FACTORS INFLUENCING IMPLEMENTATION OF POSTPARTUM HAEMORRHAGE MANAGEMENT GUIDELINES AMONG HEALTH CARE PROVIDERS IN KILIMANJARO REGION

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By

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A Dissertation Submitted in (Partial) Fulfillment of the Requirements for the Degree of Master of Science in Midwifery and Women`s Health of the Muhimbili University of Health and Allied Sciences

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CERTIFICATION

The undersigned certify that I have read and hereby recommend for acceptance by Muhimbili University of Health and Allied Sciences a research dissertation entitled; "***Factors influencing implementation of postpartum haemorrhage management guidelines among health care providers in Kilimanjaro region" in*** partial fulfilment of the requirements for the degree of Master of Science in Midwifery and Women's Health of Muhimbili University of Health and Allied Sciences.

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Dr. Beatrice Mwilike

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Date

DECLARATION AND COPYRIGHT

I, **Dativa F. Urio,** hereby declare that this dissertation is my original research work, and that it has not been or will not be presented to any other university for a similar or other degree award without my permission or acknowledgement by the university.

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DEDICATION

This work is dedicated to my wonderful family, relatives, and children, who have always been my staunchest supporters. They were always inquiring about my academic progress. They were and continue to be a source of inspiration, success, and joy for me. They always pushed me to achieve greater academic success. Thank you, GOD, for bringing them into my life. Finally, this dissertation is dedicated to my cousins, Mr. and Mrs. Lucy Woisso, Faustine Urio's family, and the entire Urio family, as well as my roommate, Ms. Prisila Ntandu, for their emotional, spiritual, and financial support throughout my time at Muhimbili University of Health and Allied Sciences. I adore all of you. .

ABSTRACT

Background: One of the most common life-threatening complications of labor is postpartum haemorrhage (PPH). It usually happens without warning or warning signs or symptoms, and it often happens without any predisposing factors. The most common causes of PPH are uterine atony (which occurs in about 80% of cases), retained placenta, and genital tract trauma. Primary interventions such as active management of the third stage of labor, uterotonic and uterine massage, all of which are well described in the guidelines for preventing and managing postpartum haemorrhage, are all effective in preventing and managing PPH.

Objective: The study aimed to determine factors influencing the implementation of postpartum haemorrhage management guidelines among health care providers in Kilimanjaro Region.

Methodology: A descriptive cross-sectional study was conducted using a quantitative data collection approach. Data was collected using self-administered structured questionnaires.

The study included all enrolled and registered nurses, midwives, and physicians working in maternity units at selected facilities. Multistage cluster sampling was used because it allowed the researcher to collect data in smaller, more productive groups while saving money and time. The project will involve six (6) health centers and two (2) hospitals.All participants signed a written consent form. Descriptive statistics and logistic regression analysis were used to analyze the data.

Results: The implementation of the PPH management guideline is influenced by participants over the age of 25, with a higher education and more than 5 years of college or university work experience, as well as nurses/midwives and physicians with more than 5 years of work experience. Health care providers can also improve their skills in implementing the PPH management guideline by participating in on-the-job training or refresher courses. Two health system factors that influenced the implementation of the PPH management guideline were the recruitment and allocation of competent health care providers in the maternity unit. Furthermore, health-care facilities must have sufficient and easily accessible equipment and supplies.

Conclusion: The implementation of PPH management guidelines is influenced by qualified personnel with good communication skills and more than 5 years of experience working in a maternity unit.

Recommendations: The government or health institutions should hire more qualified personnel who will adhere to all postpartum haemorrhage prevention and management principles. The government and health institutions should provide frequent training and refresher courses, as well as supportive supervision, to keep health care providers' skills up to date. The government must ensure that adequate equipment and suppliers, as well as reliable transportation (ambulance) within health-care facilities, are always available.

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LIST OF ABBREVIATIONS

ACOG	International Federation of Gynaecology and Obstetrics
AMTSL	Active Management of Third Stage of Labour
CCT	Control Cord Traction
EmONC	Emergency Obstetric and Neonatal Care
FIGO	International Federation of Gynaecology and Obstetrics
HIMS	Heath Information Management System
I/M	Intramuscular
I/V	Intravenous
ICD	International Classification of Disease
ICM	International Confederation of Midwives
IRB	Institutional Review Board
IU	International Units
IUFD	Intra Uterine Foetal Death
KM	Kilometres
MoHCDEC	Ministry of Health, Community Development, Gender, Elderly and Children
PPH	Postpartum Haemorrhage
SDG	Sustainable Development Goals
TANROADS	Tanzania Road Authority

DEFINITION OF TERMS

Guideline is systematically developed statements with recommendations or tools to assist practitioners and patients make better decisions about appropriate health care for specific circumstances within the health care facilities(1,2). In this study guidelines are tools used by enrolled and registered nurses and midwives which provide instructions on how to handle and manage Active Management of Third Stage of Labour (AMTSL) to prevent postpartum haemorrhage.

Implementation is a process of making the plan of care activities or interventions carried out into action with good effect (3). In this study, implementation will be used to show the effective interventions applied by nurses, midwives, and physicians throughout the progress of preventing postpartum haemorrhage.

Health care providers are health professionals, licensed, accredited or certified to perform specified health services consistent with state law or a health care facility (4). In this study health care providers involve both enrolled and registered nurses, midwives and physicians who work in the maternity unit and take care of women from labour, delivery and postnatal care effectively.

Postpartum haemorrhage (PPH) is defined as a blood loss of 500 ml or more within 24 hours after birth or blood loss exceeding 500 millilitres (mL) following a vaginal delivery or more than 1000 mL following caesarean delivery (5). In this study postpartum haemorrhage is an excess of vaginal bleeding which occurs to woman followed delivery if the third stage of labour was not managed well by the health care provider who conducted the delivery.

Active management of the third stage of labour is the administration of a uterotonic drug within one minute after the birth of the baby, controlled cord traction during contractions, and uterine massage immediately after the delivery of the placenta which is conducted by a skilled health provider (6,7). In this study active management of third stage of labour is the measures which health care provider will use to prevent postpartum haemorrhage.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Postpartum haemorrhage is an obstetrical emergency with a prevalence of 11 percent to 26 percent for blood loss of 500 mL or less (vaginal delivery) and 2 percent to 5 percent (8) for blood loss of 1,000 mL or more (caesarean section) (9) that can be avoided by prompt diagnosis, provision of essential resources and equipment, and proper management of the third stage of labor (10). Primary postpartum haemorrhage occurs within 24 hours of giving birth, and secondary postpartum haemorrhage occurs between 24 hours and 12 weeks after giving birth (11). With a global prevalence rate of 6%, postpartum haemorrhage is the leading cause of maternal death. The poorest and middle-income countries bear the brunt of the burden (12,13).

PPH is the fourth most common cause of maternal death in Sub-Saharan Africa, accounting for more than 48 percent of all maternal deaths in Uganda and Tanzania (14). Women in Sub-Saharan Africa experience postpartum haemorrhage (PPH) at a rate ranging from 2% to 10.5 percent globally, with a higher rate of 59 percent in Burkina Faso. Ivory Coast has 37% and Guinea Bissau has 43% (15), while postpartum haemorrhage is responsible for about a quarter of maternal deaths (16) in East Africa. The major causes of maternal deaths were mentioned as direct and indirect causes.

Haemorrhage accounted for 27.1 percent of direct causes, hypertensive disorders 14.0 percent, and sepsis 10.7%, while indirect causes included unsafe abortion, obstructed labor, malaria, anemia, and HIV (17), as well as other factors such as delays from home or referral health facilities (18). Grand multiparity and multiple gestations are both risk factors for PPH. PPH, on the other hand, can occur in women who have no known clinical or historical risk factors (6).

However, according to a study conducted at Sir Ganga Ram Hospital in Lahore from January 1, 2013 to December 31, 2017, the most common causes of postpartum haemorrhage are uterine atony (80%), placental complications (36%), birth canal lacerations (19,20), uterine rupture, retained placenta, and bleeding disorders (17,21).

According to the population-based survey, Tanzania's mean maternal mortality ratio was 556/100,000 live births in 2015, 539/100,000 live births in 2016, and 524/100,000 live births in 2017, with a total number of maternal deaths ranging from 8,000 to 13,000 per year (22,23).

Interventions to reduce preventable deaths from postpartum haemorrhage will be required to meet the new maternal death target of 140/100,000 live births by 2030(2,24). (25). PPH is thought to be responsible for at least 25% to 28% of maternal deaths in Tanzania. According to ICM/FIGO guidelines on managing AMTSL, uterotonic agents should be administered within three minutes of the foetus's delivery after a uterus palpation has ruled out the presence of any other baby (29). For all births, the use of an effective uterotonic to prevent PPH during the third stage of labor is recommended (7,10,28). When PPH strikes, early detection of bleeding and prompt treatment with evidence-based guidelines can prevent the majority of PPH-related severe morbidity and mortality (30,31).

The most common cause of PPH, uterine atony, will be carefully managed, beginning with fundal massage, bladder drainage, and uterotonics, then aortic compression, and rapid placement of uterine balloon tamponade, as per the postpartum haemorrhage management guideline. Despite the effective use of PPH guidelines on PPH management as reported in studies conducted in various countries, maternal death due to postpartum haemorrhage remains unacceptable in Tanzania (7).

There is no evidence-based information or studies on the implementation of the PPH management guideline. Because of this ambiguous knowledge, the purpose of this study is to determine the factors that influence the implementation of PPH management guidelines among health care providers in the Kilimanjaro region. Furthermore, to improve health-care quality by lowering maternal and perinatal morbidity and mortality.

1.2 Problem statement

Every day, approximately 830 women die from pregnancy and childbirth-related causes that could have been avoided (32). Almost all of these deaths occur in low-resource settings, and women in rural areas and poorer communities are disproportionately affected (26,33).

Postpartum haemorrhage (PPH) remains one of the most common causes of maternal morbidity and mortality, despite efforts to reduce rates. The leading cause of maternal death worldwide is postpartum heamorrhage (PPH) (34). Early detection of bleeding and prompt management using evidence-based guidelines can prevent the majority of PPH-related severe morbidity and death.

Despite the fact that it is potentially preventable, postpartum haemorrhage (PPH) is the most lethal form of obstetric bleeding worldwide, primarily in Sub-Saharan Africa, where it accounts for at least one-fourth of maternal deaths (13).

According to the Tanzania Demographic and Health Survey (TDHS) 2015/2016, maternal death occurs in Tanzania at a rate of 556 per 100,000 live births, with PPH accounting for at least 25%-28 percent of maternal deaths, with the main cause being the failure of the uterus to contract adequately after childbirth, which occurs in about 70%-80% of cases (35).

Kilimanjaro is one of 31 Tanzanian mainland regions with a high rate of maternal death due to PPH, compared to nearby regions such as Arusha (23%), and Manyara (21%). (36). PPH is the leading cause of maternal death in Kilimanjaro, accounting for 34%, infection 10%, pre-eclampsia 9%, and other causes accounting for 9%. (36).
Active management of the third stage of labor (AMTSL) is recommended as a useful, feasible, and inexpensive practice that saves the lives of millions of women (37). The use of uterotonic agents is a crucial part of the prevention and treatment of PPH. It is made available within one minute of the baby's birth. Reduce the risk of Postpartum Haemorrhage (PPH) by delivering the placenta with Controlled Cord Traction (CCT) and massaging the uterus after delivery (38–40). Oxytocin administered intravenously or intramuscularly, is the gold-standard uterotonic for the treatment of PPH caused by

uterine atony. Where oxytocin can help achieve the third Sustainable Development Goals (SDG 3) health targets, particularly target 3.1: reduce global maternal mortality to less than 70 per 1000,000 live births by 2030. (40,41).

Despite different recommendations for managing PPH in different health care settings, postpartum haemorrhage remains one of the most common causes of maternal morbidity and mortality in the Kilimanjaro region, and little is known about the factors influencing health care providers' implementation of PPH management guidelines. Due to the scarcity of publicly available information, this proposed study aims to fill in the gaps.

1.3 Conceptual framework

This conceptual framework has been organized to describe the relationship between independent variables and dependent variables, such as health system factors such as guidelines availability and accessibility, as well as clarity on how to use them, human and non-human resources required within the organization, and communication among team members as good communication leads to good implementation. Health care providers can also have a positive or negative impact on the implementation of postpartum haemorrhage guidelines. Social demographics (level of education, age, and experience in maternity units), knowledge, skills, and attitude, including the health care provider's traditional values, motivation, on-the-job training, fresher coursers, and mentorship are examples of such factors.

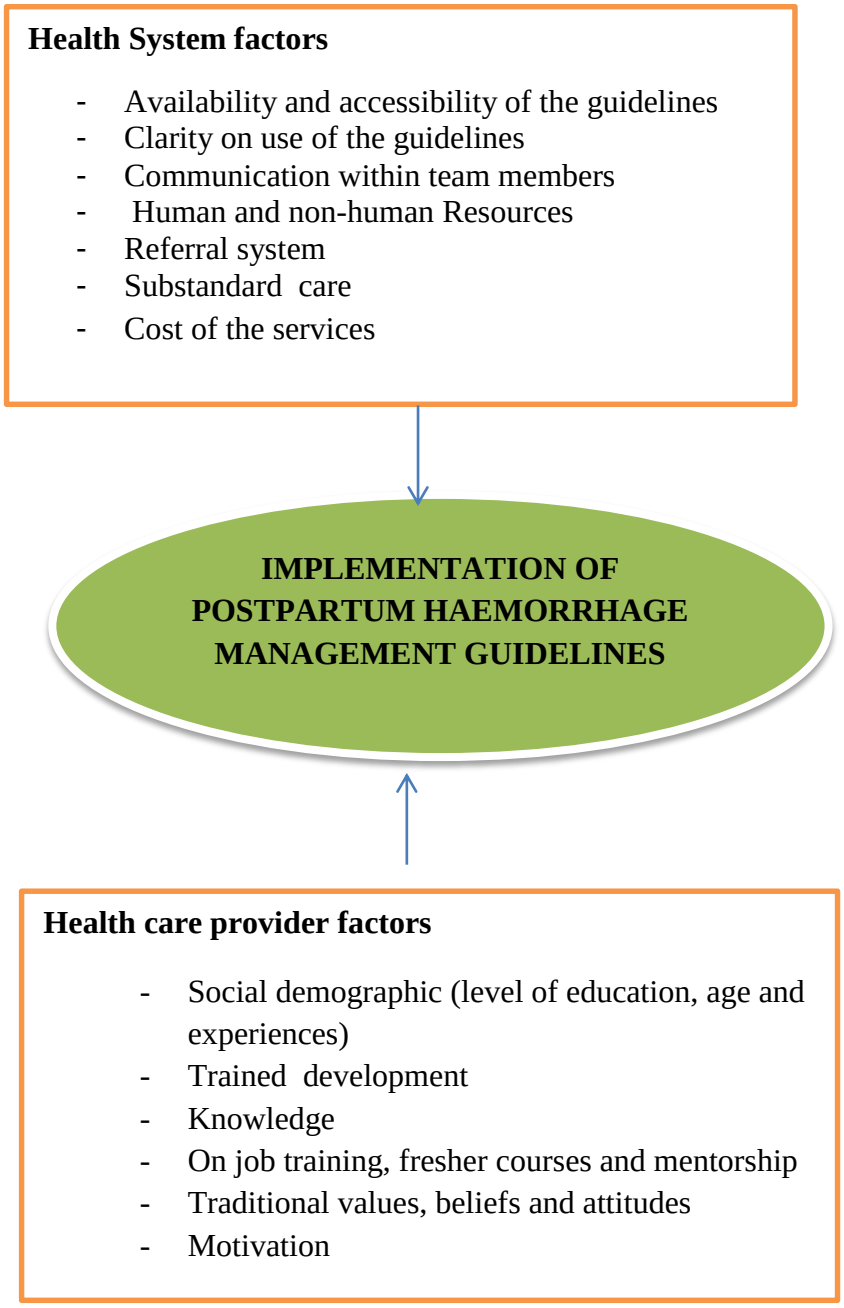

Figure 1. Conceptual framework for implementation of PPH management guideline.

1.4 Rationale for the study

PPH can be avoided, treated, and is unpredictable. It can be improved by using current guidelines, regular training, and mentoring for health care providers to gain more competencies in improving maternal services, resulting in a decrease in maternal death due to postpartum haemorrhage.

Furthermore, the findings of the study will improve midwifery practice and research policy, empowering and increasing the capacity of health care providers to provide care for the mother and baby's well-being. It also evaluates the quality of maternity care provided and provides key indicators for both specialties and organizations. Using a variety of interventions primarily available within health care facilities, health care providers will be able to monitor, evaluate, and optimize the care required from perinatal to postnatal periods.

1.5 Research questions

1.5.1 Broad Research question

What are the factors influencing implementation of postpartum haemorrhage management guidelines among health care providers in Kilimanjaro Region?

1.5.2 Specific research questions

1. What is the health system factors used to facilitate implementation of postpartum haemorrhage guidelines among health care providers in Kilimanjaro region?
2. What are the health care provider factors influence implementations of postpartum haemorrhage guidelines in Kilimanjaro region?

1.6 Research objectives

1.6.1 Broad objective

To determine factors influencing implementation of postpartum haemorrhage guidelines among health care providers in Kilimanjaro Region

1.6.2 Specific Objectives

1. To determine health system factors influencing implementation of postpartum haemorrhage management guidelines among health care providers in Kilimanjaro region.
2. To assess how health care providers influence the implementation of postpartum haemorrhage management guidelines in Kilimanjaro region.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Overview of the PPH management

Effective postpartum care can prevent long term consequences of unrecognized and limited management problem which may arise during labour and delivery. The use of thoroughly developed, evidence-based clinical guidelines has the potential to improve patient care, impact on policy and ensure consistency of care across health sectors. This study aims to determine factors influencing the implementation of postpartum haemorrhage management guidelines among health care providers in Kilimanjaro Region. Proper implementation of postpartum haemorrhage guidelines by health care providers can have a big impact on reduction of maternal mortality in different areas.

However, several factors may influence the implementation of postpartum haemorrhage management guidelines either positively or negatively. In health system factors such as (clarity and knowledge on use of the guidelines by health care providers, (42) communication within team members, adequate resources both human and non- human resources and health system structure (43). Also health care provider factors such as social demographic factors, believes and attitudes, motivation, provisional development, knowledge and skills, on-job training, fresher courses and mentorship (43). Other factors might also influence the problem such as low socio-economic status leading to maternal nutrition and lifestyle (4), maternal complications such as uterine atone, abruption placentae, Intrauterine foetal death (IUFD) and delaying in performing caesarean section (44).

2.2 Health system factors facilitating the implementation of PPH management guideline

Health system is the organization of people, institutions and resources that deliver health care services by ensuring accessible, affordable, high quality and safe health service to meet the health needs of target population. Health system can influence the implementation of the postpartum haemorrhage management guidelines either positively or negatively through different sources of information from literatures.

Moreover, the health care system had good collaboration between each other (25). No sufficient competencies health care professional who provide high quality care as we can see big number of health care providers but does not correlate with the clients/women been served (45,46).

Essential interventions and medicines including oxytocin, misoprostol and magnesium sulphate can improve maternal health and prevent complications which may happen during delivery and after delivery (47). The key emphasis of the 2030 Sustainable Development Goals (SDG) is to reduce maternal mortality by provision of high quality care. Provision of evidenced based clinical guidelines for estimating availability and use of emergency obstetric care (EmONC) services are in place (5). However, lack of equipment and supplies can make life-saving services to be delayed in case of obstetric haemorrhage management (48). No stable system for issuing equipment such as medication and other supplies for birth and immediate for postpartum. During perinatal visits women were advised to bring their own equipment's during delivery (5,39).

Moreover, Women complained of overcrowding in the health care facilities and some areas there was no enough space and lack of beds. They use to sleep four up to five in a single bed while others ends laying down on the floor (8,10). Most of health care providers were unable to follow the guidelines and standard of care as majority of women were discharge between 6 hours to 12 hours after delivery (49).

WHO guidelines acknowledged that some uterotonic drugs like carbetocin with minimal side effects is effective in preventing postpartum haemorrhage but is not available in many settings due to its high cost (47,50). However there is a big shortage of human and non-human resources within the health care system such as staff shortage, lack of equipment's and suppliers and poor infrastructure. The health policies are not supported. There is poor documentation leading to limited capacity of health care providers to deliver high quality care using the evidence-based guidelines (51). Lack of blood transfusion services, anaesthetic services, and operating capabilities also plays a role (19).

Moreover, improvement in the Tanzania transport system has a significant contribution in reducing the second level delay of access to receive health care services. The availability of good roads and means of transport facilities is critical in achieving the goal. Tanzania Road Authority (TANROADS) in 2018 reported that 67.2% (8,211 KM) of the roads in Tanzania are paved with almost all regions and the majority of districts connected (52).

The international guidelines for managing postpartum haemorrhage is not user friendly due to its complexity, its achievable, unfeasibility (23), having unclear checklist and not practicable leading to sub standards in management of postpartum haemorrhage to various health care facilities (47).

2.3 Health care providers' factors facilitating the implementation of the PPH management guideline

Health care providers are people with ability to provide high quality *care* and timely health services in order to achieve the best possible health outcomes.

The knowledge and skills required to perform AMTSL are vital for routine use as a key for active management of third stage of labour (53). Other health care providers don't have equipped knowledge on management of PPH (18,54,55). They provide uterotonic drugs after delivery of the placenta. They apply fundal pressure and massage the uterus after delivery of the baby. Also they controlled cord traction without administration of uterotonic drugs. Health care providers get standardized competency-based refresher courses. (5,47,56).

Additionally, the Ethiopian study by Said (11) reported that they are lacking knowledge on exchange opportunities between senior health care provider and newly trained providers including supportive supervision and mentorship chances. However, most births in low-resource settings are not attended by skilled providers as only 51% birth are assisted by skilled provider in Tanzania (35,37,58).

The implementation of the guideline for postpartum haemorrhage was well functioned due to good storage and transportation system. There are availability of sufficient equipment's and suppliers on the site such as oxytocin, needles and syringe. (10,57).

There is a contradiction between the government's promise of universally free prenatal health care services to pregnant woman and under five as been announced by the parliament of Tanzania and in the media. The community members are getting confused as the situation is versus within the health care facilities (49,59,60).

Moreover, Ghana policy introduced Free Maternal Health Care Policy with full package. It is comprehensive maternal healthcare via free registration to all pregnant women to the National Health Insurance Scheme to access Health. However the success was very little due to geo-political and socioeconomic issues (61).

Several models were developed by Niger's government and international non-government organizations for rapidly reduction of postpartum haemorrhage mortality. A combination of new techniques, use of intrauterine condom tamponade, misoprostol, and systematic measuring of blood loss in case of haemorrhage occurrence (29).

A lot of strategies have been put forward in implementation of postpartum haemorrhage guideline in all level of health facilities. Good number of human resources with competence knowledge and skills to implement the guideline. Availability of essential equipment and suppliers including needles, syringes, uterotonic drugs and gloves with good infrastructures (ambulance, electricity and refrigerator). Also provision of health management system (patients records and registers) (62).

Some women did not receive uterotonic drugs within 3 minutes despite of its availability due to limited staff undertaking multiple tasks as may lack to have enough time to follow the protocol (35).

However, in Tanzania they added challenges on delaying and safety of the health care providers in making decision when a need for referring to high level of health care service is required as there is no continuity of both antenatal and postnatal care to women who cannot afford or access services (58). To improve maternal health, barriers that limit access to quality maternal health services must be identified and addressed at both health system and societal levels (9,18,50,52).

CHAPTER THREE

3.0 METHODOLOGY

3.1 Introduction

This chapter explains and investigates how data was collected using a well-tested tool in order to identify study objectives. The study design, study setting, study population, variables, sampling procedure, sample size, data collection techniques, data management, validity and reliability, data analysis, ethical considerations, and dissemination of the study's findings are all covered in this chapter.

3.2 Study design

To obtain information from enrolled and registered nurses-midwives and physicians within the district council health care facilities, a descriptive cross-sectional study with a quantitative approach was used. It takes very little time and resources to carry out. It is completed at a single point in time because it only considers events of interest (63). This design was appropriate for this study because participants were chosen based on the variable of interest and no variables were manipulated. However, it collects preliminary data in order to answer study questions, and the study's findings can be easily generalized.

3.3 Study setting

The research was carried out in the Kilimanjaro region, which is located in the northern zone. Moshi rural district 509,431, Rombo district 284,834, Hai district 229,791, Moshi Municipal 201,150, Mwanga district 143,466 and Siha district 126,953 are the six administrative districts in the region, with population estimates for 2017 as follows: Moshi rural district 509,431, Rombo district 284,834, Hai district 229,791, Moshi Municipal 201,150, Mwanga district 143,466 and Siha district 126. There were 20 (4.5 percent) hospitals, 50 (11.4 percent) health centers, 361 (82 percent) dispensaries, 8 (1.8 percent) clinics, and one (0.2 percent) maternity home in the region. Despite the fact that the region is divided into six districts, the study was conducted in Rombo because it is one of the largest districts in the region, with many health facilities located

in remote areas far from the main tarmac road, posing challenges in terms of feasibility, time, and human and non-human resources.

Researchers collected data from enrolled and registered nurses-midwives and physicians working in maternity units within the six health centres and two hospitals, excluding dispensaries because the majority of deliveries take place in health centres and hospitals within the district. A delivery takes place only in the event of an emergency at the dispensary level, as they prefer to refer to higher levels as soon as possible. In addition, data was collected from health care providers who only work in maternity units, despite the fact that most of our dispensaries lack maternity units. Kilwa health centre, Keni health centre, Karume health centre, Tarakea health centre, Moyosafi health centre, Holili health centre, Huruma hospital, and Ngoyoni hospital are the health centres and hospitals identified.

3.4 Study populations

All enrolled and registered nurses, midwives, and physicians working in the maternity unit at Rombo health facilities, which included six health centers and two hospitals, were included in the study. The total number of employees in the study's target area was 146, with the study expecting to draw a sample from this group.

3.5 Criteria for Selection

The population characteristics used to determine whether or not a person was eligible to participate in a study were defined by sampling criteria.

3.5.1 Criteria for inclusion

Both enrolled and registered nurses-midwives and physicians of any rank who had worked in obstetric care facilities (i.e. maternity units) for more than six months and were available during data collection and signed the consent form on their own took part in the study.

3.5.2 Criteria for exclusion

The study excluded all enrolled and registered nurses, midwives, and physicians who were sick, on maternity leave, annual leave, or engaged in special activities and didn't sign the consent form.

3.6 Sampling procedure

The study participants were chosen using a multistage cluster sampling procedure. The Kilimanjaro region has six districts (Moshi rural, Rombo, Hai, Moshi Municipal, Mwanga, and Siha), and the researcher purposefully selected one district (Rombo) out of the six to produce a sample that can be logically assumed to be representative of the population. The district is divided into eight wards, each with six (6) health centers, two (2) hospitals, and twelve (12) dispensaries. The researcher chose all two hospitals and six health centers, excluding dispensaries, because the majority of deliveries take place in health centers and hospitals within the district. A delivery takes place only in the event of an emergency at the dispensary level, as they prefer to refer to higher levels as soon as possible.

In addition, data was collected from health care providers who only work in maternity units, despite the fact that most of our dispensaries lack maternity units. The following data was collected in various health care facilities located within wards throughout the district: In the Holili ward, there is a Holili health facility, Keni Health Centre in Mengeni ward, Kirwa Mashati Health Centre in Kirwa Keni, Karume Health Centre in Kitirima ward, Moyosafi Health Centre in Nanjara ward, Tarakea Motamburu Health Centre, Huruma Council District Hospital in Kelamfua Mokala ward, and Ngoyoni Hospital in Ngoyoni ward. The researcher further narrowed it down from the chosen hospitals and health centers, selecting only enrolled and registered nurses, midwives, and physicians working in maternity units to participate in the study.

3.7 Sample size

To get a reasonable sample size for the study, the researchers looked at 146 targeted populations. To minimize error, the Rao soft sample size calculator was established with a margin error of 5% and a confidence interval (CI) of 95% to calculate the sample

size; the sample size was obtained using Yamane's formula (1967). The actual sample size was calculated using this formula: -

Formula; $n = \frac{N}{1 + (N)e^2}$

Where

n = Sample size,

N = Total number of staffs

e = Standard error (e=0.05%)

From $n = \frac{146}{1 + (146)(0.05)^2} = 106.9597$; approximately, n = 107

As a result, a sample size of 107 health care providers from health facilities was used in the study. All enrolled and registered nurses, midwives, and physicians working in maternity units for all six (6) health centers and two (2) hospitals were invited to participate in the study, which resulted in a sample size of 107 health workers.

3.8 Variables

3.8.1 Dependent variable

Implementation of postpartum haemorrhage management guidelines

3.8.2 Independent variables

As shown in table 1, independent variables were grouped into three contributing factors: social demographic factors, health care provider factors, and health system factors, each with their own level of measurement scale.

Table 1: Independent variables with a level of measurements

Serial number	Contributing Factors	Variables description	Scale of Measurement
1.	Socio-demographic factors	Gender	Nominal
		Marital status	Nominal
		Religion	Nominal
		Age	Interval
		Level of education	Ordinal
		Level of experiences	Ordinal
		Years of work	Ordinal
2.	Health system factors	Availability and accessibility of guidelines	Nominal
		Clarity on use of guidelines	Ordinal
		Communication within team members	Nominal
		Collaboration across the health system	Nominal
		Cost of services	Ordinal
		Unstable system	ordinal
		Training development,	Nominal
3.	Health care provider factors	Traditional values beliefs and attitudes	Ordinal
		On job training	Nominal
		Knowledge and skills on implementation of the PPH guidelines	Ordinal

3.9 Data collection procedure and tools

3.9.1 Data collection procedure

The researcher received an approval ethical clearance letter from the office of the director-research and publication, as well as an introductory letter from the office of the director of postgraduate studies at Muhimbili Institutional Review Board (IRB),

which was submitted to the Rombo District Medical Officer In-Charge with an attached letter from the researcher requesting permission to conduct the research study in Rombo District Health Facilities (six health cents). The District Medical Officer agreed to the request and sent letters to the six health centers (Holili, Keni, Kirwa, Karume, Moyosafi, and Tarakea) and two hospitals (Huruma and Ngoyoni hospital), with copies being made and sent to the hospital in charge of the study area. I requested an introduction meeting with participants and scheduled data collection days in each health facility on different days. On different days, participants signed the consent form and completed the questionnaires individually. During the data collection process, no participant failed or refused to sign the consent form.

3.9.2 Data collection tool

A self-administered written questionnaire was used to collect data from the health care providers. This tool was designed depending on the data needed by clearly define the objectives and variables of the study. The tool was designed in a way that it was simple and well readable with close-ended questions which were translated into Swahili version and back to the English version to check consistency with three parts i.e. (Introductory, body with three sections; 1st section contained information about demographic characteristics of the participants, 2nd section contained information on health system factors and 3rd section contained information on health care provider factors. Data collection was highly anonymous and confidential as participants were able to complete and filled out the questionnaire themselves under my supervision within their normal working hours. Data was checked every day for completeness and accuracy as self-administered questionnaires produce results that are easy to summarize, compare and generalize.

3.10 Research Assistant

3.10.1 Recruitment of research assistant

The researcher chose research assistants from the district's health-care facilities who had previous experience with postpartum haemorrhage management. They were given a complete package of the data collection process as well as capacity building, with the goal of generating a common understanding of all data collection activities.

3.10.2 Training and responsibilities of research assistant

The researcher provided a one-day training session on the study's purpose, familiarization with data collection tools, and skill sessions on how to administer the data collection tool. Their responsibilities were also outlined, including adhering to research ethics, safety, and rights throughout data collection. One of the responsibilities was to act ethically and honestly while providing guidance, preparing progress reports and suppliers, and receiving and checking questionnaires from subjects. Their responsibilities, on the other hand, were managed and day-to-day activities were carried out according to protocols.

3.11 Validity and reliability of the data collection tool

Before the actual day of data collection, the data collection tool was pre-tested on a sample of participants with the same characteristics but not in the same field of the study area at Mnazi Mmoja health center in Ilala Municipality in Dar-es-Salaam region. The purpose of pre-testing was to determine the data collection tools' reliability and effectiveness. However, while on the field, the researcher flagged and re-collected data to ensure that data for each question could only be submitted in one standardized format, free of bias.

3. 12 Data quality management

Daily supervision to ensure completeness, look for outliers, and edit the raw research data to remove any data points that could compromise the results' accuracy.The data was coded and recorded. The researcher entered the data, and a trained data clerk double-checked it for accuracy. Data cleaning included sorting and listing to look for

missing values and outliers. Data cleaning was done at the end of data entry, and frequencies and cross-tabulations were calculated from the data.

Any errors discovered during data collection were addressed, and any errors discovered during or after data entry were addressed by rewriting the original questionnaire. A debriefing meeting was also held to discuss the data collection process. To maintain confidentiality, all completed questionnaires were kept in a locked cabinet that only the researcher had access to. If technical audits and references for data cleaning are required, the complete questionnaires will be stored for five years before being destroyed.

3.13 Data analysis

Several steps were taken during data analysis, including data validation to determine how accurately the study answered the questions and to monitor any data collection bias. Data cleaning was done to ensure that the data was correct, consistent, and usable by fixing or removing incorrect, corrupted, incorrectly formatted, duplicate, or incomplete data, as it is critical to the analytical process and uncovering reliable answers. Data transformation was accomplished by creating a scale of measurement, which was followed by data coding and data entry by assigning values to responses. Following that, descriptive statistics were calculated in accordance with the study's objectives and converted to numerical form using a Microsoft Excel spreadsheet, which was then analyzed using computer software. The data was then analyzed using the Statistical Package for the Social Sciences (SPSS). To describe categorical data, the researcher uses frequencies and percentages.

Unadjusted effect and independent effect on PPH implementation and other associated factors were determined using binary logistic and multivariable logistic regression models. A p-value of less than 0.05 with a 95 percent confidence interval is considered statistically significant.

3.14 Ethical consideration

The Muhimbili University Institutional Review Board (IRB) gave its approval for ethical clearance and introductory letters. District Medical Officers provided official

letters authorizing the study. Respondents were given advance notice of the study's objectives and goals. Finally, regardless of the respondents' educational status, written informed consent was considered because it promotes self-autonomy, stimulates trust and confidence, and reduces the risk of unnecessary legal claims based on incorrect assumptions about appropriate medical care, and it was signed by the respondents without any coercion. The study participants' privacy and anonymity were guaranteed. Respondents were given the option to leave the study at any time without penalty.

3.15 Dissemination of findings

Before the study was completed, the dissemination plan was created by identifying the target groups for disseminating the research report, which included the Department of Community Health Nursing, the MUHAS Institutional Review Board (IRB), the director of postgraduate studies, and the MUHAS library. The findings will also be presented at a local, national, and international scientific conference, as well as published in a peer-reviewed journal, and distributed to the district medical office and staff members working in the health facilities where data was collected.

CHAPTER FOUR

4.0 RESULTS

4.1 Introduction

The results of the study produced by descriptive quantitative analysis are described in this chapter. It began by describing the study participants' general demographic characteristics. The fundamental findings of the study are then presented in accordance with the research objectives, followed by the study's recommendations and conclusions.

4.2 Demographic Characteristics of Participants

The study enrolled 107 people, with more than half of them being women (63). (58.9 percent). The majority of the 54 participants (50.5%) were between the ages of 25 and 34 years old. The majority of the participants, 57 (53.3 percent), were single. In terms of education, 83 (77.6%) had completed college and 13 (12.1%) had completed secondary school. In the third quarter, 91 (85.0%) of the participants identified as Christians. In terms of professional experience, 51 (47.7%) had less than 5 years of work experience, but as table 2 below shows, the year of work in current institutions was the most important factor.

Table 2: Demographic Characteristics of Participants (n=107)

Characteristics	n	%
Sex		
Female	63	58.9
Male	44	41.1
Age (Years)		
< 25	15	14.0
25-34	54	50.5
35-44	20	18.7
> 44	18	16.8
Marital status		
Single	57	53.3
Married	50	46.7
Level of education		
Secondary	13	12.1
College	83	77.6
University	11	10.3
Religion		
Christianity	91	85.0
Muslim	16	15.0
Working experiences in maternity unity (Years)		
< 5	51	47.7
5 – 9	28	26.2
10 – 14	9	8.4
≥ 15	19	17.8
Working experiences in the institution (Years)		
1-5	43	40.2
6-10	29	27.1
11-15	12	11.2
> 15	23	21.5

n = Frequency; % = Percentage

4.3 Social demographic factors influencing implementation of PPH management guidelines

The findings on social demographic characteristics influencing implementation of PPH management guidelines shows that the third quarter of the participants 75(87.2%) aged 25 years has an impact on implementation of PPH management guideline. Also, in terms of education 64(74.4%), staff with college followed by 9(10.5%) those with university-level qualifications were capable to implement the guideline.

This study found more than half 45(52.3%) of the participants with experience of ≥ 5 years in maternity unity as well as those with working experience for more than five years in the institutions 53(61.6%) play a great role in the implementation of PPH management guideline as table 3 below shows

Table 3: Social demographic factors influencing implementation of PPH management guidelines

Demographic characteristics	**PPH management guideline**	
	No n(%)	**Yes n(%)**
Age Category, Years		
<25	4(19.0)	11(12.8)
≥ 25	17(81.0)	75(87.2)
Level of education		
Secondary	-	13(15.1)
College	19(90.5)	64(74.4)
University	2(9.5)	9(10.5)
Experiences in maternity unity (Years)		
<5	10(47.6)	41(47.7)
≥ 5	11(52.4)	45(52.3)
Working experiences in the institution (Years)		
1-5	10(47.6)	33(38.4)
≥ 6	11(52.4)	53(61.6)

4.4 Health System factors influencing the implementation of PPH management guideline

The descriptive findings on health system factors to facilitate implementation of PPH guidelines among health care providers found that 75(87.2%) of health care facility have a PPH management guideline, 83(96.5%) there is a good implementation of PPH guideline if the health system have effective intervention and good governance and 72(83.7%) uterotonic drugs and service delivery equipment are available at health facility.

Furthermore, participants reported 81(94.2%) health facilities provide supportive supervision and refresher courses on the implementation of PPH management guidelines, 67(77.9%) provide free services to a pregnant woman seeking health care at facility including delivery services. Eighty one of (94.2%) have good referral system for women diagnosed with PPH in health care facilities that cannot be managed and 71(82.6%) health care normally take more than 30 minutes to refer a patient from facility to highest level when the need arises PPH.

In addition the study found that 74(86.0%) of labor wards have emergency cupboard/kit for dealing with emergence cases, 77(89.5%) nurse-midwives receive equipment and supplies such as uterotonic drugs immediately when a request is made, 82(95.3%) allowed to communicate with other staff in health facility in the event PPH and 60(69.8%) have different intervention in managing a woman with PPH in health care facilities, district hospitals and regional hospitals. Binary logistic regression assessed the Health System factors on implementation of PPH management. The Univariate analysis was considered since in descriptive findings all factors indicated high percent health system factors used to facilitate implementation of PPH guidelines among health care providers. Hence Binary logistic regression aimed to identify which factor has a higher odds multiplicative effect to be considered on implementation on PPH management guideline. The study found all assessed factors had high OR >1 implying both are important to be considered as table 4 below shows.

Table 4: Health System factors on implementation of PPH management guideline

Variable	**Category**	**Health System factors on implementation of PPH guideline within the facility.**		
		Yes n(%)	**OR (95%CI)**	**ρ value**
PPH management in health care facility	No	11(12.8)	Ref	
	Yes	75(87.2)	1.1(0.3-4.5)	0.856
PPH effective intervention.	No	3(3.5)	Ref	
	Yes	83(96.5)	1.4(0.1-14.0)	0.784
Timely uterotonic drugs service delivery in the facility	No	14(16.3)	Ref	
	Yes	72(83.7)	1.2(0.4-4.1)	0.761
Supportive supervision and fresher courses.	No	5(5.8)	Ref	
	Yes	81(94.2)	2.7(0.6-12.4)	0.200
Free services to a pregnant woman	No	19(22.1)	Ref	
	Yes	67(77.9)	1.8(0.6-5.0)	0.285
Referral to women when diagnosed with PPH.	No	5(5.8)	Ref	
	Yes	81(94.2)	1.7(0.3-9.5)	0.542
Time management about 30 minutes to refer the patient to the highest level.	No	15(17.4)	Ref	
	Yes	71(82.6)	1.5(0.5-4.7)	0.504
Equipped emergency cupboard/kit in labour ward for handling emergence cases	No	12(14)	Ref	
	Yes	74(86.0)	1.4(0.4-5.1)	0.559
Equipment and supplies for nurse-midwives e.g., uterotonic drugs.	No	9(10.5)	Ref	
	Yes	77(89.5)	2.0(0.6-7.3)	0.288
Communication with other staff in the facilities	No	4(4.7)	Ref	
	Yes	82(95.3)	4.8(1.1-21.2)	0.037*
Intervention in managing PPH in all facilities	No	26(30.2)	Ref	
	Yes	60(69.8)	1.2(0.4-3.2)	0.783

COR/OR: Crude odds ratio; CI = Confidence Intervals; Mgnt: Management; *Statistically significant; HS: Health System

4.5 Health care provider factors on the implementation of PPH management guideline

The findings of the study on how health-care provider factors influence PPH guidelines implementation At work, 53 (61.6%) of the participants received PPH job training, and almost all of the participants completed the course. Fresher courses or workshop attendance can increase health care workers' competence in managing a woman with PPH, according to 80 percent of respondents. The majority of health-care providers (83%) can diagnose at-risk women who may develop PPH, and 82 (95.3%) can manage a woman with PPH.

Furthermore, 83(96.5 percent) health care providers believe that positive attitudes toward the use of PPH management guidelines are critical, as are 73(84.9 percent) incentives or promotions for health workers, which can boost morale and lead to better health care, and 76(88.4 percent) get time to go over the PPH management guidelines for effective implementation.

Furthermore, 79(91.9%) participants said health care should provide uterotonic drugs immediately after delivery of the baby, 83(96.5%) said it is a good practice to implement PPH management guidelines in your working place, 80(93.0%)said educating women on danger signs during delivery and after delivery is very important because it can reduce chances of developing PPH during delivery and 81(94.2%) the effective utilization of PPH management guideline can decrease the number of maternal deaths.

Analytical findings through binary logistic regression were done to determine health care provider's factors on the implementation of PPH. The 95% CI and $\rho < 0.05$ were considered for the factors to be considered most on implementation of PPH management guideline. The study found 4.2 OR with 95%CI [1.1-15.3] $\rho = 0.032$ statistically significant fresher courses or workshop attendance can increase competence to health care workers in managing a woman with PPH. Also increasing competencies to health care providers had higher odds 4.8 in managing a woman with PPH with $\rho = 0.037$, 95%CI [1.1-21.2] as well good practice on PPH management guidelines in the working area had [OR=8.6; 95%CI: 1.9-39.9] to implement the guideline as table 5 below shows.

Table 5: Health care provider factors on the implementation of PPH management guideline

Variable	Category	HCP factors on the implementation of PPH management guideline		
		Yes n(%)	**OR (95%CI)**	**ρ value**
Job training courses of PPH at the workplace	No	33(38.4)	ref	
	Yes	53(61.6)	1.8(0.8-4.6)	0.245
Fresher courses or workshop attendance.	No	6(7)	ref	
	Yes	80(93.0)	4.2(1.1-15.3)	0.032*
Diagnosing woman at-risk to develop PPH	No	3(3.5)	ref	
	Yes	83(96.5)	4.6(0.9-24.7)	0.074
Competencies in managing PPH	No	4(4.7)	ref	
	Yes	82(95.3)	4.8(1.1-21.2)	0.037*
Health care provider positive attitude on utilization of PPH	No	3(3.5)	ref	
	Yes	83(96.5)	2.9(.5-18.7)	0.259
Incentives or promotion to health workers.	No	13(15.1)	ref	
	Yes	73(84.9)	2.2(0.7-6.9)	0.155
Time to pass through the PPH management for effective implementation of guideline	No	10(11.6)	ref	
	Yes	76(88.4)	1.8(0.5-6.4)	0.371
Provision of uterotonic drugs immediately after delivery of the baby	No	7(8.1)	ref	
	Yes	79(91.9)	1.2(0.2-6.2)	0.838
Practice to implement PPH management in the working area	No	3(3.5)	ref	
	Yes	83(96.5)	8.6(1.9-39.9)	0.006*
Educating women on danger signs during delivery and after delivery	No	6(7)	ref	
	Yes	80(93.0)	2.2(0.5-9.7)	0.289
The effective utilization of PPH and ensure decrease number of maternal deaths	No	5(5.8)	ref	
	Yes	81(94.2)	1.7(0.3-9.5)	0.542

OR: Odds Ratio; CI = Confidence Intervals; Mgnt: Management; *statistically significant;

HCP: Health care provider

4.6 Risk factors for developing Postpartum haemorrhage

In this study, adjusting for risk factors associated with PPH and potentially confounding factors that require implementation between a primary predictor's

variable and a dichotomous categorical outcome were considered with 95% CI and ρ <0.05. After running multivariate, the study found participants with uterine atony are at risk of 4.7– folds increase in odds as the most common cause that require PPH management with significant ρ = 0.011 and CI: 1.4 - 15.5. Also, a woman who develop PPH indicated with AOR of 4.2 more times higher risk, ρ = 0.021 require management. In univariate analysis the study indicated that [OR=1.5; 95%CI: 0.4-5.1] high risk factor grand multipara women are more likely to develop PPH than primigravida women that requiring PPH management as shown in table 6 below.

Table 6: Risk factors for developing Postpartum haemorrhage

Risk factor	PPH Mgnt	Risk factors for Postpartum haemorrhage			
	Yes n(%)	COR (95%CI)	ρ value	AOR (95%CI)	ρ value
Uterine atony					
No	12(14)	ref		ref	
Yes	74(86)	3.8(1.3-11.1	0.015	4.7(1.4-15.5)	0.011*
Low social economic status					
No	37(43)	ref		ref	
Yes	49(57)	0.5(0.2-1.5)	0.230	0.4(0.2-1.4)	0.163
Woman who developed PPH					
No	11(12.8)	ref		ref	
Yes	75(87.2)	3.4(1.1-10.3)	0.030	4.2(1.2-14.1)	0.021*
Grand multipara women					
No	12(14)	ref		ref	
Yes	74(86)	1.5(0.4-5.1)	0.559	0.9(0.2-3.7)	0.886

COR: Crude odds ratio; AOR: Adjusted odds ratio; CI = Confidence Intervals; Mgnt: Management *Statistically significant

CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents detailed discussions; conclusion and recommendations pertaining to the study from the obtained results in chapter four and word forward in addressing the implementation of postpartum haemorrhage management guideline including the areas for further research have also been presented.

5.2 Discussion

This study was conducted to determine factors influencing implementation of PPH management guidelines among health care providers. The rate of PPH complications and maternal death relate to health system gaps such as insufficient knowledge and skills to birth attendance, shortage of skilled health personnel and unavailability of equipment's and supplies to the health care system leading to increase maternal death. Also, incapability of health care provider to make appropriate decision timely that delay referrals for further management when PPH occur.

5.2.1 Social demographic characteristics of participants

The findings of this study observed that social demographic characteristics of the health care provider have an influence on the implementation of PPH management guidelines. The study found that having more than 25 years old with education level from diploma to University level will influence the implementation of PPH management guideline. However, participants who are having experience in maternity unity for ≥ 5 years together with working experience for more than five years in the institutions play great role in the implementation of PPH management guideline.

This is why people with such characteristics have gained experience from cases, they come across during patients treatments, and skills gained from training and supportive supervision offered by the institutions. The findings is similar to Kibusi et al, (5,10) whom reported that being ≥40 years old, having >3 years of professional training and being in a maternity unit for ≥5 years of experience were predictors for knowledge in

PPH management and prevention. Additionally, Muyanga (60) in Tanzania reported similar findings that health care providers aged ≥ 45 years are likely to have adequate skills unlike health care provider with < 25 years. This adds more value that age of health care provider has influence on competence in implementing PPH management guidelines. This is obvious true because it goes directly with experience as we say old is gold. In this situation, increase number of health care providers to share the content with others in working place will add more competencies.

5.2.2 Health care providers' factors facilitating the implementation of the PPH management guideline

The presence of health care provider is one of the tools in the implementation of PPH management guideline. This study found that the health care provider get time to pass through PPH management guidelines. For effective implementation, 61.6% undergone job training courses concerning with PPH management guideline at their working place including fresher courses to increase their competence in diagnosing at risk women and managing a woman with PPH at their working areas (1,5,36). Also adequate resources both human and non- human resources have value towards implementation of PPH management guidelines (41,37).

The findings of this study indicates that, heath care providers are competent and well equipped with skills which are helpful to women who can experience PPH. Similar study done in Tanzania found that implementation of PPH management guideline was well functioned due to competency-based refresher courses and uterotonic drugs were distributed free of charge to women during delivering. There was good storage and transportation of the drugs and availability of other materials (10,57). In contrast to a study conducted by Kibusi et al. (5,10) who reported that a large number of health care providers don't have skills both practical and theoretical in implementing the PPH management guideline

Moreover, the study done in Ethiopia reported lacking knowledge on exchange between senior health care providers and newly trained. This is probably due to many staff not being given short-term training, lack of essential equipment suppliers, lack of testing equipment or perhaps even the government not emphasizing this challenge

facing many women. So, through this study, I found that there is a need to strengthening and ensure awareness for health care providers on implementation of PPH management guideline to reduce maternal death due to PPH.

Nevertheless, the current study is different from that done in Tanzania as it was found only 51% birth are assisted by skilled provider due to low level of knowledge and skills because in low-resource settings births are not attended by skilled providers (35,37,58). The current study found almost staffs are skilled. This will add value to health care providers to follow the guideline and implementation for the purpose of improving maternal services and prevents maternal death. For emphasis all essential items should be made available to the facility all the time for the best management of PPH parallel to the competence of staff in managing PPH that will lead to reduction of maternal death due to PPH.

However, the study found 96.5% health care workers replied it is a good practice to implement PPH management guideline in working area because effective utilization of PPH management guideline can decrease number of maternal deaths by 94.2%. Moreover, study found in managing woman with PPH 91.9% health care providers provide uterotonic drugs immediately after delivery of the baby. They also have good referral system in order to reduce PPH in the health facility.

Coupled with managing PPH, the study found that to reduce chances of developing PPH during delivery 93.0% it is important to educate women on danger signs during delivery. Additionally, this is important on educating pregnancy women on danger signs during delivery and after delivery. Furthermore, improving referral system to other health facilities so as to immobilize unity of work after shouting for help.

This study found 96.5% health care providers were having positive attitude on utilization of PPH management guideline followed by 84.9% provision of incentives or promotion to health care providers to increase the moral working for good quality health care. This result is very important in managing PPH and it concur with the suggestion of Medoh (12) who reported that inadequate knowledge concerning the management of PPH and low levels of skills and experiences among newly hired health provider is the hindrance factors toward implementation of PPH management guideline. For more emphasis and improving PPH management guideline, the

participants suggested that more vivid examples in managing PPH in working environment i.e. using prosthetic models or dolls and regular supportive supervision is required as well as providing oxytocin injection within one minute after delivery of the baby.

5.2.3 Health system factors facilitating implementation of PPH management guideline

The challenge of PPH can be prevented through man power for timely diagnosis, provision of essential resources, financial assets, equipment's and correct management of the third stage of labour (10, 11). In considering health system factor as one of the major concerns to reduce PPH challenges for women, this study found 87.2% the health care facilities have PPH management guideline and 83.7% have uterotonic drugs and service delivery equipment's are available at health facility all the time and health care providers make sure that uterotonic drugs provided immediately after delivery of the baby. Correspondingly, 86.0% the facilities have equipped emergency cupboard/kit in labour ward for handling emergence cases of which nurse-midwives get equipment and supplies like uterotonic drugs immediately when request.

This study found that 94.2% of the health facilities capacitate their health care providers through supportive supervision, mentoring and provision of fresher courses in order to implement PPH management guidelines efficiently. Identically, 77.9% facilities provide free services to pregnant woman who came to seek for health care services. Along with, the study found woman diagnosed having PPH in health care facilities that cannot be managed, 94.2% of them get good referral system that almost take more than 30 minutes to refer patient from facility to highest level. This is good achievement. Different literatures indicate that delays either from home or receiving treatment and referral to other health facilities were major causes of increasing maternal deaths (17).

Moreover, the study found 69.8% health care facilities conduct different interventions in managing a woman with PPH from district level to regional hospitals as well as improving the implementation of PPH guideline for effective intervention and good

governance. Certainly 95.3% they are allowed to communicate with other staff in health facility in case of PPH. This findings is similar to Medoh (12) on prevention and management of PPH and finally succeeded to increase knowledge to health workers by 36% and decreased the rate of PPH from 15% to 0%.

5.3 Conclusion

The study revealed that qualified staffs with good communication skills and experience in maternity unit for more than 5 years of working are significant factors influencing the implementation of PPH management guidelines. Moreover, positive attitude on utilization of PPH management guidelines by health care providers is very important. Fresher courses/workshop and supportive supervision increase competencies to health care providers in managing PPH properly and reduce maternal death. Moreover, incentives or promotion increase morale to health care providers leads to effective implementation of postpartum haemorrhage

5.4 Recommendation to the government and the health institution

- They should consider recruiting more competent staff that will adhere to all principles in preventing and managing PPH because health care providers in maternity unity are crucial needed for saving the life of women and babies.
- They should provide frequent training and fresher courses including supportive supervision to update the skills of health care providers that relate to the current advancement of science and technology.
- To ensure that each health care facility have well stipulated and up-to date PPH management guideline and the health care providers are able to implement it.
- To ensure availability and adequate equipment's and suppliers with good transport (ambulance) all the time within the health care facilities.

5.5 Implication for practice

Maternal death due to PPH is a national concern and health care providers are the key informants towards implementation of PPH management guideline in order to reduce it. The study results provide clear picture of health system and health care in local

setting. No doubt the results have direct inferences for PPH leading to maternal death and its preventive measures. Training staffs, improving infrastructure in health institutions as well as mode of referral and transport will save more life of delivering woman. There is a need of conducting the study regional wise rather than district level for the sake of assessing the knowledge, attitude and practice of healthcare providers based on PPH management guidelines' implementation.

5.6 Study limitation and Mitigation

The study conducted in one district rather than one region. Disappointment of some health care providers hindered data collection that led to have small sample size.

- This study provided important information although there was no involvement of manipulating the variables. Questionnaires were well structured with clearly phrased language and participants volunteered to participate in the study without any coercion.
- Follow up reminders to participate and encouragement to complete filling the questionnaires, increased time and cost to conduct the study and required incentives to increase response rate. The participants were instructed and insisted to fill the questionnaire individually without sharing with other co-worker on the day of data collection and research assistant collected and checked for completeness of questionnaires immediately on each day and coding were done to questionnaires which were complete.
- The study was hospital based where consumed more time during data collection as the setting was too be busy due to shortage of staff and some equipment's and suppliers. Good communication throughout data collection was maintained both by the researcher, research assistant and participants by negotiation on actual good time to collect data within the health care facilities identified also support some activities while they were filling the questionnaire.

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APPENDICES

Appendix 1. Structured Questionnaires in English version

Tittle: Factors influencing implementation of postpartum haemorrhage management guidelines among health care workers in Kilimanjaro region

Participants: En-rolled and registered nurses-midwives and physicians working in maternity unity

INSTRUCTIONS

1. This questionnaire is consisting of three (3) sections
2. Please answer all the questions asked in each section A, B and C using your own ideas and don't share with anybody
3. Put a tick (√) on the brackets provided in front of the answers
4. Don't write your name anywhere in this questionnaire form.
5. Fill the blank space with appropriate information's

Participant ID number……. ……../……/ 2021

Questions

Section one: Social demographic characteristics of the respondents

1. What is your gender?
    a) Female ( )
    b) Male ( )
2. What is your marital status?
    a) Single ( )
    b) Married ( )
3. What is your religion?
    a) Christianity ( )
    b) Muslim ( )
4. What is your age?
    a) Less than 25 years old ( )
    b) 26-35 years old ( )
    c) 36-45 years old ( )
    d) Above 46 years old ( )
5. What is your highest level of education?

a) Primary level ( )
b) Secondary level ( )
c) College level ( )
d) University level ( )

6. How many years of working experiences in maternity unity do you have?
   a) Less than 5 years ( )
   b) More than 5 years but less than 10 years ( )
   c) More than 10 years but less than 15 years ( )
   d) More than 15 years ( )

1. How many years of work do you have?
   a) 1 year to 5 years ( )
   b) 6 years to 10 years ( )
   c) 11 years to 15 years ( )
   d) More than 15 years ( )

7. How many years of work do you have?
   e) 1 year to 5 years ( )
   f) 6 years to 10 years ( )
   g) 11 years to 15 years ( )
   h) More than 15 years ( )

Questions section two: Health system factors

1. Do you have postpartum management guideline at your health care facility?
   a) Yes ( )
   b) No ( )
2. Are postpartum management guidelines available and accessible to all nurses working in maternity unity all the time?
   a) Yes ( )
   b) No ( )
3. You can improve the implementation of postpartum haemorrhage guideline well if the health system has a good governance
   a) Yes ( )
   b) No ( )

4. Are uterotonic drugs and service delivery equipment's available at your health facility all the time?
    a) Yes ( )
    b) No ( )
5. Does your health facility provide supportive supervision on implementation of postpartum management guidelines?
    a) Yes ( )
    b) No ( )
6. Do you provide free services to pregnant woman who came to seek for health care at your health facility including delivery services?
    a) Yes ( )
    b) No ( )
7. There is good referral system to women when diagnosed having postpartum haemorrhage in health care facilities that you cannot manage
    a) Yes ( )
    b) No ( )
8. Do you take more than 30 minutes to refer patient from your health facility to highest level when need arises (postpartum haemorrhage)?
    a) Yes ( )
    b) No ( )
9. Is there equipped emergency cupboard/kit in labour ward for handling emergence cases?
    a) Yes ( )
    b) No ( )
10. Nurse-midwives get equipment and supplies e.g. uterotonic drugs immediately when request for it.
    a) Yes ( )
    b) No ( )
11. Do you allowed to communicate with other staff in your health facility in case there is occurrence of postpartum haemorrhage?
    a) Yes ( )
    b) No ( )

12. Is there different intervention in managing a woman with postpartum haemorrhage in health care facilities, district hospitals and regional hospitals?
    a) Yes ( )
    b) No ( )
13. Is there any community believe when a woman die due to postpartum haemorrhage in your health care settings?
    a) Yes ( )
    b) No ( )
14. Is there any maternal death occurred at your health facility due to postpartum haemorrhage for the past one year?
    a) Yes ( )
    b) No ( )

Section three: Health care providers

15. Have you undergone any job training courses concerning with postpartum haemorrhage at your working place?
    a) Yes ( )
    b) No ( )
16. Fresher courses or workshop attendance can increase competence to health care workers in managing a woman with postpartum haemorrhage?
    a) Yes ( )
    b) No ( )
17. Do you know how to diagnose at-risk woman who can develop postpartum haemorrhage?
    a) Yes ( )
    b) No ( )
18. Do you have competencies in managing a woman with postpartum haemorrhage?
    a) Yes ( )
    b) No ( )
19. Is positive attitude on utilization of postpartum haemorrhage management guideline by health care provider very important?
    a) Yes ( )

b) No ( )

20. The most common cause of postpartum haemorrhage in your setting is uterine atony
    a) Yes ( )
    b) No ( )
21. Incentives or promotion to health workers can increase the moral of workers and results to provision of good quality health care
    a) Yes ( )
    b) No ( )
22. Do you get time to pass through the postpartum haemorrhage management guidelines for effective implementation?
    a) Yes ( )
    b) No ( )
23. Health care provider should provide uterotonic drugs immediately after delivery of the baby
    a) Yes ( )
    b) No ( )
24. It is a good practice to implement postpartum haemorrhage management guideline in your working area?
    a) Yes ( )
    b) No ( )
25. Educating women on danger signs during delivery and after delivery is very important because it can reduce chances of developing postpartum haemorrhage during delivery?
    a) Yes ( )
    b) No ( )
26. Women with low social economic status are at higher risk of developing postpartum haemorrhage?
    a) Yes ( )
    b) No ( )
27. Have you ever experienced a woman who developed postpartum haemorrhage?
    a) Yes ( )
    b) No ( )

28. The effective utilization of postpartum haemorrhage management guideline can decrease number of maternal deaths?
    a) Yes ( )
    b) No ( )
29. The grand multipara women are more likely to develop postpartum haemorrhage than primigravida women?
    a) Yes ( )
    b) No ( )

Thank you for your time and for your participation.

Appendix II: Dodoso kwa lugha ya kiswahili

Kichwa cha utafiti: Kuhusu vitu vinavyopelekea utekelezaji wa miongozo kwa watoa huduma wakati mama anapotokwa na damu nyingi mara baada ya kujifungua

Walengwa: Wauguzi, wakunga na madaktari wote wanaotambulika na baraza na wamesajiliwa wanaotoa humuda wodi ya uzazi

MAELEKEZO

1. Hii karatasi ina maswali yaliyotengwa katika sehemu kuu tatu (3)
2. Tafadhali jibu maswali yote kwa kila sehemu A, B na C kwa mawazo yako mwenyewe bila kumshirikisha mtu yeyote kwenye kutoa majibu
3. Weka alama ya vema (√) kwenye kiboski kilichopo mbele ya jibu.
4. Usiandika majina yako kwenye hizi karatasi
5. Tafadhali jaza sehemu zilizo wazi kwa majibu sahihi

Nambari ya utambulisho …… ……/……/2021

MASWALI

Sehemu ya kwanza: Maswali kuhusu taarifa zako binafsi

1. Wewe ni jinsia gani?
    a) Wakike ( )
    b) Wakiume ( )
2. Hali yako ya ndoa?
    a) Sijaolewa ( )
    b) Nimeolewa ( )
3. Wewe unaabudu thehebu gani?
    a) Mkristu ( )
    b) Msilamu ( )
4. Una miaka mingapi?
    a) Chini ya miaka 25 ( )
    b) Miaka 26 hadi miaka 35 ( )
    c) Miaka 36 hadi 45 ( )
    d) Zaidi ya miaka 46 ( )
5. Taja kiwango chako cha elimu
    a) Elimu ya msingi ( )
    b) Elimu ya sekondari ( )
    c) Elimu ya chuo cha kati ( )
    d) Elimu ya chuo kikuu ( )
6. Unauzoefu wa kazi jengo la uzazi kwa miaka mingapi?
    a) Chini ya miaka 5 ( )
    b) Miaka 5 hadi miaka 9 ( )
    c) Miaka 10 hadi miaka 14 ( )
    d) Zaidi ya miaka 15 ( )
7. Una miaka mingapi kazini?
    a) Mwaka 1 hadi miaka 5 ( )
    b) Miaka 6 hadi miaka 10 ( )
    c) Miaka 11 hadi miaka 15 ( )
    d) Zaidi ya miaka 15 ( )

Sehemu ya pili: Eneo ambako huduma zinatolewa (hospitalini au kituo cha afya)

1. Kwenye kituo chenu cha kutolea huduma mnayo miongozo ya kuwasaidia wakati mama anapotokwa na damu nyingi mara baada ya kujifungua?

    a) Ndiyo ( )
    b) Hapana ( )

2. Kwa watoa huduma wote wodi za wazazi wanao uwezo wa kupata miongozo ya kumsaidia mama anayetokwa na damu nyingi mara baada ya kujifungua kwa wakati?

    a) Ndiyo ( )
    b) Hapana ( )

3. Mnaweza mkatumia vizuri miongozo ya kumsaidia mama anayetokwa na damu nyingi mara baada ya kujifungua kama utawala wa kituo uko vizuri

    a) Ndiyo ( )
    b) Hapana ( )

4. Je kwenye kituo chako kuna dawa za kuongeza uchungu pamoja na miongozo kwa ajili ya watoa huduma wakati wote?

    a) Ndiyo ( )
    b) Hapana ( )

5. Je kwenye kituo chako cha kutolea huduma kunakuwa na siku za ukaguzi pamoja na vipindi vya kujikumbusha na kuwekana sawa kama kuna taarifa mpya yautoaji huduma?

    a) Ndiyo ( )
    b) Hapana ( )

6. Je mnatoa huduma bure kwa mama mjamzito anayekuja kupata huduma kwenye kituo chenu ikiwa ni pamoja na kujifungua?

    a) Ndiyo ( )
    b) Hapana ( )

7. Kwenye kituo chenu cha kutolea huduma kuna mfumo mzuri wa kumpeleka mama kituo kingine anapokuwa amepatwa na tatizo la kutokwa damu nyingi pindi anapokuwa amejifungua?

a) Ndiyo ( )
b) Hapana ( )

8. Inapo lazima kumhamisha mama anayetokwa na damu nyingi mara anapojifungua kwenda kwenye kituo kikubwa zaidi inachukua zaidi ya dakika 30?

a) Ndiyo ( )
b) Hapana ( )

9. Kuna kabati lenye vifaa pamoja na dawa za dharura kwenye kituo chako kama ikitokea dharura?

a) Ndiyo ( )
b) Hapana ( )

10. Wauguzi na wakunga wanapata vifaa tiba pamoja na dawa kama dawa za uchungu haraka pale wanapozihitaji?

a) Ndiyo ( )
b) Hapana ( )

11. Je, unaruhusiwa kuwasiliana na mtumishi mwenzako pale inapotokea dharura kwa mama kutokwa na damu nyingi pindi tu ajifunguapo?

a) Ndiyo ( )
b) Hapana ( )

12. Kuna tofauti yoyote ile kwenye utoaji huduma kwa mama anayetokwa na damu nyingi baada ya kijifungua kwenye kituo vya afya, hospitali za wilaya na hospitali za mikoa?

a) Ndiyo ( )
b) Hapana ( )

13. Jamii ina imani yoyote ile pale mama anapokufa kutokana na kutokwa damu nyingi sana pale anapokuwa amejifungua katika kituo cha kutolea huduma?

a) Ndiyo ( )
b) Hapana ( )

14. Kwenye kituo chako chakutolea huduma kulishatokea mama akafa kwa kupoteza damu nyingi mara alipojifungua ndani ya kipindi cha mwaka moja?

    a) Ndiyo ( )
    b) Hapana ( )

Sehemu ya tatu: wahudumu wanaotoa huduma jengo la uzazi

15. Ulishawahi kujiendeleza au kupelekwa kwenye semina au shule katika kituo chako cha kutolea huduma kuhusiana na kutokwa damu nyingi kwa mama aliyejifungua?

    a) Ndiyo ( )
    b) Hapana ( )

16. Kujiendeleaza na kupelekwa semina kunaongeza tija kwa watoa huduma kuhusu namna ya kumhudumia mama anayetokwa na damu nyingi mara anapokuwa amejifungua

    a) Ndiyo ( )
    b) Hapana ( )

17. Unajua namna ya kumtambua mama atakayepatwa na tatizo la kutokwa damu nyingi mara baada ya kujifungua?

    a) Ndiyo ( )
    b) Hapana ( )

18. Ulishawahi kumhudumia mama anayetokwa damu nyingi mara anapokuwa amejifungua?

    a) Ndiyo ( )
    b) Hapana ( )

19. Mtoa huduma yoyote yule anapaswa kuwa na kauli nzuri kwa wateja wake pale anapotumia miongozo ya kutolea huduma kwa mama aliyetokwa damu nyingi

    a) Ndiyo ( )
    b) Hapana ( )

20. Kitu cha kwanza kabisa kinachosababisha mama kutokwa na damu nyingi mara anapokuwa amejifungua ni uterasi atoni

    a) Ndiyo ( )
    b) Hapana ( )

21. Kutambulika kazini kwa kupandishwa cheo kunamfanya mtumishi kufanya kazi kwa ueledi mkubwa na kutoa huduma iliyo bora kwa wateja wake

    a) Ndiyo ( )
    b) Hapana ( )

22. Je unapata muda wa kutosha kupitia miongozo ya kutoa huduma kwa mama analiyejifungua na kutokwa na damu nyingi kwa ajili yakuleta utekelezaji ulio bora kazini?

    a) Ndiyo ( )
    b) Hapana ( )

23. Wahuduma wodi za wazazi wanapaswa kutoa dawa ya kupunguza damu izitoke nyingi mara tu mtoto azaliwapo.

    a) Ndiyo ( )
    b) Hapana ( )

24. Ni tabia nzuri kwa mhudumu wa afya kutekeleza kwa vitendo utumiaji miongozo kwa ajili ya kuzuia mama aliyejifungua na kutokwa na damu nyingi eneo lako la kazi

    a) Ndiyo ( )
    b) Hapana ( )

25. Kuelimisha akina mama kuhusu dalili hatari kabla na baada ya kujifungua ni vizuri kwani inapunguza uwezekano mkubwa kwao kutokwa na damu nyingi mara wajifunguapo

    a) Ndiyo ( )
    b) Hapana ( )

26. Akina mama wenye kipato cha chini kiuchumi wako hatarini kutokwa na damu nyingi sana wakati na baada ya kujifungua

    a) Ndiyo ( )
    b) Hapana ( )

27. Ulishaona mwanamke aliyejifungua akatokwa na damu nyingi?

    a) Ndiyo ( )
    b) Hapana ( )

28. Matumizi sahihi kuhusiana na utekelezaji wa miongozo yote kwa ajili ya kuzuia mama kutokwa na damu nyingi pindi anapokuwa amejifungua kunapunguza kiasi kikubwa kwa vifo kwa akina mama

    a) Ndiyo ( )
    b) Hapana ( )

29. Akina mama waliozaa zaidi ya watoto watatu na kuendelea wako hatarini zaidi kutokwa na damu nyingi wakati wa kujifungua na baada ya kujifungua kuliko akina mama ambao wanazaa kwa mara ya kwanza

    a) Ndiyo ( )
    b) Hapana ( )

Asante sana kwa ushiriki wako katika utafiti huu.

Appendix III: Informed consent form (English version)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES (MUHAS)

DIRECTORATE OF RESEARCH AND PUBLICATIONS

INFORMED CONSENT FORM

ID NO: HD/MUH/T.483/2019

Consent to participate in a study: Factors influencing implementation of postpartum haemorrhage management guidelines among health care providers in Kilimanjaro region

Greetings Madam/sir

My name is Dativa Urio, master student in the Department of Community Health Nursing. I am conducting research with the title factors influencing implementation of postpartum haemorrhage management guidelines among health care providers in Kilimanjaro Region

Purpose of the study: This study aims to determine factors influencing implementation of postpartum haemorrhage management guidelines among health care provider in Kilimanjaro Region

Who are involved: All registered nurses-midwives and physicians working in health care facilities based on obstetric care i.e. labour and postnatal wards and are willing to participate in the study.

Confidentiality: All the information which will be collected from the study participants will not be revealed to anybody without their permission except the interviewers themselves.

The right to anonymity: No name of participants will be written on the questionnaire instead codes in term of numbers will be used as identity.

Risks: There are no risks associated with being involved in this study as there is no manipulation of any variables under study

Rights to withdraw: Your participation is voluntary and you have the right to withdraw from the study at any time. Your decision will not affect in anyway your right to care.

Benefits: Staff involved in this study will be given priority in they career development

Compensation: No compensation will be given to participants

Costs: No payment will be requested or given to you as to participate in this study is free of charge

In case of any problem about your rights as a participant in this study, please communicate immediately

Person to contact:

Dativa Urio, 0762419614/0739419614, Candidate on Master of Science of Midwifery and Women's Health in MUHAS

Contact:

Dr. Beatrice Mwilike, Phone no. 0712620924, Lecturer and main supervisor of this study at MUHAS

Email address: beatricemwilike@yahoo.com

Contact:

Director of Research and Publication

Telefax/direct line: +255-22-2152489

Email address: drp@muhas.ac.tz

I ---------- have read and understood the contents of this form, my questions have been answered, and I consent to participate in this study.

Signature of the participant---------- Date signed------/-------/-

Signature of researcher---------- Date signed------/-------/-

Appendix IV. Fomu ya ridhaa (kwa lugha ya kiswahili)

CHUO KIKUU CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI

KURUGENZI YA TAFITI NA UCHAPISHAJI

FOMU YA RIDHAA

Nambari ya kitambulisho: HD/MUH/T.483/2019

Ndugu, habari za wakati huu.

Utambulisho: Jina langu ni Dativa Urio mwanafunzi wa shahada ya uzamili ya ukunga katika Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili. Ninafanya utafiti kuhusu vitu gani vinavyosababisha/ kuwezesha utumiaji wa miongozo kwa ajili ya kuzuia/ kutibu mama anayetokwa damu nyingi mara anapokuwa amejifungua kwa kufuata miongozo ya afya iliyopo

Lengo la utafiti: Lengo la utafiti huu ni kudhibiti au kuniwezesha kujua ni vitu gani vinavyobabisha wamama kuendelea kufa kwa kutokwa damu nyingi mara wanapokuwa wamejifungua wakati miongozo ya afya ya kutolea huduma ipo

Utafiti huu unamhusu nani: Utafiti huu unawahusu wauguzi, wakunga and madaktari wanaotambulika na kusajiliwa na baraza na wamejitolea kwa hiari kushiriki na pia wanafanya kazi wodi za uzazi na wodi za wamama baadaya ya kuzaa

Usiri wa taarifa: Taarifa tutakazochukua zitatunzwa kwa usiri. Taarifa hizo zitatumika tu kwa ajili ya utafiti huu.

Haki ya kutotajwa jina: Hakuna jina la mshiriki litaandikwa kwenye kartasi au kutajwa popote kwenye utafiti huu badala yake nambari za utambulisho zitatumika.

Athari: Utafiti huu hauna athari yoyote kwa mshiriki.

Kushiriki kwa hiari na haki ya kujitoa: Kushiriki katika utafiti huu ni kwa hiari na unaweza kujitoa wakati wowote. Vyovyote vile uamuzi wako hautaathiri mwenendo wa huduma yako.

Faida: Mshiriki atapewa kipao mbele kupata huduma za kliniki

Fidia: Hakuna fidia yoyote atapewa mshiriki

Gharama ya kushiriki katika utafiti huu: Mshiriki hataingia gharama yoyote ili kushiriki katika utafiti huu.

Ukiwa na maswali au shida wakati wowote kuhusiana na utafiti huu wasiliana na wafuatao:

Dativa Urio 0762419614/0739419614, Mtafiti Mkuu, au

Dokta Beatrice Mwilike mkufunzi katika chuo kikuu cha Afya na sayansi shirikishi Muhimbili na Msimamizi wa utafiti huu.

Simu ya mkononi: 0712620924

Barua pepe: beatricemwilike@yahoo.com

au

Mkurugenzi wa utafiti na uchapishaji

Namba ya mawasiliano: +255-22-2152489

Barua pepe: drp@muhas.ac.tz

Mimi ---------- nimesoma na kuelewa yaloyomo katika fomu hii, maswali yangu yamejibiwa vizuri, Nakubali kushiriki katika utafiti huu.

Sahihi ya Mshiriki ---------- Tarehe ya kusaini ------/-------/--

Sahihi ya Mtafiti ---------- Tarehe ya kusaini ------/-------/--

Appendix V. Permission letter to conduct research in Rombo District Council

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA WILAYA YA ROMBO
(Barua zote zipitie kwa Mkurugenzi Mtendaji wa Halmashauri)

Fax No 027-2757585
Tel. No 2757175

HEALTH DEPARTMENT
P.O BOX 223
Mkuu –Rombo

Ref.No.MDB.31/2/ VOL.B/77

12/05/2021

DATIVA F. URIO
P.O BOX 394,
MKUU-ROMBO

RE: PERMISSION TO CONDUCT YOUR RESEARCH IN ROMBO DISTRICT COUNCIL.

The heading above is concerned and refer to your letter dated on 10th of May.2021 with no reference number requesting permission to conduct a research study in our health facilities.

Permission has been granted to conduct a research study on clinical trial on***"FACTORS INFLUENCING IMPLEMENTATION OF POSTPARTUM HAEMORRHAGE MANAGEMENT GUIDELINES AMONG HEALTH CARE PROVIDERS IN KILIMANJARO REGION"***. from 12th May 2021, to 31st May 2021.

You will be required to adhere with research ethics and share the final report with the District Medical Officer's office.

Sincerely,

Dr. Boaz Mwaikugile
District Medical Officer
ROMBO.

DISTRICT MEDICAL OFFICER
ROMBO

Copy to:

Medical Officer Incharges,
Hunuma Hospital, Ngoyoni Hospital. Keni, Tarakea, Karume, Holili,Kirwa Mashati and Moyosafi.

Rombo.

Appendix VI. Approval for ethical clearance for a study

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

OFFICE OF THE DIRECTOR OF RESEARCH AND PUBLICATIONS

P.O. Box 65001
DAR ES SALAAM
TANZANIA
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Tel G/Line: +255-22-2150302/6
Ext: 1016
Direct Line: +255-22-2152489
Telefax: +255-22-2152489
E-mail: drp@muhas.ac.tz

Ref. No.DA.282/298/01.C/ Date: 07/05/2021

MUHAS-REC-05-2021-597
Dativa Urio
MSc. Midwifery and Women's Health School of Nursing
MUHAS

RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: FACTORS INFLUENCING IMPLEMENTATION OF POSTPARTUM HAEMORRHAGE MANAGEMENT GUIDELINES AMONG HEALTH CARE PROVIDERS IN KILIMANJARO REGION

Reference is made to the above heading.

I am pleased to inform you that the Chairman has on behalf of the University Senate, approved ethical clearance of the above-mentioned study, on recommendations of the Senate Research and Publications Committee meeting accordance with MUHAS research policy and Tanzania regulations governing human and animal subjects research.

APPROVAL DATE: 07/05/2021
EXPIRATION DATE OF APPROVAL: 06/05/2022

STUDY DESCRIPTION:
Purpose:
The purpose of this observational cross sectional study is to determine factors influencing implementation of postpartum haemorrhage management guidelines among health care providers in Kilimanjaro Region

The approved protocol and procedures for this study is attached and stamped with this letter, and can be found in the link provided:
https://irb.muhas.ac.tz/storage/Certificates/Certificate%20-%20635.pdf and in the MUHAS archives.

The PI is required to:

1. Submit bi-annual progress reports and final report upon completion of the study.
2. Report to the IRB any unanticipated problem involving risks to subjects or others including adverse events where applicable.
3. Apply for renewal of approval of ethical clearance one (1) month prior its expiration if the study is not completed at the end of this ethical approval. You may not continue with any research activity beyond the expiration date without the approval of the IRB. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.
4. Obtain IRB amendment (s) approval for any changes to any aspect of this study before they can be implemented.
5. Data security is ultimately the responsibility of the investigator.
6. Apply for and obtain data transfer agreement (DTA) from NIMR if data will be transferred to a foreign country.
7. Apply for and obtain data transfer agreement (DTA) from NIMR if data will be transferred to a foreign country.
8. Apply for and obtain material transfer agreement (MTA) from NIMR, if research materials (samples) will be shipped to a foreign country,
9. Any researcher, who contravenes or fail to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine as per NIMR Act No. 23 of 1979, PART III section 10 (2)
10. The PI is required to ensure that the findings of the study are disseminated to relevant stake holders.
11. PI is required to be versed with necessary laws and regulatory policies that govern research in Tanzania. Some guidance is available on our website https://drp.muhas.ac.tz/.

Dr. Bruno Sunguya
Chairman, MUHAS Research and Ethics Committee

UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

OFFICE OF THE DIRECTOR – POSTGRADUATE STUDIES

Ref. No. HD/MUH/T.483/2019

7th May, 2021

DISTRICT MEDICAL OFFICER,
P.O. BOX 223,
MKUU-ROMBO

Re: INTRODUCTION LETTER

The bearer of this letter is Dativa Urio (HD/MUH/T.483/2019), a student at Muhimbili University of Health and Allied Sciences (MUHAS) pursuing MSc. Midwifery and Women's Health.

As part of her studies she intends to do a study titled: **"Factors Influencing Implementation Of Postpartum Hemorrhage Management Guidelines Among Healthcare Providers In Kilimanjaro Region".**

The research has been approved by the Chairman of University Senate.

Kindly provide her with the necessary assistance to facilitate the conduct of her research.

We thank you for your cooperation.

Ms. Victoria Mwanilwa
For: DIRECTOR, POSTGRADUATE STUDIES

cc: Dean, School Nursing, **MUHAS**
cc: Dativa Urio

9 United Nations Road; Upanga West; P.O. Box 65001, Dar Es Salaam: Tel. G/Line: +255-22-2150302/6; Ext. 1015; Direct Line:+255-22-2151378;Telefax:+255-22-2150465;E-mail:dpgs@muhas.ac.tz;Web:https://www.muhas.ac.tz