NHRA LETTER**







# NATIONAL HEALTH RESEARCH AUTHORITY

Lot No. 18961/M, off Kasama Road, Chalala, P.O. Box 30075, LUSAKA

Tell: +260211 250309 | Email: [znhrasec@nhra.org.zm](mailto:znhrasec@nhra.org.zm) | [www.nhra.org.zm](http://www.nhra.org.zm)

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Ref No: NHRA00004/25/01/2023

Date: 25<sup>th</sup> January 2023

The Principal Investigator,

**Tom Mwewa,**

**UNILUS,**

**Lusaka, Zambia.**

**Dear Mr Mwewa,**

## **Re: Request for Authority to Conduct Research**

The National Health Research Authority is in receipt of your request for ethical clearance and authority to conduct research titled “**Knowledge Attitudes And Practices Towards Malaria Interventions Among Mansa Residents Of Luapula Province .**”

I wish to inform you that following submission of your request to the Authority, our review of the same and in view of the ethical clearance, this study has been **approved** on condition that:

1. The relevant Provincial and District Medical Officers where the study is being conducted are fully appraised;
2. Progress updates are provided to NHRA bi-annually from the date of commencement of the study;
3. The final study report is cleared by the NHRA before any publication or dissemination within or outside the country;

4. After clearance for publication or dissemination by the NHRA, the final study report is shared with all relevant Provincial and District Directors of Health where the study was being conducted, University leadership, and all key respondents.

Yours sincerely,

**National Health Research Authority**



Ms Sandra Chilengi Sakala,

Acting Director/Chief Executive Officer