

**DISASTER MANAGEMENT AND PREVALENCE  
OF DISEASES IN CENTRAL UGANDA**

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**A Thesis**

**College of Higher Degrees and Research**

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**In Partial Fulfillment of the Requirements for the Master of Development  
Administration and Management**

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**NAMUTEBI PRICILLA MULUNGI**

**MAD/16795/111/DU**

**September, 2012**

## DECLARATION A

"This thesis is my original work and has not been presented for a Master or any other academic award in any university or institution of learning".

NAMUTEBI PRICILLA MULUNGI

Name and Signature of Candidate



26/09/2012

Date

**DECLARATION B**

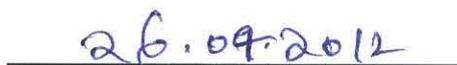
"I confirm that the work reported in this thesis was carried out by the candidate under our supervision".



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Name and Signature of Supervisor

DR ABUGA ISAAC



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Date

Date

## **DEDICATION**

To my parents Mr. and Mrs. Sentamu Herman and my boyfriend Mr. Kalanzi David for the psychological support and financial provision towards my academic life.

## **ACKNOWLEDGEMENT**

Firstly, I want to appreciate the almighty God who has enable me to accomplish all this for two years,

I am indebted to my supervisor Mr Abuga Isaac, I appreciate your endless effort and tireless guidance in the conducting of this study, otherwise without you I would not have managed.

, I appreciate all members of the panel,Dr Abuga Isaac,Dr Mwanik Roselynn and Pr Rwabuhihi Emmanuel Festus who have also contributed to my accomplishment of the final thesis.

To the entire staff and lecturers under the College of Higher Degree and Research, your effort is worth mentioning. Special thanks to Department of Social Sciences.

I appreciate all my respondents from Mulago, IHK and AIC for their material contribution in this study, without you all, this would not be an easy task.

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## TABLE OF CONTENTS

DECLARATION A	i
DECLARATION B	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
LIST OF TABLES	viii
LIST OF ACRONYMS AND ABBREVIATIONS	ix
ABSTRACT	x
CHAPTER ONE:THE SCOPE AND ITS PROBLEM	1
Background to the Study	1
Statement of the Problem	4
Purpose of the Study	4
Research Objectives	4
General Objective	4
Specific Objectives	5
Research Questions	5
Null Hypothesis	5
Scope of Study	5
Significance of the Study	6
Definition of operational terms	7
CHAPTER TWO: REVIEW OF RELATED LITERATURE	8
Introduction	8
The Concept of Disaster Management	8

Levels of Achievement of Emergency Disaster in Preventing Incidence of Diseases	9
The Prevalence of Disaster Diseases after Emergency Disaster Effort	14
Conclusion of the Literature Review	21
CHAPTER THREE: METHODOLOGY	22
Research Design	22
Research Population	22
Sample size	22
Sampling Method	24
Research Instruments	24
Questionnaire method	24
Interview method	24
Validity of the instrument	25
Reliability of the Instrument	25
Data Gathering Procedures	26
Data Analysis	26
Ethical Considerations	28
Limitations of the study	28
CHAPTER FOUR: PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS	30
Introduction	30
Response Rate	30
Background characteristics of the respondents	31
Levels of achievement of emergency disaster management in preventing incidence of diseases	36
The relationship between disaster management achievement and effort applied	39
Level of prevalence rate of diseases after an emergency disaster	40
Level of achievement between disaster management team and level of prevalence of disease	42

CHAPTER FIVE:FINDINGS, CONCLUSIONS, RECOMMENDATIONS	45
Introduction	45
FINDINGS	45
Profile of respondents in terms of attributes	45
Level of achievement of emergency disaster management in incidence of diseases	46
Level of achievement of emergency disaster management in incidence of diseases	53
Correlation between levels of achievement and the prevalence of diseases	56
CONCLUSION	60
The level of disaster management achievement and controls	60
The level of prevalence of diseases after emergency disaster	60
The relationship between disaster management achievement and the prevalence of diseases	61
RECOMMENDATIONS	61
Areas for further research	63
REFERENCES	64
APPENDIX I: TRANSMITTAL LETTER	67
APPENDIX IB: TRANSMITTAL LETTER FOR THE RESPONDENTS	68
APPENDIX II: CLEARANCE FROM ETHICS COMMITTEE	69
APPENDIX III:INFORMED CONSENT	70
APPENDIX 1VA: FACE SHEET	71
APPENDIX V: PROPOSED DATA PRESENTATION THROUGH TABLES	74
APPENDIX VI:PROPOSED BUDGET	76
APPENDIX VII:TIME FRAME	77
RESEARCHER'S CURRICULUM VITAE	78

## LIST OF TABLES

Table 1: Sample Size .....	23
Table 2: gender of respondents .....	31
Table 3: Profile of the Respondents by age.....	32
Table 4: Representation of the Respondents by Education.....	33
Table 5: position held by respondents .....	34
Table 6: number of years of experience.....	35
Table 7: Level of achievement of emergency disaster management in incidence of diseases .....	37
Table 8: Level of Prevalence of Disaster Diseases after an Emergency Disaster....	40
Table 9: Level of achievement between disaster management team and prevalence of disease.....	42
Table 10: Correlation between Achievements of Disaster Management and Prevalence of Diseases.....	44

## **LIST OF ACRONYMS AND ABBREVIATIONS**

ACT:	Artemisinin-based Combination Therapy
AIC:	AIDS Information Center
AIDS:	Acquired Immune Deficiency Syndrome
FP:	Family Planning
HIV:	Human Immune Virus
ITN:	Insecticide Treated Nets
LLIN:	Long Lasting Insecticidal Net
MOH:	Ministry of Health
NGOs:	Non Government Organizations
PAM:	Pregnancy Associated Malaria
PLHAs:	People Living with HIV/AIDS
STI:	Sexually Transmitted Infections
UNICEF:	United Nations Children's Fund
VCT:	Voluntary Counseling and Testing
WHO:	World Health Organization
CVI:	Content Validity Index
BCP:	Basic Care Packages

## **ABSTRACT**

This study sought to examine disaster management and prevalence of diseases in Central Uganda with special focus on AIC, Mulago and IHK. The specific objectives were to determine the: profile of the members of disaster team; level of achievement of disaster teams in incidences of diseases; level of prevalence of disaster diseases; challenges faced by disaster team in prevalence of diseases and the relationship between the levels of achievement in disaster management and prevalence rate of diseases. The study employed a descriptive survey design employing both qualitative and quantitative data by use of questionnaires, and interview guide as study instruments administered on a sample size of 166 with a response rate of 74.4%. The findings revealed that management teams are achieving success in managing malaria, offering VCT services; screening and treating opportunistic infections and diseases; research and documentation. Diseases have also remained prevalent due to poor sanitation and hygiene, low application of mosquito nets, cases of untreated stigma related diseases, and others. This however cannot be underestimated or restricted to these conditions but disaster teams experience difficulties of low skill capacities with a few technical staff, decentralization of medical units, among others. The study concluded that; Management controls have a significant effect on level of achievement, effective controls may be available but teams may have limited skills. The study recommends need to; improve funding; mobilization of community funding; ongoing prevention, vaccination and disease control campaigns; improved advocacy for the uneducated to seek professional medical assistance; focus on fighting stigma; promote skills; introduce penalties for corruption cases and more public health centers be constructed.

## **CHAPTER ONE**

### **THE SCOPE AND ITS PROBLEM**

#### **Background to the Study**

Worldwide, measures for disaster emergency have been put in place to prepare communities to manage disaster in case of any eventualities. Today NGOs play an important role in disaster response and mitigation in different regions of the world. Many international Non Governmental Organizations specifically focus on providing humanitarian aid to disaster victims.

Landsman, et. al, (2001) assert that, over the next 50 years the nations, and indeed the world, will face crises on an almost unimaginable scale. If even a few of the following trends continue at current rates, then public service leaders of the future will be living in a far more challenging environment. with climate change, air pollution, water pollution, water shortages and increase desertification, continued world-wide food shortages, decreases in plant and animal specie diversification, emergence of drug resistant bacterial and viral strains, more virulent viruses spread more rapidly and persistence of major worldwide epidemics like HIV as well emergence of new lifestyle epidemics like obesity and continued spread of addiction diseases.

Historically, diseases have remained prevalent worldwide, for instance malaria and measles are some of the oldest childhood diseases which remain prevalent up today. The first written record of measles goes back to the 10th century (Cherry, 1992). The introduction of an effective vaccine has brought measles under reasonable control in the many countries where vaccination coverage is high, and the disease usually occurs only as occasional epidemics among school children (Maldonado, 2004).

Theoretically, disaster diseases are a major public health problem. For instance malaria affects between 300–500 million people annually. Cases of malaria

increase just like acute respiratory infections and acute diarrhea after a floods experience (Garrete, 2010). Measles is still one of the top killer diseases of children with a sustained occurrence and unclear outbreaks noted in places where there is an influx of susceptible or non-immunized individuals especially in rural areas of developing nations. However, periodic mass measles vaccination has been recommended as a cost-effective means of disease control (Maldonado, 2004).

Conceptually, there are number of killer diseases whose prevalence has persisted while their causes remain known. Measles as an exanthem, is noted to be caused by an RNA virus of the genus *Morbillivirus* and the family Paramyxovirus. While malaria is caused by the *Plasmodium falciparum*, being responsible for the main disease burden afflicting primarily sub-Saharan Africa (Maldonado, 2004). It is portrayed that Severe *P. falciparum* malaria is thus predominantly a childhood disease. Apart from exception, the pregnancy-associated malaria (PAM), women become more susceptible to malaria upon pregnancy, despite their semi-immune status In endemic areas, approximately 25 million pregnancies are at risk of *P. falciparum* infection every year, and 25% of these women have evidence of placental infection at the time of delivery (WHO, 2006).

Contextually, it is noted that global trends indicate increase of disaster diseases especially in developed nations like those of Africa. The occurrence of drought in Africa has increased overtime and drought related diseases have become prevalent particularly in rural Africa. The prevalence of HIV/AIDS has persisted in Sub Saharan Africa just like elsewhere in the world (Durbar, 2009).

Disease disasters therefore, should be recognized as a long term phenomenon, requiring long term strategies which must be integrated in the country's planning framework.

In Africa, malaria is a leading cause of mortality especially in children under five due to *Plasmodium falciparum*, which is a most difficult to treat and severe

form of the disease while the regions is home to the most efficient malaria mosquito vectors, while the victims are the poorest of the poor, lacking the basic infrastructure and resources necessary to mount sustainable malaria control efforts. Uganda just like other African nations is emblematic of the immense problems disaster diseases such as malaria pose for African countries.

According to [www.uganda.clusters.com](http://www.uganda.clusters.com), it is estimated that, over 4 million people have been affected by disasters in Uganda since 1900, and more than 200,000 have died from disaster-related causes. Drought alone has affected over 3.2 million people, the biggest killer being disease epidemics, accounting for nearly all of Uganda's disaster-related deaths. Malaria is highly endemic in most parts of Uganda with 63% of the population of 26.9 million (2005) exposed to high and 25% to moderate malaria transmission levels while 12% live in areas with low or unstable transmission which are epidemic prone. Bwambale (2008), states that HIV/AIDS remains a major public health problem, mainly affecting people in the productive and reproductive age group of 15 to 49 years. About 1.2 million people are living with HIV while 1.8 million people have died of Human Immune Virus.

In the central part of Uganda, various naturally triggered and human induced disasters have been witnessed. These have caused loss of life and property. Examples of these disasters are floods, diseases, construction accidents, fires, wars, drought and pests. Unfortunately, the level of preparedness to such disasters is inadequate leaving the country highly vulnerable to the consequences of disasters particularly diseases. However, with the financial, and institutional challenges that hamper the emergency preparedness the formulation of this policy is underpinned. This research therefore found out disaster management is designed to cover the need of local disaster affected community; levels of achievement in solving incidence of disease; challenges experienced and solutions that curb the situation in the context of central Uganda.

## **Statement of the Problem**

Uganda has experienced disasters in different forms and in different parts of the country, the impact of which has been enormous on respective communities calling for emergency disaster management. Attempts have been made by various stakeholders to determine the different diseases, significant of which are; government, religious institutions, Non Governmental Organizations, as well as individuals. However, the approaches applied by disaster management agencies to control disease incidence have not been effective in meeting and solving this broad objective. This is despite the fact that medical centres are working in collaboration with other agencies and concerned actors to control the prevalence of diseases.

Partnerships and collaborations have been established, but with little success due to misallocation of resources like funds in the government. The disaster management practices remain weak because they have been applied as a calling and not an understanding. It is therefore, imperative to state that there is a relationship between implementation of emergency disaster management plans and rate of diseases in Kampala. This relationship is not clearly marked thus hindering effective management of disaster diseases in Kampala. Due to this, there was an urgent need to enable or disable the current approaches in emergency disaster to improve on the way incidence of disease is controlled. The study therefore provided appropriate remedies to controlling prevalence of diseases.

## **Purpose of the Study**

The purpose of the study was to find out how the disaster management programme is designed to find out how it can be enabled or disabled to improve on the management of disaster diseases.

## **Research Objectives**

**General Objective:** To investigate on the correlation between achievements of disaster management and the prevalence of diseases in central Uganda.

### **Specific Objectives**

1. To determine the profile of the members and emergency disaster team in central Uganda in terms of age, gender, highest educational qualifications and number of years experience in disaster management.
2. To determine the levels of achievement of emergency disaster management teams in incidences of diseases in Central Uganda
3. To determine the level of prevalence of disaster diseases in Central Uganda.
4. To establish if there is a significant relationship between the levels of achievement in disaster emergency management and prevalence rate of diseases in Central Uganda.

### **Research Questions**

1. What is the profile of members of emergency disaster team in central Uganda in terms of age, gender, highest educational qualifications and number of years experience in disaster management?
2. What is the level of achievement of the emergency disaster management teams in preventing incidence of diseases in Central Uganda?
3. What is the level prevalence of disaster diseases in Central Uganda?
4. Is there any significant relationship between the levels of achievement in emergency of disaster management and prevalence rate of diseases?

### **Null Hypothesis**

1. There is no significant relationship between the levels of achievement in emergency of disaster management and prevalence rate of diseases.

### **Scope of Study**

The research was about effective disaster management policies and its ability to control the prevalence of diseases in the context of emergency disaster

management in the level of achievement in preventing incidence of diseases, in determining the prevalence rate of occurrence of diseases after an emergency of disaster. The study was restricted to one disaster incidence of the period of 2006-2010 because of the enormous increase in the prevalence of diseases as well as to the provision of sufficient data for the study.

Geographically, the research was conducted at various medical centres and emergency disaster centres all around central Uganda.

### **Significance of the Study**

An understanding and documentation of the disaster management policy is necessary in identifying the key determinants of effective disaster management strategies in disease control, which would provide policy makers, program managers with information to effectively plan future interventions.

Medical institutions and their partners are expected to benefit from improved understanding of the effective disaster management policies in control of disaster diseases.

The findings will act as a guide to the academic existing knowledge and literature in relation to this subject to narrow the existing gaps and it is expected also to enrich the researcher's skills and knowledge

The study contributed towards efficient and effective emergency disaster management in terms of changing the country to get prepared for disaster any time.

## **Definition of operational terms**

The key operational terms are defined below:

- Disaster:** an event that causes serious loss, destruction, hardship, unhappiness, or death
- Management:** the act of handling or controlling something successfully.
- Collaboration:** Working together for mutual benefits.
- Epidemic:** If a disease has habitual presence within a geographical area
- Incidence:** the number of *new* cases of a disease in a specific population
- Partnership:** cooperative relationship between people or groups who agree to share responsibility for achieving some specific goal.
- Prevalence** the total number of cases of a disease within a population at a specific point of time.
- Resources:** Financial, material and human inputs employed.
- Diseases:** a condition in humans, plants, or animals that results in pathological symptoms and is not the direct result of physical injury

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **Concepts, Opinions, Ideas from Authors/ Experts**

##### **Introduction**

This section presents a discussion of available literature related to the subject of emergency disaster management policies in control of prevalence of disaster diseases. Most of the work in the area disaster management has its origins in the realms of practise, and less in the academic discipline. As a result, much of the writing on this subject has been made to explore and review the relevant gaps in the available literature. The review will be presented in the order of objectives and a number of the concepts have been explained.

##### **The Concept of Disaster Management**

No single country is equipped to handle massive needs of a disaster. When catastrophe happens, it is the disaster management teams, together with the global health specialists that are first on the scene. Medical, food, clothing and shelter, are always urgent concerns. Countries that suddenly find themselves faced with the backlash of disaster look to others already equipped with the knowledge, technical abilities and monitory funds to help. Outcries from the heaps of suffering humanity supersede any National bias that may exist. Thus disaster management activities begin with mitigating the vulnerability and negative impacts of disasters, preparedness in responding to operations, responding and providing relief in emergency situations such as search and rescue, fire fighting, etc and aiding in recovery which can include physical reconstruction and the ability to return quality of life to a community after a disaster. Whereas government and NGOs have been cited as key players in disaster management, they need to work in collaboration to maintain a harmonious relationship (Levy, 1997).

Emergency disaster management is a serious risk management as a series of actions programmes, projects and/or measures and instruments expressly aimed at reducing disaster risk in endangered regions, and mitigating the extent of disasters. Emergency disaster management includes risk assessment, disaster prevention and mitigation and disaster preparedness. It is used in the international debate to underscore the current trend of taking a proactive approach to hazards posed by extreme natural phenomena. The intention is a comprehensive reduction in disaster risk accounting for all the factors that contribute to risk (risk management), as opposed to a focus on each individual danger. The logic of disaster management is plain. All disaster management agencies have the strengths, but not all the strengths required to do every thing.

The above literature presents general definitions and concepts on emergency disaster management policy in control of diseases. In this study, the emergency disaster management was operationalized on what it is intended to achieve, that is to control the rate and prevalence of the killer diseases.

## **Levels of Achievement of Emergency Disaster in Preventing Incidence of Diseases**

### ***Prevention through virus interruption***

The spread of malaria virus has been interrupted. "Olyset net", a wide mesh net woven from polyethylene thread containing 2% permethrin, is yet another improvement in ITMN technology. This net has two advantages over traditional nets in that the wide mesh permits better ventilation and light, and the treated thread enables a slow release of permethrin to the fibre surface, ensuring a long residual effect (over a year). In studies carried out in Malaysia, four washings with soap and water did not diminish the efficacy and the mortality of *Ae. aegypti* was 86.7%. For control of DF/DHF in Vietnam, Olyset net curtains are hung on the inside against doors/windows; *Ae. aegypti* was adversely affected and dengue virus

transmission was interrupted. Further studies on impregnated fabrics appear warranted (Gallup & Sachs, 2001).

With a total of 2.2 million nets handed out in 2008 in Uganda, the proportion of Long-Lasting Insecticidal Net (LLIN) coverage has now reached an estimated 84%. Malaria Consortium has been involved in the distribution of about 36% of these nets 42% of all free net deliveries according to [www.COMDIS.org](http://www.COMDIS.org).

### ***Improved access to treatment***

In Uganda, the Malaria Control Strategic Plan 2001/02 – 2004/05 targeted to increase the proportion of the population at risk of malaria, who receive appropriate treatment for malaria within 24 hrs of recognition of symptoms; to increase the proportion of pregnant women receiving IPT; to increase the proportion of children aged less than 5 years, regularly sleeping under Insecticide Treated Nets to; and to reduce malaria case fatality rate, at hospital level, to 3% by end of 2005. This is through creation of demand for nets and insecticides, ensuring availability of affordable quality nets and insecticides in urban and rural retail outlets, provision of subsidized ITNs to vulnerable groups and promoting correct use of ITNs and maintenance of their effectiveness.

### ***Improved awareness and free treatment***

Malaria Consortium's prevention activities in Uganda aim to rapidly increase coverage of life-saving interventions that have a dramatic impact upon the burden of malaria. Activities include promoting behavioural change and informing families on malaria prevention and protection through supporting community initiatives such as Information Education and Communication and Behaviour Change Communication programmes. Malaria Consortium is also involved in the distribution of long lasting insecticide treated nets through campaigns and health facilities (Okello, et. al, 2006).

According to Oldstone (1998), it is pointed out that, communities in Uganda are able to deliver malarial, diarrhea and other treatment through one week training. Among the areas in which they receive free treatment include; dangers of malaria in pregnancy; malaria prevention in pregnancy; the benefits of SP and its side-effects; taking blood samples for parasite count and haemoglobin analysis; taking the baby's weight; and estimating gestational age. Also, the home based delivery of anti-malaria medicine to children under 5 years has been rolled-out nation wide and the shift to the new, more effective malaria treatment using an Artemisinin-based Combination Therapy (ACT) is in its final stages (Gallup and Sachs, 2001). The area of case management has seen important developments with the introduction and nationwide roll-out of a community based malaria treatment programme for children under 5 (HBMF) and the preparations for a shift to a highly effective malaria treatment with Artemisinin-based Combination Therapy (ACT) (Okello. et. al, 2006).

Additionally, the success in reducing the prevalence of HIV in Uganda is the result of a broad-based national effort backed up by firm political commitment, including the personal involvement of the head of state, President Museveni. From the outset, the government involved religious and traditional leaders, community groups, NGOs, and all sectors of society, forging a consensus around the need to contain the escalating spread of HIV and provide care and support for those affected (Achan. et al, 2008).

Sex education programmes in schools and on the radio has been focused on the need to negotiate safe sex and encouraged teenagers to delay the age at which they first have sex. Since 1990, a USAID-funded scheme to increase condom use through social marketing of condoms has boosted condom use from 7% nationwide to over 50% in rural areas and over 85% in urban areas. The social marketing scheme involved sales of condoms at subsidized prices or free distribution by both the government and the private sector. The scheme was also backed up by health education and other public information (WHO, 2006).

Condom use is also being encouraged among men who seek treatment for sexually transmitted infections. A new innovative social marketing scheme to promote the use of an STI self-treatment kit has proved to be successful in treating STIs and preventing HIV infection. The kit, which contains a 14-day course of tablets, condoms, partner referral cards, and an information leaflet, is designed to improve STI treatment rates, prevent over-the-counter sales of inappropriate treatments, encourage partner referral, and reinforce condom use. The distribution system relies on the use of small retail outlets which are normally licensed to sell over-the-counter drugs but not antibiotics. The Ugandan Government, according to Zaramba (2005), has waived these restrictions to promote sales of Clear Seven, marketed at the subsidized price of US\$ 1.35, and trained pharmacists in the management of STIs. As a result, cure rates for urethritis have increased from 46% to 87% and condom use during treatment has more than doubled from 32% to 65%.

### ***Disease and epidemic outbreak tracking***

With mobile phones, stakeholders have the ability to quickly survey (humans and animals), capture and transmit data on disease incidences and be decisive in the presentation and containment of Anthrax and other disease outbreaks instead of solely relying upon written and radio communication for such emergency tracking (Ewald, 2000).

### ***Screening and treatment of other opportunistic infections***

AIC screens and treats sexually transmitted infections like syphilis and Herpes simplex type II and other opportunistic infections like skin infections, pneumonias and others in all its eight branches. Among the integrated services offered are education and counseling on Reproductive health issues for the HIV positive and offering of Family Planning (FP) suitable to individual circumstances and choice (Mbonye et al, 2008).

### ***Voluntary Counseling and Testing (VCT)***

Voluntary counseling and testing (VCT) remains the most widely accepted approach for promoting knowledge of sero-status. Research over the last decade has demonstrated the public health benefit of VCT in terms of reductions in risk behaviour that are both significant and cost effective (Weinhardt et al. 1999). According to Karckiko (1998), Voluntary Counseling and Testing is an effective method in reducing the spread of HIV/AIDs as well as redirecting people's sexual behavior after testing.

### ***Basic Care Packages (BCP)***

HIV positive clients receives basic care packages consisting of mosquito nets, water guard chemical and a safe water vessel, condoms, Septrin for prophylaxis and reading material on psychosocial counseling to all HIV positive clients. This Package helps in prevention of malaria, respiratory, central nervous system diseases among PLHAs. This was achieved through partnership with PSI (Moore, 2000).

### ***Research and documentation***

Malaria Consortium works closely with the MOH and National Malaria Control Programme to improve malaria diagnostics in Uganda. Using participatory operational research, Malaria Consortium has contributed to the adoption of an evidence-based approach to scaling up parasitological-based diagnosis of malaria. Malaria Consortium has also facilitated the National Malaria Control Programme's policy development on diagnosis and case management of malaria as well as being an active partner in the MOH's rapid diagnostic test implementations technical working group (Zaramba, 2005).

AIC being the pioneer HTC organization in Uganda, and with over 20 years of work, AIC is well placed to play a leading role in driving or influencing policy and practice in the area of HCT. AIC has made deliberate efforts to promote its

corporate image among its clients, development partners and central government agencies. AIC conducts operational research to generate answers to emerging questions and provide evidence-based data on HCT. Through its research and documentation activities with its partners, AIC has supported to the public to access evidence based information on HCT and its related services through various channels including the print materials, radio, video, the resource centre and website(Achan et al, 2008).

### **The Prevalence of Disaster Diseases after Emergency Disaster Effort**

In Uganda, steps are being taken to hamper spread and impact of diseases. The Malaria Control Strategic Plan is an example of instruments of the Government's commitment and determination to address the malaria problem in a sustainable manner. Much as this is the case, malaria remains one of the most important diseases in Uganda with respect to morbidity and mortality burden as well as economic losses. However, significant progress has been made in the last years that make it very possible that in the next five year period measurable impact can be achieved. The proportion of households with at least one net has doubled between 2000 and 2004 increasing from 13.2% to 25,9% and mechanisms are put in place to allow a rapid increase of net distribution in the future. A successful approach of re-treating mosquito nets through free mass campaigns has been established and plans are ready for a larger scale application of indoor residual spraying (Zaramba, 2005). The HIV/AIDs pandemic also accounts for approximately 800,000 deaths since it's onset in the 1980s and at least 1.7 million children have been orphaned (CDC, 1987).

### ***Poor hygiene and sanitation***

Due to water related challenges of poor sanitation and hygiene in relationship to narrow healthy system issues, disease frequency remains high in Uganda. Pertaining to the tuberculosis disease, Uganda is among the 20 highest-

burden tuberculosis (TB) countries (Mbonye et al, 2008). According to the [www.comdis.org](http://www.comdis.org), Uganda is reported to have the third highest deaths from malaria in Africa and some of the highest recorded malaria transmission rates in the continent, particularly in the areas around Lake Kyoga in central Uganda. In 2007 alone there were 12,792,759 cases of malaria with 47,000 reported dead. Tuberculosis case per 100,000 population per year were reported to be 330 in 2007 alone and the cases of death involved 27,000 people in 2007 alone. Thus in addition to malaria treatment, the Malaria Consortium is now planning to expand this programme to also address challenges relating to water, sanitation and hygiene in addition to wider health system issues (Mbonye et al, 2008).

### ***Following flooding and natural disasters***

Records of disaster diseases show that incidence of diseases is on the increase. Malaria, acute respiratory infections and acute diarrhea disease outbreaks can occur following contamination of drinking-water, and have been reported following related displacement. The risk of diarrhea disease outbreaks following natural disasters is higher in developing than in developed countries. According to the provincial directorate of health of Mexico, it is noted that in Eastern Angola during the months of January 2009, malaria cases increased by 10.7%, acute respiratory infections by 11.3% and acute diarrhea diseases by 26.1% when the country experienced floods (Garrete, 2010).

### ***Stagnant waters***

Kiwanuka (2003) report on Apac district reveals that on average, a person in Apac district near Lake Kyoga receives more than 1,500 infectious bites per year. According to Kiwanuka, when waters flood and remain stagnant, a heavy burden is imposed upon the health system, with malaria accounting for approximately 30%-50% of outpatient care, 15%-20% of admissions and 9%-14% of inpatient deaths. The peak incidence of clinical malaria follows the peak of the rains with a delay of about 4-6 weeks and the most cases are therefore seen December to February and May to July except for the North where the malaria season is more between May

and November. Contributing 30%- 50% of outpatient burden and around 35% of hospital admissions, malaria is the most common single diagnosis.

In Uganda, key indicators of the health status of the population showed good progress in the early 90'ties but stagnated between 1995 and 2000. The burden of malaria is still high with estimated 70-100,000 deaths per year among children under 5 years of age and between 10 and 12 million clinical cases treated in the public health system alone (Zaramba, 2005). This is despite some progress made towards effective malaria control.

### ***Poor maternal, obstetrical and infant outcomes***

In sub-Saharan Africa, malaria is estimated to account for 2-15% of cases of maternal anemia and 10,000 maternal deaths due to anemia each year (Steketee et al, 2001). In Uganda Malaria during pregnancy is associated with significant maternal, obstetrical, anemia and infant outcomes. Malaria affects pregnant women living in both low and high transmission areas. In low transmission areas, primigravid and multigravid women are both at risk for severe and complicated malaria, but in high transmission areas, primigravida experience the most severe episodes. In pregnant women living in high transmission areas, malaria magnifies the risk of anemia, contributing indirectly or directly to significant morbidity and mortality (Ndyomugenyi, 2001).

In a survey carried out in 2003 on 553 Ugandan health care facilities with an overall maternal mortality of 67.1/10,000 live births, malaria was attributed a direct or indirect cause of maternal mortality in 65% of cases. It is estimated that malaria may account for up to 60% of spontaneous abortions in Uganda (Kiwauka, 2003).

### ***Vaccination and coverage***

Infant mortality rate decreased from 122/1,000 live births in 1990 down to 81 in 1995 but was found to be 88 in 2000 and the most recent estimate from the 2002 census is 83/1,000. During the same time under-5-mortality rate decreased

from 180/1,000 to 147 and was estimated 152/1,000 in 2000 (UDHS 2000/01). Maternal mortality showed little change, remaining very high between 527/100,000 in 1990 and 505/100,000 in the year 2000. Coverage with childhood vaccinations also stagnated in the 90'ties (DPT3 41% in 1990 and 48% in 2000) but showed significant increases in recent years (63% in 2001/02 and 83% in 2004/05). Following the nation-wide measles vaccination campaign in October 2003 the number of monthly reported cases (HMIS) dropped from 3,000-6,000 to less than 400 and has remained low since.

### ***Stigma related diseases***

Malaria and HIV infection are two of the most important infectious disease worldwide, accounting for a combined 4 million deaths annually. Several interactions between malaria and HIV infection have been established. First, an HIV infection disrupts the acquired immune response to malaria, increasing the incidence and severity of malaria (Achan. et al, 2008). Acute malaria also elevates HIV viral load and so may increase the risk of HIV transmission according to Achan et al, thus malaria co-infection in HIV-infected individuals plays an important role in promoting the spread of HIV in Africa.

HIV infection is also associated with reduced efficacy of antimalarial treatment and therapies for each infection when they interact leading to unanticipated effects on drug efficacy or toxicity. These interactions remain a major public health concern in most areas affected by the two diseases. Increased incidence and severity of malaria has been well documented in HIV-infected populations, with resulting increased morbidity and mortality. This information suggests that malaria is a particular risk for those with HIV infection and call for the strengthening of programs for the prevention of malaria in this population (Achan, et. al, 2008).

## **Challenges Faced in Managing Disaster Diseases**

### ***Lack of fiscal and physical capacities***

Zaramba (2005) points out that lack or inadequacy of human resources at health facilities is a critical factor in the poor quality of health service delivery. This according to Zaramba has been a focus during the Health Sector Strategic Plan I 2000/01-2004/05 where, approximately 2,900 health workers have been recruited into the system increasing the proportion of approved posts filled with trained staff from 33% to 68%. According to the Resource Inventory of 2004 a total of 27,500 health workers were employed 9,100 of these in the not-for-profit private sector.

### ***Decentralization and need for integral supervision***

Additionally districts in Uganda are decentralized to a large degree and are directly responsible for the delivery of health services and the implementation of health programmes. Facilitation is required for interaction and integrated support supervision between health centers in different districts which at times may not be available (Zaramba, 2005).

### ***Limited access to treatment and resistance to drugs***

Nationwide health infrastructure is poor. In rural areas, 51% of households don't have access to healthcare and in the northern regions; healthcare delivery is heavily dependant upon humanitarian assistance for drugs and other supplies. Throughout the country, hospitals and clinics are generally under-equipped. Human resources in the health services are insufficient and there is a significant lack of skilled professionals. Nursing care is shared with the relatives who are often present by the bedside most of the day and take on the responsibility of toileting, cleaning and feeding the patient. Specialists are few and are generally not based in one hospital full-time, subsequently; people often have long waits in hospital before being operated on due to absence of the surgeon (Mbonye, 2007).

In Uganda, only two-thirds of children <5 years are vaccinated against measles; one-third remains vulnerable. One of the reasons for the low vaccination

coverage in Uganda is the low level of female education. Persistent failure of routine coverage led the Ugandan Ministry of Health, WHO and United Nations Children's Fund (UNICEF) to introduce mass measles vaccination of all children between 6 months and 15 years, first in October 2003 over a 3-day period, and secondly in October 2006, also over 3 days (Achan, 2008).

Resistance to anti-malarial drugs and particularly chloroquine began to increase in Uganda in the second part of the 1990's, significantly later than in neighbouring countries Kenya and Tanzania possibly due to the limited access to drug supplies (Achan, 2008).

### ***Traditional vs modern medicine***

Seventy-five to eighty percent (75-85%) of the population fits in to criteria for malnutrition and this is a significant factor underlying infant mortality alongside malaria, measles and pneumonia. Nationwide, HIV/AIDS has an average prevalence of 5.4%. It is the leading cause of death in adults followed by T.B and malaria. The average life expectancy is estimated at 48. Throughout the country, there is a mix of government and private hospitals and also many native healing medicine centres, which is commonly the preferred choice especially in rural areas (Okello, et. al, 2006).

### ***Off-budget funding and corruption***

The health sector of Uganda heavily relies on donor funding which severely distorts domestic health priorities. For example, although approximately 1.1 million Ugandans are known to have HIV/AIDS which is equivalent to about 3.6% of the population with a national prevalence rate is about 6%, much of the total money flowing into the health sector (primarily from donors) is earmarked for HIV/AIDS than the amount of money government of Uganda contributes to the entire sector (Platas and Mwenda, 2009).

According to Platas and Mwenda, the prevailing logic among patients, staff and government officials alike seems to be that there is not enough money to

provide quality health care to the Ugandan people; that everyone is doing the best they can do under the circumstances. The amount of money flowing into Uganda's health sector is a difficult figure to nail down, largely because so much of the funding comes from donors and is off-budget. But even some back-of-the-envelope calculations show that over Shs 1 trillion is flowing into Uganda's health sector this year, though less than 30% (around Shs 370 billion) of it provided by government. While perhaps not enough to cover all of Uganda's health costs, this is not a small amount of money by any stretch of the imagination. It is more money than any other sector in Uganda receives. Thus government itself must be held accountable for the rampant wastage and inefficiencies in the health sector wastage that has been valued at around Shs 90 billion per year, due to health worker absenteeism, grant leakages and drug expiry, among other things.

#### ***Low re-treatment of Mosquito nets***

The problem of low re-treatment rates of mosquito nets is one challenge experienced in the control of malaria, the original plans of having net treatment twice a year was not achievable with the existing human and financial resources. This constrains the ability to expand campaigns (Achan, et. al, 2008).

#### ***Discrimination and stigma***

When HIV status is disclosed, relatives especially members blame victims for being responsible for their own infections. This results to shame, guilt and isolation, having to hide one's status through isolation and denial stigmatizes HIV/AIDS patients causing further complications in disease treatment. HIV/AIDS pandemic has evoked a wide range of reactions from individuals, communities, and even nations, from sympathy and caring to silence, denial, fear, anger, and even violence (AIC, 2002).

### ***Low interest in improvement of services***

Health centers taken less initiative to improve staff and services as these do not necessarily seem to be in the interest of the health centers. In Mulago, the director does not even want any more attention or money for the hospital. According to the director, this would mean more patients to come running when they hear it has improved, and the hospital simply cannot handle any higher patient load than it already has (Plata and Mwenda, 2009).

### ***Misallocation of resources by the government***

There has been misallocation of resources that are meant for the health sector to other sectors such as military. Billions have been transferred from the health sector leaving in with low health centers and less skilled personnel. Still a lot there has been a lot of corruption within the government officials transferring the health sector money to their individual accounts. This has really increased the prevalence of diseases in central Uganda.

### **Conclusion of the Literature Review**

This chapter presented the literature reviewed on how emergency disaster management is designed and how it covers the need of local disaster affected community, levels of achievement of emergency disaster management in solving incidence of diseases, challenges faced and solutions to those challenges. Books reviewed included electronic books, journals, reports, news papers and text books. All in all, the authors did not clearly bring out how management policy can be enabled or disabled to better the situation, which the research will aim to study.

## CHAPTER THREE

### METHODOLOGY

#### Research Design

This study employed the *descriptive survey* design specifically the *descriptive comparative* and *descriptive correlational* strategies. Descriptive studies are *non-experimental* researches that describe the characteristics of a particular individual, or of a group. It deals with the relationship between variables, testing of hypothesis and development of generalizations and use of theories that have universal validity. It also involves events that have already taken place and may be related to present conditions (Kothari, 2004). Further, descriptive surveys are used to discover causal relationships (descriptive correlational), differences (descriptive comparative), to provide precise *quantitative* description and to observe behavior (Treece and Treece, 1973).

#### Research Population

Mugenda and Mugenda (1999) defines population as an entire set of individuals, events or objects having common observable characteristics about which generalization of research was made. This study population was constituted by the emergency disaster team and records in the central region of Uganda. The target population is the disaster management teams which consisted of a total number of 223 and records 350.

#### Sample size

The study selected several hospitals where all records were got from. The number of incidence of diseases were given after the research was carried out.

Thus Sloven's formula was applied in determining sample size.

$$n = \frac{N}{1 + N(0.05)^2}$$

Where:

n -Sample size

N - Study/target population

0.05 – levels of significant

$$n = \frac{350}{1 + 350(0.05)^2}$$

$$n = 223$$

**Table 1:** Sample Size

<b>Category of emergency disaster team</b>	<b>Target population</b>	<b>Sample size</b>
<b>Aids Information Center (AIC)</b>	<b>40</b>	<b>36</b>
<b>IHK Kampala – International Hospital</b>	<b>60</b>	<b>52</b>
<b>Mulago Referral Hospital</b>	<b>250</b>	<b>154</b>
<b>Total</b>	<b>350</b>	<b>223</b>

## **Sampling Method**

To get the size to participate in the study, purposive sampling method was used. Descombe (2000) puts it that a sample needs to be carefully selected if there is to be confidence that the findings from the sample are similar to those under found among the rest of the category under investigation.

## **Research Instruments**

### **Questionnaire method**

A questionnaire covering all the aspects of the study variables was designed covering information of the respondents and consideration of dependent and independent variable attributes. The questionnaire was first pre-tested before administering it to the actual selected respondents. The choice of the questionnaire was guided by the nature of data to be collected, the time available as well as the objectives of the study (Amin, 2005). The questionnaire was both close and open ended, scored on a 5 point Likert scale ranging from 5 for strongly agree to 1 for strongly disagree. The questionnaire was distributed to the different respondents in their areas of work for filling and they were collected after one week following the dispatch and filling.

### **Interview method**

Interviews with the target respondents were conducted by meeting the respondents in their respective offices and asking them questions of which the researcher recorded all the responses by himself (Amin, 2005). Interview guide was also used to gather in depth information and also to ensure consistency and to keep within the scope. This helped to collect qualitative data and to validate questionnaire short comings.

### **Documentary review**

This involved identifying information related to the study variables and summarizing it for compiling in the final report in relation to the specific objectives

(Amin, 2005). The review of documents was one of the approaches to data collection and it has been used before field exercises and continued up to data analysis and report writing stage. This process enabled the researcher to obtain pertinent information on the wide range of emergency disaster management in prevalence of diseases in the world today and Uganda in particular. Existing documentation on management policies were examined, with a view of evaluating measures for improvement. The documents that were reviewed included annual reports, work plans and operation budgets.

### **Validity of the instrument**

In order to test and improve the validity of the questionnaire, the researcher availed the instruments to two raters look at the items and check on language clarity, relevancy, comprehensiveness of content and length of the questionnaire. The researcher requested the two experts to look at each item and judge whether they were; 1-Not relevant, 2-Somewhat relevant, 3-Quite relevant or 4-Very relevant. The researcher then put the items in 2 categories with 1 and 2 in one category and 3 and 4 in another category. The researcher moved a head to calculate a Content Validity Index (CVI) using the formula below:

$$\text{CVI} = \frac{\text{Items rated relevant/very relevant by both rates (3 or 4)}}{\text{Total number of items in the questionnaire}}$$

For the instruments to be valid, the CVI should be within the accepted statistical range of 0.5 to 1 Questionnaires were tailored to reflect the research questions to ensure that inference based on data was accurate and meaningful.

### **Reliability of the Instrument**

In order to establish the reliability of the instruments, the researcher conducted a pilot study. Using the results of the study, the reliability of the

instruments was computed using Crobach's Alpha Coefficient ( $\alpha$ ) using the formula below:

$$\alpha = \frac{K}{K-1} \left[ 1 - \frac{\sum SD^2_{i^3}}{SD^2_t} \right]$$

Where  $K$  = Number of questions in the questionnaire

$SD^2_{i^3}$  = Standard Deviation squared (Variance) for each individual item

$SD^2_t$  = Variance for the total items in the questionnaire

The reliability of the instruments was approved to find out if the coefficient was within the accepted statistical range of 0.5-1. Crobach alpha was tested at 0.897 which was within an acceptable range.

### **Data Gathering Procedures**

The researcher used a letter of introduction obtained from Kampala International University which she presented to the management of AIC and other hospitals for clearance to carry out research and questionnaires were hand delivered to the selected respondents and appointments were made with key respondents who were interviewed at their convenience.

### **Data Analysis**

Qualitative data was primarily collected through interviews, questionnaires and document reviews, and analyzed using a thematic approach. Themes were developed in accordance with the objectives of study and research questions. Data was then grouped in themes, as a first step for subsequent interpretations. Analysis of this data was mainly a thematic analysis, looking at the findings and grouping them according to every theme.

*A. For the level of achievement of Emergency Disaster Management.*

<b>Mean Range</b>	<b>Response Mode</b>	<b>Interpretation</b>
4.21-5.00	strongly agree	Very satisfactory
3.41-4.20	agree	Satisfactory
2.61-3.40	Not sure	Weak
1.81-2.60	Disagree	Fair
1.00-1.80	Strongly disagree	Poor

*B. For the level of Prevalence of Diseases after an Emergency of Disaster.*

<b>Mean Range</b>	<b>Response Mode</b>	<b>Interpretation</b>
4.21-5.00	Strongly agree	Very satisfactory
3.41-4.20	Agree	Satisfactory
2.61-3.40	Disagree	Fair
1.81-2.60	Not sure	Weak
1.00-1.80	Strongly disagree	Poor

The analysis of Variance (ANOVA) was utilized to test the difference between means for hypothesis one (Ho #1) at 0.05 level of significance.

A multiple correlation coefficient to test the hypothesis on correlation (Ho #2) at 0.05 level of significance using a t-test was employed. The regression analysis  $R^2$  (coefficient of determination) was computed to determine the influence of the independent variables on the dependent variable.

## **Ethical Considerations**

To ensure confidentiality of the information provided by the respondents and to ascertain the practice of ethics in this study, the following activities were implemented by the researcher:

1. Seek permission to adopt the standardized questionnaire on disaster management through a written communication to the author.
2. The respondents and hospitals was coded instead of reflecting the names.
3. Solicit permission through a written request to the concerned officials of the hospitals included in the study.
4. Request the respondents to sign in the *Informed Consent Form* (Appendix 3)
5. Acknowledge the authors quoted in this study and the author of the standardized instrument through citations and referencing.
6. Present the findings in a generalized manner.

## **Limitations of the study**

In view of the following threats to validity, the researcher claimed an allowable 5% margin of error at 0.05 level of significance. Measures are also indicated in order to minimize if not to eradicate the threats to the validity of the findings of this study.

1. *Extraneous variables* which was beyond the researcher's control such as respondents' honesty, personal biases and uncontrolled setting of the study.
2. *Instrumentation*: The research instruments on achievements of disaster management are not standardized. Therefore a validity and reliability test was done to produce a credible measurement of the research variables.
3. *Testing*: The use of research assistants can bring about inconsistency in the administration of the questionnaires in terms of time of administration, understanding of the items in the questionnaires and

explanations given to the respondents. To minimize this threat, the research assistants was oriented and briefed on the procedures to be done in data collection.

1. *Attrition/Mortality*: Not all questionnaires maybe returned neither completely answered nor even retrieved back due to circumstances on the part of the respondents such as travels, sickness, hospitalization and refusal/withdrawal to participate. In anticipation to this, the researcher reserved more respondents by exceeding the minimum sample size. The respondents also reminded not to leave any item in the questionnaires unanswered and was closely followed up as to the date of retrieval.

## **CHAPTER FOUR**

### **PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS**

#### **Introduction**

This chapter presents the findings of the study in relation to the purpose of the study. Analysis was undertaken following the research objectives. The response of this study was to ascertain the achievement of disaster management and prevalence of diseases through by establishing the profile of members; determining the levels of achievement of emergency disaster management in incidence of diseases; determining the levels of achievement of emergency disaster management in incidences of diseases; determining the challenges faced by disaster management in prevalence of diseases; and establishing whether there is a significant relationship between the levels of achievement in disaster emergency management and prevalence rate of diseases.

The findings are presented using descriptive statistics to describe the basic features of data providing summaries, graphs of frequencies and percentages, correlation analysis using the Pearson correlation coefficient, in order to determine the relationships between the key variables of emergency disaster achievement.

#### **Response Rate**

Out of the 223 respondents, 15 (6.7%) were respondents of the interview and 208 (93.3%) were respondents of the questionnaire. All interviews were carried out successfully. However, pertaining to the respondents of the questionnaires, a total of 208 questionnaires were distributed of which only 179 (80.3%) were returned. Among the returned questionnaires, 13(6%) were disqualified due to missing data. In all the respondents considered for the questionnaire were 151 (67.7%). Therefore the total number of respondents used to test the hypotheses was 166 (74.4%). This response was considered appropriate

because according to Mugenda and Mugenda (1999) it is argued that a response rate of 50% and above is adequate enough.

### **Background characteristics of the respondents**

The study involved respondents of varying characteristics which necessitated the researcher to seek some background information on the respondents. The characteristics of the respondents investigated included age, gender, education qualification, position held and number of years in profession. The background variables about the respondents helped the researcher to know how respondents were versed with the study area, specifically the variables under investigation.

### **Representation of respondents by gender**

The study sought about the gender representation of the respondents and the study findings were as revealed in table 2;

**Table 2: gender of respondents**

Gender distribution	Frequency	Percent (%)
Males	79	47.6
Females	87	52.4%
Total	166	100.0

**Source: Field Research Findings (2012)**

Table 2 shows that females dominated the sample whereas the males comprised of the minority. The results show that out of the 166 respondents 79 (47.6%) of the respondents were male and 87 (52.4%) female. This implies that disaster disease management teams are mainly dominated by women who were mainly nurses. According to one of the study respondents in an interview, it was portrayed that women play better nursing roles and lower levels of the profession

than the males, thus are many compared to males. Thus women dominated the sample because they are capable of executing nursing aid more easily than the males. This same information was graphically presented as seen in figure 4;

**Representation of respondent by age**

The study sought about the age representation of the study respondents and the findings were as presented in table 3.

**Table 3: Profile of the Respondents by age**

Age range	Frequency	Percent
20-30yrs	20	12.04
31-40yrs	51	30.72
41-50yrs	75	45.18
50 yrs and above	20	12.04
<b>Total</b>	<b>166</b>	<b>100</b>

**Source:** Field Data (2012)

The research findings revealed that most of the respondents under the disaster management teams fell in age category 41-50 with a response rate of (45.18%), followed by the 31-40 age group (30.72%), and the age ranges 20 – 30 years as well as the 50 years and above were equally represented with a 12.04% response rate for each. The study finding reflects the fact that few people join the profession given their response rate at the age of 20 – 30 as being among the least represented. And those that join the profession take long to exit thus their high representation at the age of 41-50 years.

### Education qualification of the respondents

The study sought to establish the differences in educational levels and the study findings were as presented in table 4;

**Table 4: Representation of the Respondents by Education**

Education	Frequency	Percent
Certificate	38	22.9
Diploma	80	48.3
Degree	30	18.1
Masters	16	9.6
Other	2	1.2
<b>Total</b>	<b>166</b>	<b>100</b>

**Source:** Field data (2012)

The study findings revealed that the majority of respondents were diploma holders (48.3%), followed by certificate holders (22.9%), degree holders (18.1%), Masters Degree holders (9.6%), while the "other" section was the least represented with 1.2% of the responses. The finding suggests that disaster management team is mainly diploma holders, thus need to improve their performance by upgrading skills. This information was further presented graphically as;

## Representation according to the position held

The researcher also sought to examine the position held by the different respondents to assess how their professional positions were influential in the management of disaster diseases. The findings are summarized in table 5;

**Table 5: position held by respondents**

Gender	Frequency	Percent
Laboratory attendants/assistants	28	17%
Nurses	98	59%
General doctors	30	18%
Special Doctors	10	6%
<b>Total</b>	<b>166</b>	<b>100</b>

**Source:** Field Data (2012)

According to the study findings, there were different categories of staff under the disaster management teams and these included laboratory attendants (17%), Nurses (59%), general doctors (18%) and special doctors (6%). Nurses were the most represented group and being medical personnel who work through directives of doctors, implies that the profession is still lacking in technical expertise, thus opportunities need to be explored for nurses to advance if disaster management is to effectively be pursued, with improved knoweledgeability.

### Number of years of experience in disaster management

The researcher sought to establish the number of years for which the disaster disease management teams have actively been involved in management of diseases. The findings were as presented in table 6;

**Table 6: number of years of experience**

Years of Experience	Frequency	Percent
1-5yrs	30	18
5-10yrs	22	13
11-15yrs	56	34
16-20yrs	40	24
21 and above	18	11
<b>Total</b>	<b>166</b>	<b>100</b>

**Source:** Field Data (2012)

According to the study respondents, it was established that the majority of the respondents have an experience of 11-15 years (34%) in managing disaster diseases, followed by 16 - 20 years experience (24%), 1-5 years (18%), 5-10 years (13%), while the 21 and above years of experience were the least represented with 11% of the total responses.

This finding shows that the majority of the disaster emergency teams have experience of 11-15 years but after that they begin to drop out of the service as number continues to reduce from the 16-20 years further decrease after 21 years.

## **Emperical Findings**

This part of the study presents the findings in line with the objectives that guided the study. The presentation indicates the verification of the research objectives and presents views of respondents from questionnaires and face to face interviews through descriptive statistics of percentages and frequencies to make the necessary comparisons.

### **Levels of achievement of emergency disaster management in preventing incidence of diseases**

The study sought about the levels of achievement of emergency disaster management in incidence of diseases and the findings were presented in table 7.

**Table 7: Level of achievement of emergency disaster management in incidence of diseases**

Statement on achievement of emergency disaster management	Response in Means		
	Mean	Response mode	Interpretation
Malarial virus are effectively being controlled	1.91	Strongly disagree	poor
Our views are considered and translated to plans	1.89	Disagree	Weak
VCT is effectively being carried out to prevent spread of HIV/AIDS	1.61	Strongly agree	poor
Improved awareness of diseases	1.32	Strongly agree	poor
Malaria is effectively being prevented	2.13	Agree	weak
Immunization is helping to regulate spread of diseases	1.55	Strongly agree	poor
Screening and treating of other opportunistic infections and diseases	2.31	Agree	Weak
Improved research and documentation of incidence of diseases	1.48	Agree	poor
Access to treatment has been improved	1.95	Agree	weak
Capacities of communities are built to prevent against spread of HIV/AIDS	2.96	Agree	fair
I have heard about disaster management	1.23	Agree	Poor
Improved tracking of disease affected communities	2.68	Strongly agree	Fair
Basic care packages like mosquito nets are issued	1.58	Strongly agree	poor
Free packages and tools offered to patients to protect and prevent against diseases	1.30	Strongly Disagree	poor

**Source: Field Research Findings (2012)**

The levels of achievement were selected properly with the help of experts in the field of disease control. Similarly, suggestions from medical professionals at the

selected medical centers of Mulago, hospital, AIC, and IHK and opinions from top disease control professionals and general doctors as well as nurses and laboratory attendants were also sought in order to identify the levels of achievement that are most significant for this study.

The researcher ascertained views on levels of achievement in disaster management and incidence of diseases. On whether the malarial virus is effectively being controlled, the mean was 1.9 for those that strongly disagreed, thus poor.

Information was also sought on whether views are considered and translated to plans, the mean representation was 1.89 for those that disagreed having a weak representation.

On whether VCT is effectively being carried out to prevent spread of HIV/AIDS, a poor representation was derived with a mean of 1.61 for those that strongly agreed. Views were further sought on whether achievement has been met in improving awareness of diseases with a mean of 1.32 for those that strongly agreed with a poor representation.

On whether malaria was effectively being prevented, the representation was weak, with a mean of 2.13 for those that agreed. Study respondents further revealed that immunization was helping to control the spread of diseases as represented by 1.55 mean with a poor representation for those that strongly agreed.

Further information was sought on whether there is achievement in screening and treating of other opportunistic infections and diseases and the responses revealed a weak representation for those that agreed with a mean of 2.31. On whether achievement has been achieved through improved research and documentation of incidence of diseases, the representation was poor for those that agreed with a 1.48 mean. Information was also sought on whether achievement

has been made in improving access to treatment but the representation was weak with 1.95 mean representation for those that agreed.

On whether capacities of communities have been built to prevent against spread of HIV/AIDS, the representation was fair for those that agreed with a mean of 2.96. In fact one of the special doctors from IHK revealed that none of their staff was not aware of disaster management of diseases. On whether there is improved tracking of disease affected communities, study findings revealed that the representation was poor for those that agreed with a mean of 1.23. The study further sought opinions on whether there any basic care packages of free mosquito nets are issued and study findings revealed that the representation was fair for those that strongly agreed with a 2.68 mean representation. While findings on whether tools and free packages are offered to patients to prevent against diseases revealed that the representation was poor with a 1.58 representation for those that strongly agreed. Study findings on this objective revealed that the majority of the respondents were aware of disaster management efforts undertaken in the combating of disaster diseases, although they experienced both institutional and financial challenges as discussed in the next chapter.

### **The relationship between disaster management achievement and effort applied**

The study sought to examine the relationship between disaster management effort and the level of achievement by the disaster management teams. The findings indicate that there is a very weak and statistically insignificant but positive relationship between disaster effort and achievement of disaster management teams at a Pearson correlation of 0.012 with a significance of 0.883, which is above the 0.05 level. This implies that the disaster management efforts applied by medical personnel do not have a significant relationship with the level of achievement. An alteration in the management efforts applied may not yield significant effect on achievement by disaster management teams.

## Level of prevalence rate of diseases after an emergency disaster

The figures in Table 9 revealed in the level of prevalence of diseases after an emergency disaster effort. Indicators were also properly selected with the advice of medical professionals.

**Table 8:** Level of Prevalence of Disaster Diseases after an Emergency Disaster

Level of prevalence of diseases	Response in Means		
	Mean	Response mode	Interpretation
poor sanitation and hygiene still contribute to prevalence of diseases	1.51	Strongly agree	poor
Vaccination coverage is minimal	1.29	Strongly disagree	poor
Prevalence of malaria is due to stagnant waters	2.63	Strongly agree	fair
Disaster diseases are effectively being managed	2.37	Strongly agree	fair
Stigma related diseases contribute to the prevalence of diseases	1.23	Strongly agree	poor
Flooding waters contribute to cholera and diarrhea prevalence	1.95	Strongly disagree	weak
Low adherence to prescription and medical advice is inhibiting disease control	1.64	Strongly agree	poor
Poor net-retreatment contributes to malaria prevalence	1.29	Strongly disagree	poor

**Source:** Field Research Findings (2012)

The study findings in Table 9 establish the level of prevalence of disaster diseases in central Uganda. The researcher sought information on whether poor sanitation and hygiene have anything to do with the prevalence of disaster diseases and the representation was poor with a 1.51 for those that strongly agreed. On whether vaccination coverage is minimal and could be the major cause of

prevalence of diseases, the representation was poor for those that strongly disagreed with a 1.29 mean representation. On whether malaria prevalence was due to stagnant waters, the representation was fair 2.63 mean for those that strongly agreed. The study further sought information on whether disaster diseases are effectively being managed however study responses revealed that 2.37 is fair for those that strongly agreed. The researcher further attempted to find out whether flooding waters contribute to cholera and diarrhea prevalence 1.95 for weak for those whose opinions strongly differed. On whether stigma related diseases contribute to the prevalence of diseases, with a poor representation of 1.23 mean level for those that strongly agreed.

The study further examined whether low adherence to prescription and medical advice was significant in inhibiting disaster disease control and the study findings revealed that the mean was 1.64 for those that strongly agreed with a poor representation. The study further focused on finding out whether poor net-retreatment contributed to malaria incidence but the representation was poor for those that strongly disagreed with 1.29 mean. On whether disaster diseases are effectively being managed the representation was 2.37 for those that strongly agreed with a fair representation. In respect to this objective, it is established that much as disaster efforts are underway to curb the incidence of diseases, their prevalence is still significantly witnessed due to the factors expressed as later discussed in chapter five.

### Level of achievement between disaster management team and level of prevalence of disease

The researcher sought to find out the respondents' views on levels of achievement between disaster management team and the level of prevalence of disease. Emerging results are presented in Table 10.

**Table 9: Level of achievement between disaster management team and prevalence of disease**

Impact on Level of achievement	Response in Means		
	Mean	Response mode	Interpretation
Low levels of research and documentation affect the performance of disaster management teams	1.22	Strongly disagree	poor
Corruption and embezzling of medical supplies affects achievement	1.75	Strongly agree	poor
Limitedness of medical supplies and finances	1.27	Strongly agree	poor
Resistance to drugs contributes to low achievement	4.01	Strongly agree	Satisfactory
Decentralizing medical units without organizing for integral supervision	2.16	Strongly disagree	poor
Barriers to greater professionalism limit the level of achievement	1.61	Strongly agree	poor
Poor planning and approaches in sensitizing community	2.21	Strongly disagree	poor
Preventive mechanisms are too costly	1.48	Strongly agree	poor

**Source:** Field Study (2012)

The researcher solicited views on whether barriers to greater professionalism affected the level of achievement of disaster teams and the findings revealed that 1.61 strongly agreed with a poor presentation. The study also focused on whether decentralizing medical units without having integral supervision hinders disaster management success and 2.16 strongly disagree with a poor presentation.

The study findings further revealed that of the respondents agreed that the limitedness in medical supplies and finances was affecting the level of achievement of disaster management team. Study findings further revealed that the low levels of research and documentation have insignificantly affected disaster management as reflected by 1.12 with a poor presentation of the respondents who strongly disagreed on this.

Asked whether corruption and embezzlement affected the achievement of disaster management teams, 1.75 strongly agreed but with a poor presentation. The study findings further revealed that resistance to drugs has also contributed to the low achievement of disaster management teams as supported by 4.01 of the respondents who strongly agreed and with a satisfactory presentation.

The study sought to find out about the poor plans and approaches in sensitizing the people and how these affect the level of success of disaster management teams and the study revealed that 2.21 strongly disagreed.

Lastly study findings revealed that some controls applied were costly which affected the ability of disaster management teams to control incidence of diseases. This was supported by 1.48 of the respondents who strongly agreed and with a poor presentation.

### **The level of achievement of disaster management and level of prevalence of diseases**

In order to ascertain the level of achievement and level of prevalence of diseases, the researcher used Pearson Product Moment correlation coefficient and the results are presented in table 10.

**Table 10: Correlation between Achievements of Disaster Management and the Prevalence of Diseases**

		Prevalence disease	Achievement
Prevalence disease	Pearson Correlation	1	.337(**)
	Sig. (2-tailed)	.	.000
	N	166	166
Achievement	Pearson Correlation	.337(**)	1
	Sig. (2-tailed)	.000	.
	N	166	166

\*\* Correlation is significant at the 0.01 level (2-tailed).

Pearson Correlation results in table 10 above revealed that the relationship between level of achievement of disaster management and level of prevalence of disease is positive and significant. This is evidenced from the Pearson Correlation value  $r$ , which is positive .337\*\* and the significance value is 0.00 at the level of 0.01. This means that the level of achievement and prevalence of disease is positive; implying that when challenges inhibiting the control of disease are addressed, there is likely to be a corresponding effect in achievement of disaster management team. The value of  $r$  is however low, given that 0.337 is far below 1. This signifies a weak but statistically significant relationship between prevalence of disease and achievement of disaster teams.

## **CHAPTER FIVE**

### **FINDINGS, CONCLUSIONS, RECOMMENDATIONS**

#### **Introduction**

This chapter presents and discusses the major findings of the study, draws conclusions and suggests recommendations on how to improve on disease disaster management achievement in Uganda. The discussions are presented in accordance with the study objectives stated in chapter one that the study sought to fulfill.

#### **FINDINGS**

In view of the study presentation, analysis and interpretations made in the chapter four, the study established the following findings;

##### **Profile of respondents in terms of attributes**

The majority of the respondents were female. This finding revealed that in Uganda disaster diseases management is mainly be female. Females dominated the sample because they enroll more for the nursing profession than do their male counterparts. This is in addition to being more vulnerable to disaster diseases as compared to males, and thus their full cooperation to engage in management of diseases.

The majority of the disaster management team ranged from age group 31-40. This implies that, management for disaster diseases is particularly exercised by age categories above 31-40 years who by virtue of their years, gain experience in managing disaster diseases. However age group above 40 years has lesser members much as they have the experience. This is particularly because as an aging group, they become less energetic and less flexible thus tend to withdraw from the service, contrary to age group 21-30 who were noted to have low experience by the fact that most of them are just joining the field from school.

Most of the disaster diseases management teams are diploma holders. In Central Uganda, the majority of the respondents in the management of disaster diseases are diploma holders who do not undertake to upgrade their skills. This is also derived from their age representation where the majority fell between 31 -40 years. Without upgrading skills, the disaster disease management team will still experience challenges of knowledge gaps. This is despite the fact that team members may be working through experience by way of on-job orientation and training.

Predominant in the length of service were those workers serving from 16 to 20 years. This is depictive of the fact that the disaster management effort is still hampered possibly by disincentives that may demotivate the team. That at an early age of 40+ with a working experience of 16-20 years, they begin to drop out of the service. The disaster emergency team withdraws at an early age where according to the age profile after attaining 41, the team falls short. This is despite the fact that disaster diseases have been prevalent in Uganda since 1900 with over 4 million people affected by disaster diseases since 1900 according to [www.uganda.clusters.com](http://www.uganda.clusters.com). This implies that more support requires to be invested in promoting the sustainability of disaster management teams to extend their years of service.

### **Level of achievement of emergency disaster management in incidence of diseases;**

The study findings revealed that there is a statistically weak relationship between emergency disaster teams' achievement and the incidence of diseases. Thus low team may not yield successful controls provided there are no financial and medical supplies however much good controls they may exercise.

Study findings revealed that the achievements in minimizing the incidence of malaria are relative low. Respondents pointed out that much as the government

has remained supportive in the cause of eliminating malaria by issuing free treatable mosquito nets especially with the under 5 who experience acute malarial attacks which consequently ends up in death of some, once there is delayed seeking of medical treatment, malaria remains one of the most prevalent diseases. Indeed according to [www.COMDIS.org](http://www.COMDIS.org) shows donor support of 2.2 million Long-Lasting insecticidal Nets handed out in 2008, where by coverage had reached an 84% where 42% was a distribution of free nets. According to one of special doctor, it was pointed out that much as these nets are issued, the users at times are adamant that they will just keep them. According to this respondent it was emphasized thus;

*"If our clients are realistic enough to our effort as well as to their lives, cases of malaria would be very minimal if not forgotten. There is a lot of carelessness, in the application of these nets. When you ask them actually you get to find that even those with mosquito nets at one time or another, will not fix them on their beds. For instance some will simply say, the mosquitoes bit, the baby she did not sleep under the net because it was washed and the maid did not fix it. Another will tell you "my mosquito net is worn out, and this is with a lot of arrogance, not considering how much costs they incur on treating malaria, than on purchasing a mosquito net". So that is the case there is a lot of negligence, you talk to patients, they know everything necessary to prevent from malaria, but they just simply ignore until the worse comes to the worst"*

This study finding suggests that much as the disaster management team would have achieved better results on the control of malaria in particular, the negligence and adamancy of the community is failing their efforts and making the incidence more severe than it would actually be. And indeed, apart from treating and giving advice they cannot chase people up to their houses to find out how they following and applying the advice provided.

Pertaining to the achievement of disaster teams on measles it was pointed out those cases of measles at least are on the minimal especially in the region. That this is because people within the central have had a good turn up on

immunization once called upon. Thus according to one general doctor from Mulago it was put forward that;

*"the most reported cases that we are handling are cases from outside the central region, who come up when the measles intensifies, and most of times, these have never taken the children for immunization. At least in Kampala measles is minimal because the children have the immunity, even if measles is attack because at times it is just seasonal and on and off, but at least, the cases are very minor and symptoms will simply show, but the child is not severely affected."*

This finding is in contention with the UDHS (2004/05) report that the number of monthly reported cases for measles is falling following a nation-wide vaccination campaign for measles. It can therefore be submitted that the disaster management team has been in position to regulate the impact of measles by having the community respond to immunization.

As far as HIV/AIDS is concerned it was noted that, people have become more aware of living positively. This according to the respondents was due to the nature of counseling lessons both individual and group counseling which has enabled the people to realize that they can still live positively, to support their children and families while in that infected stated and yet remain like others. This same view is further evidenced through the WHO (2006) report which portrays that sex education programmes in schools and on the radio is being focused to negotiate safe sex an encourage teenagers to delay the age of their first sexual encounters as backed up by health education and other public information. Similarly, Old stone (1998), comments that communities in Uganda have been trained to delivery malarial, diarrhea and other treatment within a week. This study finding suggests that training and awareness rising is done right from schools and within the community where counseling is enabling the community to reduce the possibility of developing stigma related diseases because the patients freely seek medical advice and treatment in addition to protecting from risky sex behavior. In fact study findings reflect that VCT services are portraying achievement levels for management disaster teams.

However, contrary to one doctor it was also put forward that, other patients stubbornly refuse to refrain from live sex even when advised. This stimulates their viral load yet they could still satisfy their desires by having protected sex, while at the same time protecting their health. According to another special doctor, some HIV/AIDS patients have also remained adamant of the medical advice given in terms of feeding, as well as advice on protecting against contraction of malaria. According to him others will go ahead to sleep without a mosquito net and yet we keep informing them of how malaria can stimulate their HIV viral load. Clients will say *"I can not sleep under a mosquito net, it makes me sleepless with a lot of heat and it affects my breath"* such negativity is also slowing our target to reduce the prevalence of HIV/AIDS. This same finding is earlier envisaged by Achan et al (2008) who noted that acute malaria elevates the HIV viral load increasing the risk of HIV transmission where malaria co-infection in HIV-infected individuals plays an important role in promoting the spread of HIV.

This study finding depicts the fact that much as HIV/AIDS infected persons have been counseled and equipped with advice of how to live positively with their infection, there is still some negligence on their part which is increasing the possibility of spreading the disease to their partner(s). It can be said that the disaster management teams are doing their best to counsel, treat and educate the patients, although some of them are still unyielding to advice provided and making their lives more liable to being affected by the disease, thus the prevalence of the disease. In fact this view is supported by the fact that a few respondents consented that the medical views provided are being transmitted into plans. This accordingly applies to the affected persons who are not yielding to advice provided, much as this is to the benefit of improving their health.

Study findings further revealed that, disaster management teams are working towards raising awareness of the people through advocacies on prevention against diseases. People are more aware of circumstances and surrounding disaster diseases, their causes and how they can be prevented from spreading and from

being contracted. Similar Oldstone (1998) also supports this view when he contends that communities in Uganda are able to deliver malarial, diarrhea and other treatment through one week training. In respect to this study finding it can therefore be supported that the community is in position to give or administer first aid treatment before the patient actually visits the medical doctor.

The findings further portray that disaster management teams have counted on immunization to prevent and control spread of diseases and that this is particularly true for immunizable diseases such as measles, tetanus, meningitis and others. The disaster teams were noted to participate in periodically arranged seminars to serve as flag bearers of community projects in the fight against spread of diseases especially communicable diseases like measles and TB. According to one of the special doctors from AIC, it was expressed that "team members are sent on mobile home care services to meet different patients in their different homes, differently to communicate positive living and possibility of survival provided advice is taken, which indeed most of them have followed." This, kind of communication according to Okello, et. al, (2006), helps to change behavior when community projects are supported and families informed on prevention and protective measures. It can therefore be submitted that with support accorded by medical personnel to promote the cause/concern of community projects in the prevention and fight against spread of disaster diseases, the impact becomes better felt by the community sharing experiences from professionals, thus an achievement on the part of the disaster management teams.

Further still the study findings established that disaster management teams have had some success in screening and treating of opportunistic infections and diseases especially when cases are handled at an early stage. That other related diseases for instance of HIV/AIDS which may lead to sore skin infections and sexually transmitted diseases are screened and treated to reduce stigma among patients. Indeed Mbonye, et. al (2008) comments on AIC screening and treating sexually transmitted infections like syphilis and herpes and other opportunistic

infections like skin infections. This study finding depicts the fact that diseases like HIV/AIDS come along with other opportunistic diseases which may explore the opportunity of broken body immunity or a weakened body. But such diseases are screened and treated in isolation to avoid the impact of HIV/AIDS from weakening the body by introducing other related diseases.

The study findings further revealed that achievement by the disaster management team is also attained through research and documentation of information on disaster diseases. That through research the management team has been able to rely on reliable statistics in determining the amount of effort and which mechanism is required to regulate disease prevalence as well as choosing possible alternatives to managing diseases. Indeed respondents also pointed out that through research and documentation, it has been possible to improve disease tracking especially in the most affected communities. This same situation is in line with Zaramba (2005) who envisages that participatory research is contributing to the adoption of evidence based approach to scale up disease. This reflects that evidence based approaches are undertaken track diseases. Just like Achan, et. al, (2008) comments on AIC playing a leading role in influencing policy and practice in the area of HCT. This implies that with disaster diseases research and documentation is undertaken to adopt different approaches to suit different situations in regulating the incidence of disease depending on reliable statistics other than abstract and generalized conclusions.

Study findings further reflected that disaster management teams are working towards ensuring improved access to health services. This was mainly linked to the level of attention and respect accorded to the patients to make health centers easily accessible with a friendly environment where patients' preference should not be diverted from seeking professional doctors. This according to some respondents is purposely because cases are being experienced where patients want to consult and have prescriptions taken to a pharmacy or clinic of their choice to purchase the prescribed dosage.

For such reasons, the management teams acknowledge need for ensuring improved access to health services and thus their advocacy. Thus some special and medical doctors consented that, through seminars and workshops as well as documented research, appeals and recommendations for improved access to medical services are being made. This has eased the prior complicated procedure of attaining a medical license thereby enabling an easy establishment of medical centers by qualified doctors and pharmacists. Zaramba (2005) similarly notices this when he comments that the Uganda government has waived restrictions in promoting trained pharmacists. This study finding depicts the fact that through advocacies, access to treatment has been improved when government realized the potential of better control of diseases through improved medical access with spread distribution centers.

The study findings also revealed that disaster management teams have been able to influence issuing of free mosquito nets as well as tools through advising policy. These mosquito nets are delivered to medical personnel for free distribution to enable people to protect against malaria by sleeping under a net. This study finding implies that disaster management teams work towards promoting free distribution of mosquito nets to eliminate the possibilities of lacking a net due to challenges of affordability while preventing against prevalence of malaria.

This has also been done in addition to treating the mosquito nets which indeed has reduced the number of times a mosquito may be capable of biting an individual, as revealed by one medical doctor. Just like Gallup & Sachs (2001) reveal that the Olyset net disrupts the malaria virus. This implies that by spraying and sleeping under the mosquito net, the possibility of malaria contraction is reduced. However, contrary to Zaramba (2005), the burden of malaria is still high despite some progress made in Uganda.

### **Level of achievement of emergency disaster management in incidence of diseases;**

The relationship between the level of prevalence of diseases was found to be significant after a disaster management effort is undertaken. This implies that the better and more improved the effort, the better the performance of the disaster teams and the reverse is true for unimproved efforts. The findings reflect a positive and significant relationship between disease prevalence and disaster effort applied. This implies that incidence of disease is influenced by the way the necessary controls are applied.

Disease prevalence was reported to be founded on poor sanitation and hygiene. According to the respondents, diarrhea, cholera and typhoid cases are mainly developed because of poor sanitation and hygiene which mainly comes up from water related consequences, poor disposal of refuse and garbage as well as poor sewage disposal. In addition it was further mentioned that poor food storage which leads to food poisoning also leads to diarrhea. Similarly Garrete (2010) also supports that disease prevalence follow contamination of drinking water. This same finding is in line with Mbonye et al (2008) who noted that water related challenges of poor sanitation and hygiene in relation to the narrow health system increase disease frequency. This depicts the fact that however good the efforts may prove in handling and treating diseases, poor sanitation and hygiene will continue to affect the health of the people.

The occurrence of disease was further attributed to the level of coverage of the vaccination process. That much participation in the vaccination and immunization exercise is undertaken by many (0.64) a few (0.06) still suffer from vaccination related diseases. It was noted that, some pregnant women particularly in Mulago hospital catch tetanus on delivery because some of them either do not take vaccination completely or because they only took one immunization dose instead of two. This was further emphasized by special doctors from Mulago, that

there are cases of mothers delivering at home on their own or with the help of traditional birth attendants have been received, with tetanus infections because of poor delivery services. Children delivered at home or with traditional birth attendants, are rarely taken for immunization, which leaves their immunity very low. Over 0.15.5 of mothers in Mulago have been found to have infections during the time of birth. In the researcher's opinion, this implies that mothers who deliver from homes as well as their children, only get to be taken to hospital when they actually get to fall sick. Thirty five percent of the people do not undertake vaccination and immunization exercises, while 0.06 of these get serious infections pushing them to seek medical advice. However, the level of affected cases, given the population level is very low, showing a high achievement in vaccination and immunization responses. Indeed the UDHS (2000/01) report also acknowledges immunization and vaccination responses when it portrays that coverage in childhood vaccinations showed significant increases and that the number of monthly reported cases dropped from 3/6000 down to 400 which indeed is a great achievement.

Study responses further revealed that cases of diarrhea, asthma and cholera also mainly acute during seasons of heavy rainfall, and that malaria also remained prevalent soon after the rainy season. This view is shared by Garrete (2010) who noted that acute respiratory infections, diarrhea and malaria follow when a country experiences floods. This view is therefore significant of the fact that, when it rains and floods, transmission of some diseases is easy, thus diseases become more prevalent during rainy seasons.

Study findings fairly reflected that disaster diseases were not effectively being managed. This according to the disaster team was due to the fact that cases were on and off seasonally. This was referred to cases of communicable diseases like measles, chickenpox which became more prevalent in rainy seasons. Zaramba (2005) also emphasizes this when he points out good progress and then

stagnations in indicators of health status of Uganda with a reported a high burden of malaria. This therefore implies that cases may be particularly reported to be high for particular diseases in particular seasons and due to disaster management efforts incurred, the diseases are managed. However, once managed, preventives are not undertake, that when the next attack comes up is when people get to think of disease prevention. This implies that prevention has not been ongoing.

Stigma was also established to contribute to prevalence of opportunistic diseases according to the study respondents. That some diseases if not treated may lead to development of other complications. In this the HIV/AIDS virus was mentioned to contribute to development of diseases like sores and skin infections, TB and malaria while malaria was also associated with dehydration, headache and anemic situations. According to the respondents, because some people have stigma of contracting diseases like HIV/AIDS, they tend to avoid treatment, fearing that their status will be known. This affects their general health when diseases are not managed at an early stage. In a similar context Ndyomugyenye (2001) envisages magnification of the risk of anemia by malaria prevalence while Achan, et. al (2008) also comment on the interaction HIV infection as disruptive to immune response to malaria increasing its severity. It can therefore be submitted that, diseases if not well treated or managed at an early stage, may letter lead further disease complication, thus effort needs to be directed to managing stigma.

Study findings further revealed that there are cases of low adherence to treatment and medical advice. Patients at times do not undertake the right prescriptions given, while others will skip the dosage because they are busy and forgot, yet others on feeling relief, dispense the remaining dose. This according to the doctors has turns bodies resistant to particular drugs making it harder for diseases to cure and that this was very particular with malaria. Other occasions reflect patients who miss out or postpone their hospital injections because they had to be at work, which indeed reveals low access. Achan et al (2008) similarly point

out on how even after vaccinations, some cases remain vulnerable. This shows that bodies may at times resist drugs, especially where dosages are not rightly taken and antibodies are weakened.

Study responses also suggested that the response of the community to having their mosquito nets treated is very low. This according to one special doctor is significant enough to express how much value people attach to using their mosquito nets as preventives to malaria. This however is contrary to CDC (1987) report which envisaged a successful approach to retreating of mosquito nets through mass campaigns. This study finding reveals that mosquito nets are only treated when mass campaigns are on, but after this no further effort is undertaken to treat nets. Which indeed increases the possibility of mosquito attacks and prevalence of malaria.

### **Correlation between levels of achievement and the prevalence of diseases**

The relationship between levels of achievement and prevalence of disease was found to be statistically significant, thus management team affects the level of achievement, thus, the better the management disaster team, the lesser the incidence of disease. The two have a weak but statistically significant relationship as evidenced from Pearson correlation value  $r$ , which is positive .337\*\* and the significance value 0.00 at the level of 0.01. This is indicative of the fact that management team has a relatively weak but, recognizable influence on the prevalence of diseases.

Study responses revealed that barriers to greater professionalism affected the level of achievement of disaster. According to the respondents, there are limited opportunities to upgrade skills apart from the professionally technical and special doctors. In fact according to Mbonye (2007) specialists are few and are not

based in one hospital on full-time. The limitedness of medical personnel and chances to enhance professionalism has left many at a disadvantages of exploring their potentials and yet sponsoring self for professional improvement is very expensive in the medical arena, given the nature of salary earned. This has left the field short of technical staff. This same situation is envisaged in a report by Plata and Mwenda (2009) which reflected that health centers take less initiative to improve staff and services. In the researcher's opinion, this implies that with low different of skills, disaster management staff will be limited by numbers making it more difficult for the disaster teams to handle all patients with expertise, as simple cases now have to be left to the responsibility of the nurses, who lack that technical expertise.

It was further noted that the decentralization process of districts has left medical centers decentralized and yet no arrangements have been made to enable integral supervision and sharing of experience which indeed has affected the level of success of the disaster management teams. This is also evidenced in Zaramba (2005) who noted that additional districts in Uganda have been decentralized to a large degree and directly responsible for the delivery of services and implementation of health programmes without facilitation for interaction and integrated support. In the researcher's opinion, this implies that without an integral process to learn and share from each other through supervision to improve on performance of particular medical institutions, then disaster management team is still bound to face challenges.

Study findings further revealed limitedness in medical personnel, supplies and finances as part of the challenges derailing the achievement of health disaster management teams. Medical supplies were also noted to run short of medical supplies and equipment due to financial shortages which indeed affects the level of achievement of disaster management teams. Indeed Zaramba (2005) comments on the lack of and inadequacy of human and physical resources at medical centers as

a critical factor in the nature of services delivered. Mbonye (2007) similarly comments on a situation of a few specialists where people have to take long to receive medical attention and to be operated upon. This implies that the disaster management teams also experience a challenge of limited professionals to direct and supervise services while the equipments needed are also not adequate in supplies implying that no effective implementation can be made if there are no equipments and medicines moreover with inadequate staff level recruitment to handle many cases without equipments.

It was further established in the study that the much as research and documentation are crucial and have been helpful in disaster management efforts in the health sector, personnel are finding difficulties in ongoing research because the finances allocated are at times inefficient or simply not available that research has to be put at a standstill until when funds are secured. This affects the level of results relied upon. Low funding is clearly evidenced in Platas and Mwenda (2009) report that Uganda heavily relies on donor funding which severely distorts domestic health priorities. In the researcher's opinion therefore, it can be submitted that because the country does not rely mainly on national funds, it is not predictable to anticipate when funds will be available, thus programmes only get to be executed when donations are released, in this way research is also affected. This implies that because research is not ongoing, may yield unsuccessful results and statistics in this case may not be 100 percent dependable because irregularities may be registered or simply assumed.

Study findings further revealed that corruption and embezzlement affected the achievement of disaster management teams. That medical personnel have on severely occasions been caught in acts of embezzlement of funds as well as medical supplies and equipments which are taken to private clinics. "We have heard some cases of staff dismissals due to embezzlement," according to medical specialists, however according to one doctor, it was emphasized thus;

*"at times you may come to justify cases of embezzlement because the pay is too poor. Am not saying that it is a right thing to do, but at times, circumstances of poor pay and challenges encountered may result into such actions"*

This finding depicts that, because medical staffs do not receive an adequate pay, some resort to embezzling equipment to gain an extra income. This however, receives disaster teams unequipped to manage disasters. This same view is clearly expressed by Platas and Mwenda (2009) who noted that the amount of money flowing into Uganda's health sector is a difficult thing to nail down because most of it is off-budget where government needs to be held accountable for rampant wastages and inefficiencies.

The study also established that due to poor planning and approaches taken in sensitizing the people, disaster management teams are limited in their functioning. This is possibly because they are few in numbers moreover with limited institutional capacities in form of physical and medical supplies. This is seen in Mbonye (2007) who portrays that there are a few specialists who moreover are not based in one hospital. This shows that sensitization campaigns cannot effectively be carried on by professionalized medical doctors because duty calls amidst absence of personnel, thus emergency cases are handled first in hospital with less attention accorded to sensitization campaigns. This implies that plans and approaches are limited by low capacities.

The study findings further revealed that the nature of controls exercised were expensive and costly to be met by all, thus whereas some patients can afford particular treatments others cannot not. This in fact limits the capacity levels of the disaster teams as they can incur costs on behalf of the patients other than to recommend treatment, simply because the patients lack sufficient finances to meet some of their medical requirements. Due to this some patients resort to traditional medicines, to reduce their health costs especially the uneducated. Okello et, al (2006) also comments on native healing centers as the most preferred choice.

## **CONCLUSION**

Based on the findings of the study as discussed above, the following conclusions were drawn;

### **The level of disaster management achievement and controls**

Management controls have a significant effect on level of achievement of disaster management teams. The study concludes that even with effective controls, but as long as team remains less equipped, sanitation and hygiene remain low, and as long as the vaccination levels remain low with rainy and flooding seasons and untreated stigma related diseases, a low adherence to treatment, low response to mosquito usage and irregular preventive efforts and research, then the controls will still remain inadequate. The study therefore concludes that there is a significant relationship between disaster management achievement and the effort incurred. Thus incidence of disease is influenced by the way the necessary controls are applied.

### **The level of prevalence of diseases after emergency disaster**

The relationship between the level of prevalence of diseases was found to be significant after a disaster management effort is undertaken. This implies that the better and more improved the effort, the better the performance of the disaster teams and the reverse is true for unimproved efforts. The findings reflect a positive and significant relationship between disease prevalence and disaster effort applied. This implies that incidence of disease is influenced by the way the necessary controls are applied. Disease prevalence was reported to be founded on poor sanitation and hygiene, low responses to vaccination, rainy seasons and flooding, untreated stigma related diseases, low adherence to treatment, low response to mosquito net usage, irregular preventive efforts and research, which led to ineffectiveness in disaster management efforts.

The study further concludes that if preventive measures are not maintained as ongoing and if funding entirely continues to be majorly donor funded, then capacities of disaster management teams to achieve commendable success will remain limited.

### **The relationship between disaster management achievement and the prevalence of diseases**

Disaster management achievement and the prevalence of diseases have a significantly weak factor but with a direct effect of the controls exercised. Performance of the disaster management teams is due to poor institutional capacities which hinder ongoing research and regular preventive controls due to poor plans and low finances, barriers to greater professionalism, decentralizing health facilities without enhancing capacities to sharing professional advice, corruption and embezzlement due to poor pay and greed and the expensiveness of the controls that are exercised which remain unaffordable. Management of disease and controls exercised are integral, thus support needs to be emphasized on management team to promote effective application of controls. The study therefore concludes that management quality is significant to disaster management achievement to exercise controls effectively to contain diseases.

### **RECOMMENDATIONS**

Upon drawing conclusions on the study findings, the following recommendations are envisaged;

More funding is needed from the government through its budgetary allocations to scale up its intervention in controlling the prevalence of disaster diseases as to supplement donor funding and this will also help to reduce on the global burden.

There is need for improved funding of community mobilizations programmes for instance through community pooling to educate communities as a group on the impact of disease prevalence such as malaria with its consequences. As group, the message may carry more impact and be perceived more seriously, than when handled individually. This will give people an opportunity to share different experiences with others, especially on the effect of disaster diseases.

There is need for a continuous on-going prevention and disease control campaigns. Such effort should not particularly be active after diseases strike but they need to be a regular exercise.

Advocacy also needs to be improved for the uneducated community to improve on its professional medical seeking levels. This will help in having the right controls exercised which will minimize the prevalence of diseases.

There is need for more disaster management effort to target on reducing stigma by restoring confidence in patients through improving support in home care visits and shared experiences first through small group visits.

There is need to invest more funds in upgrading skills of the available medical personnel as well as developing support programmes for new staff.

There is need to introduce strict penalties enforceable by the law for corrupt medical personnel however, government also needs to revise the remuneration for medical personnel. Still the government has to put health sector has a first priority in its annual budget, this is because when you have a weak population, there can never be any development in the country.

Awareness raising, vaccination as well as research and documentation need to be ongoing to keep the spirit of preventiveness burning. Otherwise relaxing leads to negligence and impacts a burden on the available medical facilities.

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**APPENDIX 1**  
**TRANSMITTAL LETTER**  
**OFFICE OF THE DEPUTY VICE CHANCELLOR (DVC)**  
**COLLEGE OF HIGHER DEGREES AND RESEARCH (CHDR)**

Dear Sir/Madam,

**RE: INTRODUCTION LETTER FOR NAMUTEBI PRICILLA MULUNGI**

**REG. NO. MAD/16795/111/DU, TO CONDUCT RESEARCH IN  
YOUR**

**INSTITUTION**

The above mentioned candidate is a bonafide student of Kampala International University pursuing a Masters in Development Administration and Management

She is currently conducting a field research for his dissertation entitled, **Achievements of Disaster Management and Prevalence of Diseases.**

Your institution has been identified as a valuable source of information pertaining to his research project. The purpose of this letter then is to request you to avail him with the pertinent information he may need.

Any data shared with her will be used for academic purposes only and shall be kept with utmost confidentiality.

Any assistance rendered to him will be highly appreciated.

Yours truly,

---

Novembrieta R. Sumil, Ph.D.

Deputy Vice Chancellor, SPGSR

**APPENDIX 1B**  
**TRANSMITTAL LETTER FOR THE RESPONDENTS**

Dear Sir/ Madam,

Greetings!

I am a Master. In Development Administration and Management candidate of Kampala International University. Part of the requirements for the award is a dissertation. My study is entitled, **Achievements of Disaster Management and Prevalence of Diseases in Central Uganda**. Within this context, may I request you to participate in this study by answering the questionnaires. Kindly do not leave any option unanswered. Any data you will provide shall be for academic purposes only and no information of such kind shall be disclosed to others.

May I retrieve the questionnaire within five days (5)?

Thank you very much in advance.

Yours faithfully,

Ms.Namutebi Pricilla Mulungi.

**APPENDIX 11**  
**CLEARANCE FROM ETHICS COMMITTEE**

Date \_\_\_\_\_

**Candidate's Data**

Name \_\_\_\_\_

Reg.# \_\_\_\_\_

Course \_\_\_\_\_

Title of Study \_\_\_\_\_

**Ethical Review Checklist**

**The study reviewed considered the following:**

- Physical Safety of Human Subjects
- Psychological Safety
- Emotional Security
- Privacy
- Written Request for Author of Standardized Instrument
- Coding of Questionnaires/Anonymity/Confidentiality
- Permission to Conduct the Study
- Informed Consent
- Citations/Authors Recognized

**Results of Ethical Review**

- Approved
- Conditional (to provide the Ethics Committee with corrections)
- Disapproved/ Resubmit Proposal

**Ethics Committee (Name and Signature)**

Chairperson \_\_\_\_\_

Members \_\_\_\_\_

**APPENDIX III**

**INFORMED CONSENT**

I am giving my consent to be part of the research study of Ms. Namutebi Pricilla Mulungi that will focus on Disaster management and Prevalence of diseases.

I shall be assured of privacy, anonymity and confidentiality and that I will be given the option to refuse participation and right to withdraw my participation anytime.

I have been informed that the research is voluntary and that the results will be given to me if I ask for it.

Initials: \_\_\_\_\_

Date \_\_\_\_\_

**APPENDIX 1VA**

**FACE SHEET: DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS**

**Gender (Please Tick):**     (1) Male     (2) Female    :    \_\_\_\_\_ **Age**

**Qualifications Under Education Discipline (Please Specify):**

(1) Certificate \_\_\_\_\_

(2) Diploma \_\_\_\_\_

(3) Bachelors \_\_\_\_\_

(4) Masters \_\_\_\_\_

(5) Ph.D. \_\_\_\_\_

**Other qualifications** other than education discipline \_\_\_\_\_

**Number of Years of Experience in Disaster Management (Please Tick):**

\_\_\_\_(1) Less than/Below one year

\_\_\_\_(2) 1- 2yrs

\_\_\_\_(3) 3-4yrs

\_\_\_\_(4) 5-6yrs

\_\_\_\_(5) 7 years and above

## APPENDIX IV

### B

Score	Rating Mode	Interpretation
4.21-5.00	strongly Agree	very satisfactory
3.41-4.20	Agree	Satisfactory
2.61-3.40	Not sure	Weak
1.81-2.60	Disagree	Fair
1.00-1.80	Strongly disagree	poor

### LEVELS OF ACHIEVEMENT OF DISASTER MANAGEMENT

- \_\_\_\_\_1. I have heard about emergency disaster preparedness.
- \_\_\_\_\_2. Our views are taken into consideration and translated into plans
- \_\_\_\_\_3. I have heard about emergency disaster preparedness.
- \_\_\_\_\_4. Malaria is effectively being prevented.
- \_\_\_\_\_5. Insects are being regulated to control spread of malaria
- \_\_\_\_\_6. VCT is effectively undertaken to regulate the spread of HIV/AIDS
- \_\_\_\_\_7. Effective immunization is being carried out to regulate incidence of measles
- \_\_\_\_\_8. Other opportunistic infections are being screened and treated
- \_\_\_\_\_9. Capacities are being built to prevent against HIV/AIDS spread
- \_\_\_\_\_10. There is an improved access to treatment
- \_\_\_\_\_11. Basic care packages are provided like mosquito nets.
- \_\_\_\_\_12. There is an improved awareness of diseases and free treatment .
- \_\_\_\_\_13. There is an improvement in research and documentation of disease incidences
- \_\_\_\_\_14. There is an improved tracking of disaster disease affected communities.

- \_\_\_\_\_15. Free packages and tool kits are provided to help patients in the protection and treatment of diseases.
- \_\_\_\_\_16. Mobile health services are helping in regulating disease incidences through home-based services
- \_\_\_\_\_17. Patients are recognizing the benefits of consulting professional medical centers.

**Levels of prevalence rate of diseases after emergency disaster**

- \_\_\_\_\_1. Disaster diseases have been effectively contained
- \_\_\_\_\_2. Poor hygiene and sanitation standards contribute prevalence of diseases
- \_\_\_\_\_3. Vaccinations and coverage still minimal
- \_\_\_\_\_4. Stagnant waters contribute to the prevalence of malaria disease
- \_\_\_\_\_5. Stigma related diseases contribute to prevalence of disaster diseases
- \_\_\_\_\_6. Diarrhea and Cholera are very common with flooding waters
- \_\_\_\_\_7. Poor net re-treatments contribute to the spread of malaria
- \_\_\_\_\_8. Low adherence to prescription and medical advice is leading to prevalence of diseases

**APPENDIX V**

**PROPOSED DATA PRESENTATION THROUGH TABLES**

Table 2

Demographic Characteristics Of the Respondents

<b>Category</b>	<b>Frequency</b>	<b>Percentage(%)</b>
<b>Gender</b>		
Male		
Female		
<b>Age</b>		
20-39 (Early adult hood)		
40-59 (Middle adult hood)		
60 and above (Late adult hood)		
<b>Educational Qualifications</b> (Under Education Discipline)		
Certificate		
Diploma		
Bachelors		
Masters		
PhD		
<b>Qualifications Other Than Education Discipline</b>		
<b>Number of Working Experience</b>		
6 months -1 year		

**TABLE 2**

**THE LEVELS OF PREVALENCE OF DISEASES**

**RECORD SHEET FOR PREVALENCE OF DISEASE**

Area	Hospital	Statistics	Year of incidence	Disease	Number of cases affected

**APPENDIX VI**  
**PROPOSED BUDGET**

<b>Particular</b>	<b>Quantity</b>	<b>Amount</b>
Stationary	Paper 7 Reams	70,000/=
	Ink 1 Cartridge	40,000/=
	Binding materials 10	300,000/=
Research Assistants	3 @ 100,000	300,000/=
Transport costs		3,000,000/=
Data Analysis		400,000/=
Up keep		300,000/=
Miscellaneous		300,000/=
	<b>Total</b>	<b>4,710,000 UGX</b>

## APPENDIX VII

### TIME FRAME

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1. Conceptual Phase												
Chapter 1												
2. Design & Planning Phase												
Chapter 2-3	XX											
3. Dissertation Proposal												
4. Empirical Phase												
Data Collection												
5. Analytic Phase												
Chapter 4-5												
5. Journal Article												
7. Dissemination Phase												
Viva Voce												
8. Revision												
9. Final Book Bound Copy												
0. Clearance												
1. Graduation												

## RESEARCHER'S CURRICULUM VITAE

### Personal Profile

**Name:** Namutebi Pricilla Mulungi

**Gender:** Female

**Nationality:** Ugandan

### Educational Background

Bachelor of Arts in Development Studies (K.I.U)  
(2010)

UACE(Rise And Shine High School)  
(2006)

UCE (Rise And Shine High School)  
(2004)

### Work Experiences

1 year Primary School Teaching (Children with the mission)

1 year Secretary (Passover Harvest Church)

6 months Ssg coordinator (children foundation for children and Aging.)