PROCESS EVALUATION OF IMPLEMENTATION OF INTEGRATED MALARIA COMMUNITY CASE MANAGEMENT IN MULEBA DISTRICT IN KAGERA REGION

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MSc (Project Management Monitoring and Evaluation in Health)

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PROCESS EVALUATION OF IMPLEMENTATION OF INTEGRATED MALARIA COMMUNITY CASE MANAGEMENT IN MULEBA DISTRICT IN KAGERA REGION

By

Joseph Joachim Joseph

A Dissertation Report Submitted in (partial) Fulfillment of the Requirements for the Degree of Master of Project Management Monitoring and Evaluation in Health (PMMEH) of the

Muhimbili University of Health and Allied Sciences

October, 2024

CERTIFICATION

The undersigned certifies that they have read and hereby recommend for acceptance of dissertation titled "**PROCESS EVALUATION OF IMPLEMENTATION OF INTEGRATED MALARIA COMMUNITY CASE MANAGEMENT IN MULEBA DISTRICT IN KAGERA REGION"** in partial fulfillment of the requirement for the degree of Project Management Monitoring and Evaluation in Health of the Muhimbili University of Health and Allied Sciences.

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Date_____

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Ms. Winfrida Akyoo

(Co-supervisor)

Date_____

DECLARATION AND COPYRIGHT

I, Joseph Joachim Joseph, declare that this dissertation is my original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

Signature_____ **Date** _____

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I extend special thanks to the Regional Administrative Secretary (RAS) of Kagera Region and the District Executive Director (DED) of Muleba District Council for granting permission to conduct this study. I am sincerely grateful to the participants for their consent and cooperation during data collection.

Furthermore, I extend my heartfelt gratitude to my beloved wife, Queen O. Laizer, my children Jason and Jolene, my twin sister Josephina J. Joseph, and my brothers Godfrey and Stephen for their unwavering support and encouragement throughout my study journey, special thanks to my mentor Kanuth Dimoso, for his continual encouragement and commitment to ensure that I persevere. Finally, I extend my special appreciation to all individuals who contributed to this work in various capacities.

DEDICATION

I dedicate this work to my parents, Mr. Joachim Joseph Kimaro (R.I.P) and Mrs. Augustina Joachim Kimaro, for their unconditional love, care, and prayers, these are the foundation that made me who I am today.

ABSTRACT

Background: Malaria is a major public health challenge in Tanzania, particularly affecting pregnant women and children under five. In June 2022, Tanzania launched Integrated Community Case Management (iCCM) in hard-to-reach areas to enable community-based testing and treatment of uncomplicated malaria, with referrals for severe cases. Although evidence is available on the impact and challenges of iCCM intervention, little remains to be known about the effectiveness of implementation. This study evaluates the effectiveness of iCCM implementation, despite existing evidence on its impact and challenges

Objective:

This study aimed to evaluate the implementation of integrated Malaria Community Case Management (iCCM) in the villages that implement iCCM strategies in Muleba District Council

Methodology: This study employed a case study design with an explanatory qualitative approach. A total of twenty-five participants were purposively selected, including five iCCM providers, five health facility in-charges, five Village Executive Officer (VEO), and ten community members from the villages that implement iCCM in Muleba District Council. The sample size was determined by theoretical saturation. Data was transcribed verbatim, and a content analysis approach was used for data analysis.

Findings: Availability of essential commodities and tools for iCCM was ensured through collaborative efforts between linked health facilities and iCCM providers, despite occasional stockouts. Capacity building through training and supervision was crucial for enhancing service delivery. Community engagement, facilitated by local leaders and Community Health Workers, promoted awareness and utilization of iCCM services, despite existence of challenges such as geographical barriers and financial constraints.

Conclusion: The study found that iCCM implementation faces challenges in resource availability, logistics, equipment functionality, and transportation. Despite effective training and community engagement, stockouts and financial constraints disrupt service delivery. Improved communication, collaboration with community leaders, significantly enhanced iCCM services.

Recommendation: NMCP and malaria implementing partners, should ensure continuous availability of essential commodities, enhance capacity-building efforts, promote community engagement, optimize logistical systems, improve transportation support, and address systemic challenges through collaboration between linked health facilities, local leaders, and communities.

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ABBREVIATIONS

Abbreviation	Full Name
ACT	Artemisinin-based Combination Therapies
ALU	Artemether–Lumefantrine
CHV	Community Health Volunteers
CHW	Community Health Worker
CORP	Community Owned Resource Personnel
iCCM	Integrated Community Case Management
IDI	In-depth Interview
mRDT	Malaria Rapid Diagnostic Test
NMCP	National Malaria Control Programme
SAC	School Age Children
SBC	Social Behavior Communication
WHO	World Health Organization

DEFINITIONS

Definitions of Key Terms

Integrated Community Case Management (iCCM): It is a strategy aimed at training, supporting, and equipping community health providers (CHWs/CORPs/CHVs) to deliver diagnostic, treatment, and referral services for three prevalent, treatable, and curable illnesses: malaria, pneumonia, and diarrhea. This initiative is particularly designed to reach families facing challenges in accessing case management at health facilities (1).

iCCM Provider: These are healthcare workers specifically trained to deliver health services at the community level, using the integrated community case management (iCCM) approach. There are three main types: Community Health Workers (CHWs) with formal iCCM training, Community Owned Resource Personnel (CORPs) with specific iCCM training, and volunteer Community Health Volunteers (CHVs) with basic iCCM training who focus on awareness, education, and support. While all can provide iCCM services, their roles differ in terms of employment status, training level, and potentially the scope of practice. (2).

Linked Health Facilities: These are health facilities that serve the villages that implement the iCCM villages i.e., they provide medical supplies (mRDTs and drugs),and supervise the iCCM providers (3).

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Malaria is a serious illness and a significant public health concern that leads to fatalities of both children and adults around the world (1). Over 600,000 people die from malaria each year, with the majority being children (1). Sadly, globally every minute, a child under five dies from malaria, and many of these deaths can be prevented and treated. In 2021, there were 247 million cases of malaria globally, leading to 619,000 deaths in total (1). The World Health Organization (WHO) African Region accounted for approximately 95% of worldwide cases, with an estimated 234 million cases in 2021. Despite a global decrease in mortality rates, a considerable percentage of deaths – more than 96% of 619,000 malaria deaths in 2021 - still occur in the sub-Saharan African region (1) The healthcare system in sub-Saharan Africa faces challenges due to limited availability and accessibility of medical services and products, inadequate healthcare workforce, a scarcity of functioning health facilities, and overall deficiencies in delivering quality healthcare (2). Additionally, factors such as poverty and the region's climatic conditions, which are characterized by high temperatures and abundant rainfall, contribute significantly to the high prevalence of malaria in Africa (3).

In 2021, Tanzania was accounted for 4% of all malaria deaths worldwide (1). national malaria control programme (NMCP) reported the number of reported malaria cases in healthcare facilities in Tanzania has decreased by 23% since 2015, dropping from 7.7 million to 5.9 million in 2020 (4). The prevalence of the malaria parasite in Tanzanian children under the age of five dropped from 14.8% in 2015 to 7.5% in 2017 (5) but slightly increased to 8.1% in 2022 (6).

Timely and accurate diagnosis followed by appropriate treatment is crucial to prevent morbidity and mortality (7). Early diagnosis and treatment contribute to reduced complications and deaths (8). Low care-seeking can lead to progression to severe disease and death due to lack of or delayed treatment (9). Therefore, WHO recommend that if a

patient has experienced fever (high body temperature) within the last 24 hours in areas with a high risk of malaria or 72 hours in areas with a low risk, their caregivers should immediately reach out to the designated community-based provider to undergo a timely malaria diagnostic test and receive effective antimalarial medication (10).

Integrated Community Case Management (iCCM) using Community Health Workers (CHWs) or Community Owned resource personnel (CORPS) is an approach to improve access to timely and effective malaria case management in malaria endemic countries(11). iCCM, involve training iCCM Providers to diagnose and treat common childhood illnesses such as malaria, pneumonia, and diarrhea in hard-to-reach areas. These iCCM providers receive training, essential medicines, and job aids, and they are supported through supervision and mentoring from the linked health facilities, district malaria focal person and staff from national level. Effective implementation of iCCM is ensured through community engagement, monitoring, and integration with existing health systems. The capacity of iCCM providers to diagnose cases of malaria under the iCCM project is comparable to that of experienced and qualified laboratory personnel (8,12). In malaria interventions, community health workers and other related healthcare professionals played crucial roles in preventing disease, managing cases, and promoting health.

The iCCM strategy can save lives and measurably decrease child mortality in settings where access to health facility services is low, the results of the study that was done in Democratic Republic of Congo, Malawi, Mozambique, Niger, and Nigeria to evaluate the iCCM impact as a strategy to save lives of children under five, shows that Under five mortality declined, with an average decline of 10 percent (13). Challenges of implementing community case management for malaria includes medication and RDT shortages or stock-outs, transportation difficulties with inability to complete referrals made by CHWs, poor quality of care, and lack of CHW incentives, training and supervision (12).

Integrated Malaria Community Case Management (iCCM) is a community-based strategy aimed at reducing malaria-related morbidity and mortality, particularly in hard-to-reach rural areas. It focuses on training community-level providers to diagnose and treat uncomplicated malaria, with referrals for severe cases, ensuring early detection and prompt treatment. iCCM providers are equipped with resources like bicycles, malaria supplies, and training to deliver these services effectively within their villages (14).

The Tanzania national Malaria strategic plan 2021-2025 set a vision of malaria elimination by 2030, and target of reducing the country malaria transmission average from 7% in 2017 to less than 3.5% in 2025.(4). To achieve this goal Tanzania initiated Integrated Community Case Management (iCCM) in June 2022 in hard-to-reach communities with the highest burden, enabling community-based testing and treatment of uncomplicated malaria and timely referral of severe malaria to neighboring health facilities. The iCCM is being implemented in ten district councils with high malaria burden across five regions namely Kagera, Geita, Kigoma, Kagera and Ruvuma. The NMCP have developed the guidelines to support the implementation of iCCM (15,16)
This study evaluated the implementation of implementation of iCCM in Muleba District council in Kagera region.

1.2 Problem Statement

Malaria remains a significant public health problem in Tanzania, according to Tanzania Demographic and Health Survey/ Malaria Indicator Survey (TDHS-MIS)-2022, Percentage of children aged 6-59 months who tested positive for malaria by RDT is 8% (6), Malaria prevalence among School Age Children (SAC) in 2021 survey is 11.8% (17). (4)
Malaria morbidity and mortality remain high due to limited access to healthcare facilities particularly in hard-to-reach areas, delays to seek treatment, inadequate healthcare infrastructure, shortage of formally trained health professionals which can make it difficult to provide quality care to those who need it. To address this problem the government of Tanzania initiated the integrated community malaria case management

(iCCM) to provide effective and timely diagnosis and treatment services. The National Malaria Control Program in collaboration with partners have implemented several interventions and approaches to reduce the burden of malaria.

The NMCP in 2018 stratified mainland Tanzania into four epidemiological strata according to malaria endemicity: “very low”, “low”, “moderate”, and “high” to tailor sub-national malaria intervention based on epidemiological stratification (18). In 2022 NMCP started implemented the integrated community case management in the area with high malaria endemicity(4).

Existing evidence reported on the impact of iCCM strategy indicating that it can save lives and measurably decrease child mortality in settings where access to health facility services is low (16), and challenges of iCCM intervention including low government funding and weak coordination and supervision at different levels(19). While the iCCM strategy has shown potential to reduce child mortality, there is limited knowledge about the availability of resources, capacity building among iCCM providers, and community engagement in its implementation. This study aims to evaluate these aspects to inform future improvements..

1.3 Conceptual framework

The iCCM implementation is closely tied to a comprehensive framework encompassing capacity building, resource availability, and community engagement. Through specific training, mentorship, and supportive supervision, iCCM providers gain the necessary skills and knowledge to deliver iCCM services proficiently. Concurrently, the presence of financial resources, enough iCCM providers, along with accessible essential commodities like Antimalarial drugs (ACT) and diagnostic tools (mRDT), further fortify the groundwork for community healthcare. Additionally, active participation and collaboration with the community elevate the utilization of iCCM services, ultimately leading to an elevated utilization of iCCM services.

Capacity Building:

- **Training:** Formal instruction for iCCM providers on diagnosing and treating malaria.
- **Mentorship:** Ongoing support from experienced health professionals.
- **Supportive Supervision:** Regular oversight to ensure proper service delivery.

Availability of Resources:

- **Financial Resources:** Funds to support iCCM activities.
- **iCCM Providers:** Availability of trained community health workers.
- **Commodities (ACT, mRDT):** Essential supplies like malaria treatment and diagnostic tools.

Community Engagement:

- **How the Community is Engaged:** Involvement of community members in malaria awareness, prevention, and support of iCCM services.

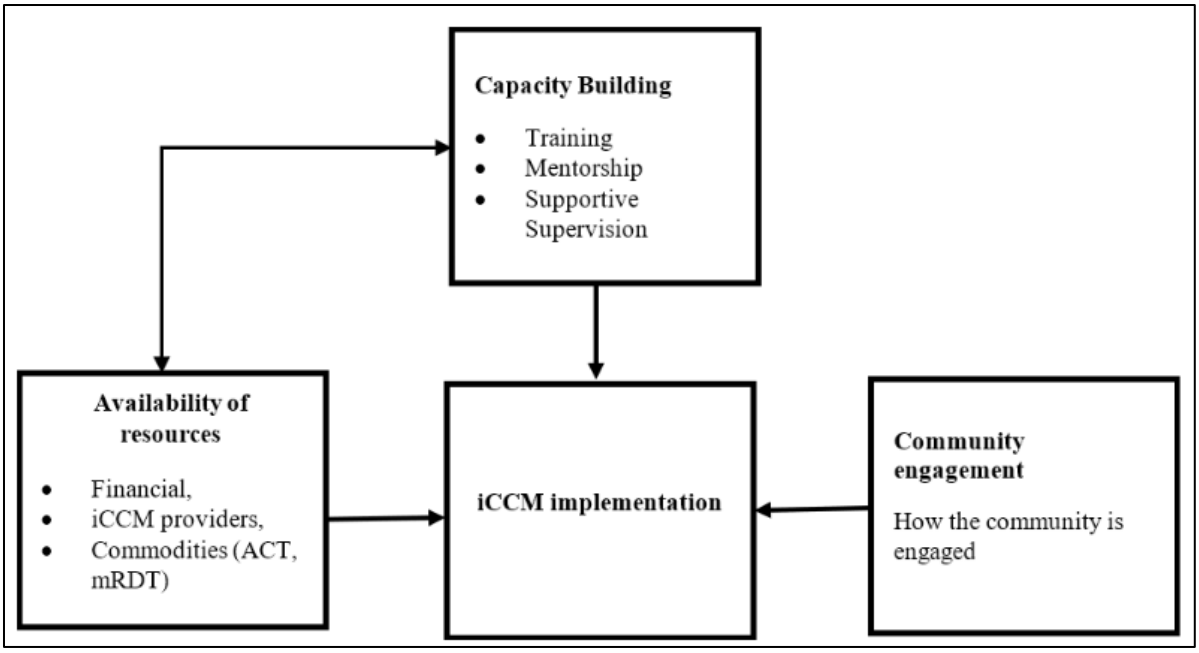


Figure 1: The iCCM implementation framework

1.4 Study rationale

The study aimed to provide valuable insights into the effectiveness of iCCM. While numerous studies have highlighted the impact and benefits of implementing iCCM, only a limited number of studies have specifically focused on evaluating its implementation. Given that iCCM is currently being implemented in Tanzania, it becomes crucial to evaluate its effectiveness to determine if iCCM is achieving its desired objectives and improving health outcomes for the targeted population.

The results obtained from this study will produce evidence that can facilitate the expansion of iCCM in other settings. Positive outcomes from the study can motivate policymakers and funders to expand the scope of iCCM interventions, enabling them to reach more communities and increase utilization of iCCM services by community members.

Moreover, this study identified the gaps in service delivery, training needs, resources needed and opportunities for strengthening the iCCM program. Through this evaluation,

the study aims to provide valuable insights into the successes, facilitating factors, and barriers encountered during the implementation of iCCM and potential areas for improving the iCCM program. Such insights will enable program improvement, promote accountability, and facilitate continuous quality improvement in community-based healthcare delivery.

The study serves as a valuable source of literature for other researchers concentrating on malaria interventions.

1.5 Research questions

1.5.1 Broad research question

How is the iCCM implemented in Muleba District Council?

1.5.2 Specific research questions

1. What resources are available for iCCM implementation in Muleba District Council?
2. How is the capacity building provided to iCCM providers?
3. How are community members engaged in the implementation of iCCM?

1.6 Objectives

1.6.1 Broad objective

To evaluate the process of implementation of iCCM in Muleba District Council on resource availability, capacity building, and community engagement

1.6.2 Specific objectives

1. To assess the resources (financial, human, commodities) available for iCCM implementation in Muleba District Council.
2. To find out how the capacity building is provided to iCCM providers.
3. To explore how the community is engaged in the implementation of iCCM programs.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Overview

This chapter provides a comprehensive review of the literature surrounding the challenges, capacity building, and community engagement related to the implementation of iCCM services. It examines various studies to identify gaps in existing knowledge and situates the current study in the context of previous research.

2.2 Availability of resources

The challenges for iCCM encompass a shortage of essential supplies (such as RDTs and gloves), inadequate availability of drugs, insufficient remuneration for Community Health Workers (CHWs), a lack of basic working equipment, an inadequate stipend to meet basic needs, and insufficient community sensitization by health workers.

Half of the district health managers in Zambia's Kapiri Mposhi district initially trained for the iCCM program were reshuffled and redeployed to different districts by the Ministry of Health, according to, Johnson Vonje Riri et al. 2022 (20). The remaining managers, burdened with additional duties, provided limited support for ICCM implementation (21). The staff turnover and increased responsibilities negatively impacted the program, hindering consistent leadership and focus on iCCM within the district.

The study conducted in Kenya indicates that sustaining iCCM requires collaborative efforts from stakeholders to enhance the program (11). The successful implementation of the program requires readily available commodities, and it is essential to boost the morale of the Community Health Workers (CHWs) engaged in iCCM. Stockouts of iCCM commodities emerged as a significant impediment to effective service delivery (22). In the study caried out in Uganda by Phyllis Awor et al.2021 (19), the study's conclusion highlighted that insufficient government funding, ineffective coordination, inadequate supervision, and conflicting policies were the primary challenges impeding the scale-up of iCCM.

In Tanzania, few studies have examined the challenges related to the scarcity of resources, including human, financial, and material resources, necessary for effective role implementation (27). Existing literature has shed light on the significant impact of resource availability on implementing Integrated Community Case Management (iCCM). However, there is still limited understanding of the specific availability of resources for iCCM implementation in the Tanzanian context. This study aims to bridge this gap by providing comprehensive insights into the current state of resources available for iCCM implementation.

2.3 Capacity Building (training, mentorship and supportive supervision) for iCCM providers

The years of experience, education level, health training received, age, and gender of Community Health Volunteers (CHVs) can all impact the quality of malaria diagnosis and treatment they provide (23). Additional factors influencing the quality of malaria diagnosis and treatment include the support and supervision provided by healthcare professionals. Some clinicians hold the perception that Community Health Workers (CHWs) should not be given Artemisinin-based Combination Therapy (ACT) as part of the iCCM, as there is concern about potential misuse. (11). A study in Senegal reveals instances of over-prescription of Artemisinin-based Combination Therapies (ACTs) to patients with a negative Rapid Diagnostic Test (RDT) or those who had not undergone an RDT at all. Additionally, the study highlights low referral rates for patients with absolute indications for referral, including severe symptoms, age under two months, or pregnancy (24).

Involving Community Health Volunteers (CHVs) in Kenya in diagnosing malaria cases under the iCCM strategy produced results comparable to those of qualified and experienced laboratory personnel. CHVs can reliably continue to offer malaria diagnosis using Rapid Diagnostic Tests (RDTs) in the community setting (8). Community Health Workers (CHWs) in Yemen were able to provide iCCM services in a challenging and insecure context. The challenges in service delivery were linked to both a weak health system and the conflict (22).

A study conducted in Malawi concluded that the presence of well-equipped and supported iCCM providers is crucial for the delivery of iCCM services (19). Additionally, a systematic review conducted by Amouzou A. et al. in 2014 (25) reported that six out of eight studies observed a more significant reduction in mortality among children aged 2 to 59 months in program areas compared to comparison areas.

High-quality treatment was delivered at the community level, leading to a reduction in the treatment burden at health facilities (26). Debra Prosnitz et al in 2019 (13) reported that iCCM strategy can save lives and measurably decrease child mortality in settings where access to health facility services is low, in the study conducted on "Evidence of Impact: iCCM as a Strategy to Save Lives of Children Under Five," the findings reveal a notable decline in under-five mortality, averaging 10 percent. An estimated 6,200 lives of children under five were safeguarded through the treatment of malaria, pneumonia, and diarrhea in the Democratic Republic of Congo (DRC), Malawi, Niger, and Nigeria. Particularly noteworthy is that approximately 4,940 lives (75 percent) were specifically saved through the treatment provided by Community Health Workers (CHWs). Research indicates that community-based interventions, including case management, can effectively decrease malaria burden (27).

While a study done in Tanzania discussed how CHWs deliver community case management intervention (21), their knowledge and capacity remain largely unexplored. This research seeks to fill this gap by exploring how capacity building is provided to iCCM providers.

2.4 Community engagement

The research carried out in Zambia indicated that an increment of one malaria service point per 1000 correlated with a 19% decrease in severe malaria admissions for children under five and a 23% reduction in malaria-related deaths among the same age group (28). These findings endorse the ongoing investment in scaling up Integrated Community Case Management (iCCM) in comparable settings, aiming to enhance access to malaria diagnosis and treatment. A study conducted in rural southeast Senegal examined the

routine reports of an iCCM program, revealing a substantial rise in the number of patients accessing Rapid Diagnostic Tests (RDT) and Artemisinin-based Combination Therapy (ACT) (24).

James S. Miller et al, 2021 (29), in the study conducted in 271 households across 8 villages Uganda to access the usage of and satisfaction of iCCM, the results indicate that individuals residing in rural Uganda commonly utilize and express satisfaction with iCCM care for malaria, pneumonia, and diarrhea. In the surveyed households, 92% reported seeking care from Village Health Workers (VHW) for iCCM services. The study found that even though facility-based care was easily accessible, it did not seem to affect people's decision to choose iCCM care or their satisfaction with it in this area (29).

Literature has highlighted the significance of community engagement in iCCM implementation. In a study conducted by Nathan P. Miller et al. (2014), the authors emphasize the critical significance of ensuring community demand for integrated Community Case Management (iCCM) services. They stress that this aspect, despite its importance, might be overlooked (21). However, particularly in Tanzania, there is a notable gap in understanding the perception of the community and the level of engagement in iCCM. This study seeks to fill this gap by developing a comprehensive understanding of how communities perceive and engage in iCCM initiatives.

In summary, the literature emphasizes several critical challenges and factors, such as resource availability, capacity building, and community engagement that affect iCCM implementation. However, there remains a gap in understanding how these factors operate specifically in Tanzania. This study seeks to fill this gap by examining the availability of resources, the effectiveness of capacity-building initiatives, and community engagement in the context of iCCM in Muleba District Council.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study design

This process evaluation employed a case study design that allowed in-depth interviews about how resources, iCCM provider capacity, and community engagement influence iCCM implementation. This approach, as Baxter and Jac (2008) emphasize, enabled a thorough examination of intricate phenomena within their specific context, utilizing diverse sources of data collection, with valuable insights informing theory development, program evaluation, and future interventions (21). Therefore, the iCCM implementation itself was considered the case for this study, with both providers and community leaders actively involved in providing insights and perspectives.

3.2 Study area

The study was conducted in Muleba district council of the Kagera region in Tanzania, which spans an area of 34.44 square kilometers, including 7,925 square kilometers of Lake Victoria water area and encompassing 20 islands, Moreover, it consists of 43 wards, 166 villages, and 46 health facilities (30).Muleba DC is situated along the shores of Lake Victoria, encompassing a diverse landscape that includes both urban and rural areas. Its proximity to the lake influences local livelihoods and public health challenges.

The estimated population of the district is 637,659 people (315,073 male and 322,586 female) according to Tanzania National Census 2022 (31). Muleba district was selected for this study because it is among the 73 district councils with high malaria burden (18,32), with malaria prevalence of 13.7% for School Age Children (SAC) according to 2021 School Malaria and Nutrition Survey (SMNS) Report (17) .Additionally, it is one of the district councils implementing iCCM. data were collected from the villages and health facilities located in Muleba district council.

3.3 Study populations

The study targeted iCCM providers, Village Executive Officers (VEOs), and influential individuals (religious leaders and community leaders) in villages where iCCM is implemented. The inclusion of iCCM providers allowed for direct insights into healthcare delivery, while VEOs contributed essential administrative perspectives. Involving the influential people in society as they represented the community's perceptions and experience regarding the iCCM implementation, enabled the study to obtain a holistic perspective of iCCM implementation.

3.4 Sampling size

A total of 25 participants were interviewed for this study. This included iCCM providers, Village Executive Officers (VEOs), Health facility in-charge and influential individuals as follows:

- Five iCCM providers with at least six months of experience in providing iCCM services were interviewed because they were the ones implementing iCCM.
- Five Village Executive Officers (VEOs), responsible for village oversight, provided insights into policy execution and community engagement
- Five health facilities in charge from the health facility linked to the village providing iCCM services were also interviewed.
- Additionally, ten community members (Community Health Workers) were interviewed,

The sample size was determined in the field after reaching data saturation. Information saturation was attained by including all 15 participants (5 iCCM providers, 5 VEOs, and 5 Health Facility in-charges) from five villages that implement iCCM. Additionally, ten more interviews with community health workers were conducted to ensure saturation, making a total of 25 participants.

3.5 Sampling technique

This study engaged 25 study participants through purposive sampling. This targeted approach selected participants based on their unique knowledge and experiences,

ensuring rich data on iCCM implementation. Within the villages implementing the program, purposive sampling was used to select five iCCM providers with at least six months of experience in providing iCCM services because they were the ones implementing iCCM.

Five Village Executive Officers (VEOs), responsible for village oversight, provided insights into policy execution and community collaboration, along with five health facilities in charge from the health facility linked to the village providing iCCM services.

Additionally, ten community members (CHWs) were chosen through a consultative process to represent the community's perceptions and experiences regarding iCCM implementation. The actual sample size was determined by reaching the saturation point, where data collection from key informants continued until no new information was obtained.

3.6 Data collection method

3.6.1 In depth Interview Guide

The study utilized face-to-face, in-depth interviews (IDIs) to gather data from participants. The IDI guide questions were initially drafted in English and later translated into Swahili to aid the data collection process. These questions delved into various aspects, including the resources available for iCCM implementation, the training provided to iCCM providers, and the community's involvement in iCCM programs. Additionally, probe questions were integrated during data collection.

Participants were scheduled for interviews at convenient times and locations conducive to their full engagement in the study. iCCM providers were interviewed at their workplace, typically the Village Office, while participants from Health Facilities were interviewed at the office of the Health Facility in charge. Community members were interviewed in their respective areas at quieter times of the day. The principal investigator conducted the interviews, and participants' consent was obtained before recording sessions with a tape recorder. Interviews typically lasted between 20 to 40 minutes.

3.7 Data collection process

Before initiating the data collection process, a research assistant was trained on the study's objectives, data collection procedures, handling and storage protocols, and research ethics. Permission to conduct the study was secured from both the Regional Administrative Secretary (RAS) and District Executive Director (DED).

All potential participants were approached, briefed on the study's aims, and requested to provide written consent. Subsequently, upon consenting to participate, data were gathered from the participants during prearranged appointments. Interviews were scheduled based on the participants' preferred time, location, and date.

The principal investigator conducted the interviews assisted by a research assistant, who documented the interviews for further analysis and took supplementary field notes. While most interviews were conducted in English, interviews in Swahili were facilitated for participants more comfortable with the language.

3.8 Pre-testing of data collection tool.

A week before the study began, a pre-test of the in-depth interview guide was carried out in Ngara district council. In this process, the research assistant participated to gain field procedure experience. Three interviews were conducted with Health Facility in-charge, and iCCM provider to assess the effectiveness of the data collection tool. The purpose of this testing phase was to refine the interview process and ensure the suitability of the data collection tool. Identified challenges during the pre-test were addressed before the actual data collection phase commenced.

3.9 Data management and analysis plan

The analysis employed a qualitative conventional content approach to generate codes and categories from the data. In addition to drawing from existing theories in the literature, the study primarily derived codes from the collected field data. The analysis process involved several key steps. First, the audio-recorded interviews were transcribed verbatim to capture the data accurately. Familiarization with the transcripts followed through multiple readings to identify recurring ideas and key concepts. Open coding was then

applied, labelling meaningful units of data to capture important concepts. These codes were grouped into categories based on identified patterns and similarities within the data. As the analysis progressed, the categories were refined, and overarching themes were developed to provide structure and align the findings with the research objectives. The steps involved in the analysis are described below.

3.9.1 Transcription and Familiarization

First, the interviews were transcribed word for word from audio recordings. Each day after collecting data, the Principal Investigator converted spoken words into written text. These transcripts, along with the audio recordings, were kept on a flash drive to maintain confidentiality. Next, the researcher went through the transcripts and any accompanying field notes to become familiar with the content, gaining a thorough understanding of the interview material.

3.9.2 Data Management and Organization

Daily checks of the interview transcripts were conducted to ensure data completeness, quality, and consistency. This process also involved assessing the need for updating the interview guide and enhancing interviewing skills. Subsequently, the transcribed interviews were imported into NVivo 12 software, a qualitative data analysis tool. NVivo 12 facilitated the management and organization of the data, streamlining the process of analysis and making it more manageable.

3.9.3 Initial domains

The data underwent analysis to pinpoint key components concerning the resources available for iCCM implementation, the training provided to iCCM providers, and the community's involvement in iCCM programs. The researcher thoroughly reviewed the transcripts, categorizing the data into these three domains to ensure comprehensive coverage of all relevant information.

3.9.4 Open coding

The next step involved open coding of the data. The principal investigator read through the paragraphs of the transcripts and generated open codes inductively. The open coding involved assigning labels to specific data portions, condensing the information into a more meaningful unit. This process helped identify and organize the important concepts and ideas in the data.

3.9.5 Code comparison and grouping

Once open coding was complete, the researcher compared the generated codes from the first two interviews, which resulted in 39 open codes. The codes were examined for similarities and differences, and those with the same meaning were merged. This merging process produced 13 group codes, which served as definitive codes for the analysis. To ensure the validity of the codes, qualitative experts were consulted, and their input was considered. Discussions and comparisons continued until a consensus was reached on the codes.

3.9.6 Application of Codes

The agreed-upon codes were then applied to the remaining transcripts. This involved systematically reviewing each transcript and assigning the relevant codes to the corresponding sections. As the analysis progressed, additional codes emerged, capturing new insights in the data.

3.9.6.1 Formation of Categories

Once all the transcripts were coded, the codes were compared for similarities and differences. Similar codes were merged to form sub-categories. The sub-categories were then further compared, and those with the same meaning were merged to produce three main categories. These categories represented the broader themes that emerged from the analysis.

Table 1: Content Analyses code inclusion

Domain	NVivo codes	Abstracted codes	Sub-categories	Main categories
Resources available for iCCM implementation	iCCM provider provided with ALU and mRDT kits based on usage reports Use of mobile phones for emergency communication iCCM Providers use tools like registers and reporting books to track and manage supplies	Stockouts or shortages of essential commodities for Malaria	Availability of essential commodities for ICCM	Availability of essential commodities and tools for ICCM
	Supply Chain coordination Recording and receiving supplies iCCM provider visit the health facilities when supplies are low	The efficient and reliability of logistic system		
	Data reporting and tools: Availability of protecting gears such as gloves Distribution of iCCM tools	Quality and functionality of the iCCM equipment	Tools and transport used for iCCM	
	The use of boat, bicycles, motorcycles for transport Use of personal funds for transport Distribution of bicycles by project Challenges in transportation costs, road infrastructure	The transport for iCCM providers		
The training	Practical learning during training	Training and	Training	The Capacity

provided to iCCM providers	Continuous learning through seminar attendance We were given a test on malaria knowledge during training	practical experience		building provided to iCCM provider.
	Knowledge beyond formal education System utilization and timely payments persist	Training impact and challenges		
	Ongoing Mentorship Programs Mentorship helps to refine malaria treatment practices Regular mentorship visits ensure compliance with protocols	Regular feedback during mentorship improves learning	Mentorship	
	Frequency of Supervision Visits Need for Supportive Supervision Check the tools correctly during supervision We go to the field at least three times a month	Role of the health facility in providing continuous capacity building	Supportive supervision	
Community engagement in the implementation of iCCM programs.	Service accessibility in villages Challenges in service accessibility iCCM Provider scheduling and access Location of service provision Challenges affecting accessibility and effectiveness of iCCM services	Availability and accommodation of iCCM services to community	Community Engagement	Community engagement and awareness
	The use of CHWs to raise awareness	Community		

	Misconception about iCCM Changes in community health behavior	awareness		
	Community participation in program planning Mobilization by village chairpersons	Influence of community leaders on supporting iCCM implementation		
	Feedback through village leaders Communication between leaders and iCCM providers		Communication Channels	
	Informing community through meetings Role of religious leaders in communication	Communication of information about iCCM services within the community.		

3.9.7 Trustworthiness of the Study

Trustworthiness was concerned with the confidence level in the data, findings, interpretation, and the methods utilized to ensure data quality in the study. As emphasized by Heale R and Twycross A (2015), it was crucial to assess not just the study's outcomes but also the rigor and efforts made by researchers to improve its quality. The study employed the following process to ensure the trustworthiness of the collected data and reporting of the findings (33).

3.9.8 Credibility of the Study

During data analysis, more than one researcher collaborated to compare and differentiate the inductively obtained codes, facilitating the generation of categories. The study ensured sufficient participant information by selecting individuals with direct involvement and thorough understanding of the resources available for iCCM implementation, the training provided to iCCM providers, and the community's engagement in iCCM programs. Triangulation was performed between data collected from in-depth interviews with iCCM providers and information obtained from health facilities and influential leaders.

3.9.9 Transferability

To enhance the transferability of this study, there was a deliberate effort to provide a comprehensive and detailed description of various aspects, including study participants, contextual information about the field site, time frame, and methods for data collection, as well as data collection and analysis procedures. This was undertaken to ensure that the findings could be applied to other programs with similar contexts.

3.9.10 Dependability

To enable future replication, research procedures were carefully documented, offering a detailed description of the study's methodology to outline both planned and executed

steps. If the study were replicated under identical circumstances, utilizing the same methods and participants, similar outcomes would be anticipated.

3.9.11 Confirmability

Confirmability was assured primarily by the triangulation method. This involved interviewing participants from diverse populations, including iCCM providers, health facility in-charges, and community members. By gathering insights from these different perspectives, we aimed to explore comprehensively the resources available for iCCM implementation, the training provided to iCCM providers, and the community's engagement in iCCM programs. This approach enabled us to gain a more comprehensive and nuanced understanding of iCCM implementation, thus enhancing the conformability of our findings.

3.10 Ethical considerations

The study obtained ethical clearance from the Institutional Review Board (IRB) at Muhimbili University of Health and Allied Sciences. Following this clearance, permission to collect data was sought from the Regional Administrative Secretary (RAS) of Kagera region and the District Executive Director (DED) of Muleba District Council.

Participants were informed about the study's objectives and the potential effects of participation. Upon understanding the study's purpose, participants provided consent by signing a written consent form. To maintain confidentiality, participants' identities were not included in the data collection tools. Privacy was upheld by allowing participants to choose their preferred interview location.

CHAPTER FOUR

4.0 FINDINGS

4.1 Overview

This study had three main objectives. The first objective was to assess the resources available for iCCM implementation in Muleba District Council. The second objective was to find out how the capacity building is provided to iCCM providers. The last objective aimed to explore the community engagement in iCCM program implementation.

4.2 Participant's characteristics

A total of 25 respondents were interviewed for this study. Among them were 5 iCCM providers with more than six months of experience, selected from five villages where iCCM is implemented in Muleba District Council, 5 Village Executive Officers from areas where iCCM is implemented, 5 Health Facility In-Charges from facilities serving iCCM, and 10 iCCM beneficiaries from the community where iCCM is implemented. This diverse selection aimed to capture insights from individuals with various professional experiences and expertise

Regarding gender distribution, 18 respondents were male and 7 were female. In terms of age distribution,8 respondents were between the ages of 20 and 30, 12 were between 31 and 40, and 5 were above 40. Concerning education levels, 14 individuals had diplomas, 6 had certificates, 4 had secondary education, and 1 had primary education **(Table 2).**

Table 2: Demographic of participants

		Number of participants (=25)	**Percent (%)**
Sex	Female	7	28%
	Male	18	72%
Age group (Years)	20 to 30	8	32%
	31 to 40	12	48%
	Above 40	5	20%
Education level	Certificate	6	24%
	Diploma	14	56%
	Secondary	4	16%
	Primary	1	4%

4.3 Assessment of the resources available for iCCM implementation

During the data analysis phase, to gain insights into the resources available for implementing iCCM, the category "Availability of essential commodities and tools for ICCM" was identified. This category encompassed two sub-categories, namely "Stockouts or shortages of essential commodities for malaria" and "Efficiency and reliability of logistic systems." These elements were examined in detail to assess their impact on the effective delivery of iCCM services.

4.3.1 Availability of essential commodities and tools for ICCM

Ensuring collaboration between health facilities and iCCM providers is critical for maintaining a consistent supply of essential malaria commodities, such as Artemether-Lumefantrine (ALU) and malaria Rapid Diagnostic Test (mRDT) kits. According to a respondent, effective collaboration involves the health facility in charge supporting iCCM providers with tests and medicines. When iCCM provider runs out of supplies, they can come to the health facility to restock and continue their work. This process is facilitated by clear communication channels between the health center and the iCCM providers, ensuring that any shortages are quickly addressed to avoid disruptions in malaria treatment. As one health facility in-charge noted

> *"If there are any shortages, like if they run out of medicine, they come to the health facility, take it, and continue with their work."* – [Participant 17, Health facility in-charge].

Regarding ordering of essential commodities, health facilities follow a systematic process to ensure availability. The iCCM provider place orders at a health facility where they receive necessary commodities based on current stock levels. In cases of limited stock, iCCM provider might receive fewer commodities but continue to manage their resources efficiently.

> *"For example, if I order ALU for 4, 2, and 1 unit, it depends on the stock at the center. If the stock is available, I receive my full order; otherwise, they provide what they have to share among us so we can continue working."* – [Participant 05, iCCM provider]

The health facilities also provide reporting tools and safety equipment, such as biohazard safety boxes, registers, and protective gear, although not all workers receive complete sets of these tools. Continuous monitoring and feedback help maintain supply levels, this collaborative approach ensures that iCCM provider are adequately equipped to perform their duties effectively, despite occasional logistical challenges.

4.3.1.1 Stockouts or shortages of essential commodities for Malaria

The majority of respondents provided their views about the stockout, noting that when supplies such as MRDTs (malaria rapid diagnostic tests) or ALU (artemether-lumefantrine) run out, operations come to a halt because treatments cannot be administered without proper diagnosis, one iCCM provider remarked,

> *"Yes, operations must stop because I cannot issue ALU without testing with mRDT to confirm it's reactive."* – [Participant 23, iCCM provider].

This shows the critical nature of having these supplies readily available to maintain continuous malaria services in the community.

The shortage of these medical supplies not only disrupts routine operations but also affects the community's expectations and trust in iCCM services. Health workers must navigate these challenges by coordinating with district malaria coordinators and linked health facilities to borrow supplies or wait for shipments from the Medical Stores Department (MSD). During these periods, they inform local leaders and community health workers (CHWs) to disseminate information and manage expectations. This approach helps mitigate some of the negative impacts by keeping the community informed and patient until the situation is resolved. Despite efforts to manage stockouts, the disruption can still be significant.

> *"The community knows that we carry out this activity, so personally, the community would ask me about it, and I would tell them things are not in place yet, but we will continue once things are sorted."* – [Participant 13, iCCM provider]

This highlights the importance of communication and transparency in maintaining community trust. While health workers strive to ensure some level of service continuity by borrowing from health facilities, the reality of limited stock often necessitates rationing supplies, affecting the overall efficiency and reliability of healthcare delivery.

4.3.1.2 The efficient and reliability of logistic system

The respondents said that the logistics system for ensuring the efficient and reliable supply of essential medical commodities, such as ALU (artemether-lumefantrine) kits, relies on a responsive and flexible approach. The iCCM providers restock their supplies as needed by visiting the center whenever they observe low stock levels, rather than adhering to a strict schedule. Typically, they receive supplies about twice a month, depending on initial allocations. Additionally, this system involves preparing and submitting usage reports to in-charges or pharmacists, who then provide the necessary supplies.

During peak malaria seasons from April to August, larger supplies are requested and received to meet increased demand, ensuring continuous availability. This method effectively prevents stockouts and maintains a steady flow of essential commodities.

One health worker explained,

> *"But when he sees he is running low or has shortages, he comes to the health facility."* – [Participant 03, Health facility in-charge]

Another elaborated on the process during peak seasons,

> "*We have certain months, for example, during the malaria peak seasons from April to August. So, I would write on my issue voucher, and he would keep the*

original and give me a copy for my record. Once I receive the supplies, I go to work." – [Participant 05, iCCM provider].

4.3.1.3 Quality and functionality of the iCCM equipment

The quality and functionality of the iCCM equipment presents both strengths and challenges. The quality of tools, such as MRDTs and tablets for data entry, are generally regarded as good and reliable. The health workers maintain the quality of the tools by performing Internal Quality Control (IQC) tests to ensure accuracy before use.

> *"The quality is good, and I always try to ensure quality improvement by performing internal IQC tests before using the tools"*– [Participant 20, iCCM provider].

Regarding the functionality, the electronic system supporting iCCM has some issues. iCCM providers mentioned that despite being trained to use the system effectively, many features do not work as intended. For instance, location tracking is non-functional, and logging in often fails. This situation calls for more practice, frequent updates, and regular refresher to ensure the system remains functional and supports the health workers' tasks effectively. One iCCM provider emphasized the need for system improvements, stating,

> *"The system we were trained on needs improvement to function as intended. Currently, it doesn't support our work well, and many features don't work properly."* – [Participant 10, iCCM provider].

4.3.1.4 The Transport for iCCM providers

Transport challenges significantly affect the implementation of iCCM by reducing accessibility to remote areas and increasing operational costs. In areas with challenging terrains, such as rocky and hilly areas near lakes, bicycles and motorcycles become impractical, forcing iCCM providers to walk long distances. As one provider noted,

> *"Given the environment where I work, which is near the lake with rocks and hills, you can't even ride a bicycle or motorcycle there, even a car cannot reach those places. So, we walk"* – [Participant 25, iCCM provider].

Additionally, in some cases, iCCM providers require boats to reach service areas and the health facility for restocking essential commodities, leading to significantly higher transportation costs

> *" We face challenges in transportation because we use boats to reach the service areas, which results in high transport costs to ensure we can travel to the center where we provide service and get the required tools from the linked health facility "* – [Participant 10, iCCM provider].

These expenses are often borne by the iCCM providers themselves, adding a substantial financial burden. High transportation costs can lead to fewer visits and reduced availability of essential medical supplies and tools, ultimately impacting the quality of care provided.

Limited transportation support from linked health facilities increases the problem, as iCCM providers frequently must cover transportation costs out of their own pockets.

> *"We don't have to say the health facility will cover the transport costs to get to the center or cover the costs of bringing in reports. In the past, they provided bicycles, but looking at bicycles now, they are not suitable for the current time"* – [Participant 20, iCCM provider].

The impracticality of provided bicycles and motorcycles in difficult terrains means that iCCM providers spend more time traveling, leaving less time for actual healthcare delivery. This inefficiency can result in delays in treatment, negatively affecting patient outcomes and the overall effectiveness of iCCM services in the area.

4.4 The Capacity building provided to iCCM providers

During the data analysis phase, the category identified as "Capacity building " was used to assess the capacity of iCCM providers, as well as mentorship, and supportive supervision. Within this category, two specific sub-categories emerged: Trainings / educational activities, and supervision visits and feedback mechanisms.

4.4.1 Trainings / educational activities

Based on interviews with iCCM providers, the training they received for conducting iCCM services was comprehensive and varied in format. Respondents highlighted the practical nature of the training, which involved hands-on practice and the use of visual aids such as projectors. One respondent emphasized the training's value, noting,

> *"Given that the job involves many things, you can't say you learned everything in school. So, I gained new knowledge from the training that I didn't get in college. It added more value."* – [Participant 02, iCCM provider]

The training sessions typically included group discussions, assignments, and practical exercises to enhance learning. Overall, the training equipped them with essential skills for managing malaria cases and effectively using the necessary tools. Another respondent appreciated the technological aspect of the training, stating,

> *"What I liked about the training was the technology aspect. Initially, we used books to prepare reports, but now with technology, we enter data into the system, which makes calculations easier compared to using paper."*– [Participant 06, iCCM provider].

4.4.2 Supervision visits and feedback mechanism

Health facility in charge explained the importance of mentorship to the ongoing professional development of iCCM providers involved in iCCM services. The mentoring

process includes regular field visits and feedback mechanisms, one participant highlighted the structured approach to mentorship and supervision

> *"For example, from here to the field, we check their documentation, how they test, and how they give medicine to patients who test positive for malaria" –* [Participant 07, Health facility in-charge].

Feedback from the community is also important to build collaboration. Regular meetings and community feedback sessions allow iCCM providers to hear concerns directly. As one interviewee explained

> *"In every monthly meeting, the chairman invites the health committee, including the in-charge and myself. So, we hear their concerns directly and discuss them." –* [Participant 13, iCCM provider]

Engagement with the community and effective resource management are additional aspects of capacity building facilitated by linked health facilities. They involve village leaders and community members to raise awareness about available services and create a supportive environment for ICCM providers.

> *"We use village leaders and village meetings to inform them that there is a malaria testing service available. If someone feels feverish, they should go to the designated center for malaria testing. If diagnosed with malaria, they receive treatment, and if not, they go to the health facility for further investigation. Additionally, I visit them every month to follow up, checking on the clients they've tested. Sometimes I go down to the village to see how they work and provide services." –* [Participant 07, Health facility in-charge].

4.5 Community engagement in the implementation of iCCM programs

During the analysis of data, to understand the involvement of communities in iCCM initiatives, the category "Community engagement in the implementation of iCCM programs" was identified. This category included four sub-categories namely, "The influence of community leaders on supporting iCCM implementation", "Communication

of information about iCCM services within the community", "Availability and accommodation of iCCM services by the community", “Misconceptions about iCCM services” and "Approachability of iCCM service by community members". These components were thoroughly scrutinized to evaluate their influence on the efficient execution of iCCM services.

4.5.1 The influence of community leaders on supporting iCCM implementation

Most respondents explain that Community leaders, particularly village or street chairpersons, play a crucial role in the dissemination and implementation of iCCM services. They act as conduits between service providers and the community, helping to mobilize residents to access healthcare services.

Additionally, community leaders collaborate with health workers, share information about service availability, and participate in decision-making processes. Their involvement ensures that the community is aware of healthcare initiatives and encourages active participation. the involvement of local leaders emerges as an important factor in disseminating iCCM information effectively

> *"Mostly, we consult with village or street chairpersons to inform them about our activities so they can help mobilize the community to come for services."* – [Participant 10, iCCM provider]

This shows the importance of community leaders in facilitating the success of iCCM programs and promoting community health. Furthermore, these leaders assist in addressing community feedback and issues, providing valuable insights into the effectiveness of iCCM services. Another quote emphasizes their role in motivating community members to accept the services, stating,

> *"Mostly through our officials and the chairman, they try to show that we have brought the service closer, so why use other means? Or instead of going to buy medicine without testing, we advise, and the leaders also advise them to come and*

get tested here. It's a free service that helps a lot." – [Participant 06, iCCM provider].

This demonstrates the proactive efforts of community leaders in promoting the uptake of iCCM services and improving health outcomes within their communities.

4.5.1.1 Communication of information about iCCM services within the community

Based on interviews with iCCM providers and community health workers, it was found that the dissemination of iCCM relies on multiple channels to ensure community awareness of available healthcare resources. Outreach clinics are a primary method, where announcements are made during community meetings. These meetings, along with gatherings at places of worship, serve as official platforms for communication, with community health workers delivering key messages. Additionally, communication through phones is used, with service providers notifying community representatives about upcoming healthcare visits, as one respondent explained.

"iCCM providers handle treatments, while CHWs operate at the sub-village level. We hold monthly meetings with all CHWs to discuss preventive measures and malaria." – [Participant 07, Health facility in-charge].

Community Health Workers (CHWs) conduct regular education sessions on malaria symptoms and preventive measures, contributing to community understanding and engagement. However, challenges persist, highlighting the need for improved communication and collaboration, including the use of phone contacts for emergencies and WhatsApp groups for feedback.

The health facility in-charge also plays a crucial role in disseminating iCCM service information, acting as a liaison between healthcare providers and the community. They collect community feedback through village leaders to address concerns effectively. Collaborating with local officials and community leaders, they promote acceptance and

utilization of iCCM services, encouraging community involvement in planning through regular meetings.

> *"Through our officials and the chairman, efforts are made to show that we have brought the service closer. Instead of purchasing medicine without testing, we advise community members, and leaders also encourage them to come and get tested here. It's a free service."* – [Participant 09, Community member].

4.5.1.2 Availability and accommodation of iCCM services to community

The analysis of responses regarding the availability and accommodation of iCCM services within the community yielded diverse perspectives. Participants generally acknowledged the benefits of having healthcare services closer to the community, with some expressing gratitude for the increased availability.

However, a significant concern raised was the inconsistency in service provider schedules, leading to delays in accessing services. Suggestions for improvement included advocating for service providers to reside closer to the community to address health issues promptly.

One participant noted,

> *"The challenge I see is that if it were possible, our service providers should have a place to stay in our area nearby so that when there are health issues, they can be nearby. The challenge is that when they are far away, we wait for their scheduled day, so even if someone is sick, they can't get help until the providers come."* – [Participant 01, Community member].

During the rainy season, physical access to service area worsens due to muddy conditions, and transportation challenges exacerbate these issues.

> *"Honestly, it's not easy because it's near the lake, which isn't a friendly environment. Moreover, during the rainy season, there is a lot of mud, making it difficult for people, especially those far away, to reach the site."* – [Respondent 05, iCCM provider].

Financial constraints also affect access, as some individuals struggle to afford transportation costs or additional medications beyond those provided for free. Furthermore, incomplete treatment due to the unavailability of essential medications other than malaria at the center poses a significant challenge.

Despite these challenges, respondents reported positive impacts of iCCM services, such as heightened awareness of malaria and reduced child mortality rates. Community members expressed satisfaction with the convenience and cost-effectiveness of accessing healthcare within their villages.

> *"The service itself has been improved, we reach them where they are, they don't incur costs, and all necessary items like medicines and tests are available,"* – [Participant 04, Community member].

Highlighting the perceived enhancements in service delivery and accessibility. Additionally, other challenges, such as transportation barriers and the need for improved communication, were identified, indicating areas for further improvement to optimize the benefits of iCCM services.

4.5.1.3 Misconceptions about iCCM services

During the interviews, it became apparent that perceptions regarding iCCM services vary within the community. While some respondents reported no negative views, others expressed uncertainty about the specific tests performed. One interviewee noted that some community members mistakenly believed the iCCM tests included screening for HIV, while others questioned whether it detected other health issues.

> *"They sometimes mistakenly think we test for HIV as well. They ask, "Does this test also check for other health problems?"* – [Participant 10, iCCM provider].

Overall community reception towards iCCM services was positive. Another respondent highlighted this positivity, stating,

> *"The community is very happy with this service and loves it because they have benefited from it"*– [Participant 06, iCCM provider].

4.5.1.4 Approachability of iCCM service by community members

Respondents mentioned community education in helping people understand the purpose, benefits, and availability of iCCM services. This awareness is usually developed through regular neighborhood meetings where Community Health Workers (CHWs) educate the community. These meetings are instrumental in spreading information and ensuring that the community is well-informed

> *"People gain awareness after being called to our neighborhood meetings where we involve our local service providers. They come and educate, and by educating them, they gain knowledge from our service providers and us calling them regularly*." – [Participant 01, Community member].

As the iCCM services became more established, noticeable changes in community attitudes emerged. Many community members, who initially faced difficulties in accessing healthcare due to distance and financial constraints, began to appreciate the local availability of malaria services.

A respondent observed,

> "*Before this service started, people had a lot of trouble because some people had malaria but couldn't manage to seek help due to their financial situation. The health service is far away, requiring a long walk. So, the benefit we have received is that our service providers come to the area and help those people, who then feel better and gain more understanding through those providers."* – [Participant 01, Community member].

Moreover, the increase in community awareness has led to behavioral changes, with more people opting for formal medical testing and treatment over traditional methods.

> *"Yes, because once people receive education, they become aware. For example, if I haven't received education but my neighbor has, and they see their child is sick, they'll inform me to take them to the doctor for testing. People gain awareness through these methods."* – [Participant 09, Community member].

This peer-to-peer dissemination of information further strengthens community awareness and encourages more individuals to utilize available iCCM services.

CHAPTER FIVE

5.0 DISCUSSION

5.1 Discussion

This chapter highlights critical findings on the implementation of Integrated Malaria Community Case Management (iCCM), focusing on resource availability, capacity building, and community engagement. The Collaboration between health facilities and iCCM providers supports consistent access to essential malaria commodities, challenges such as stockouts of essential supplies like malaria Rapid Diagnostic Test (mRDT) kits and Artemether-Lumefantrine (ALU) medications, which disrupt service continuity but are managed through effective communication and logistical processes.

Capacity building through comprehensive training, ongoing mentorship, and supervision enhances iCCM providers' practical skills and protocol adherence, strengthening their ability to manage malaria cases. Community engagement initiatives, facilitated by local leaders and strategic communication, promote the utilization of iCCM services and encourage positive health behaviors among the community. These findings are further discussed below.

5.1.1 Availability of essential commodities for malaria

Rapid Diagnostic Test (mRDT) kits, and ALU are crucial for maintaining uninterrupted iCCM services. Effective collaboration between health facilities and iCCM providers allows for prompt restocking and swift responses to shortages, preventing disruptions in malaria treatment. Health facilities follow systematic ordering processes based on current stock levels, and larger supplies are requested during peak malaria seasons to meet increased demand (23,34,35).

Stockouts of essential commodities can halt operations, affecting community trust. iCCM providers mitigate this by coordinating with district malaria coordinators and health facilities to borrow supplies or wait for new shipments, while communicating with local leaders to manage expectations. A similar study conducted by Abimbola Olaniran et al.

(2022) indicates worsening stock-outs of essential medicines and identifies specific barriers at the last mile, emphasizing the urgent need to address constraints within health and non-health systems to ensure essential medicines reach those who need them most (34).

The logistical system for iCCM involves systematic ordering processes based on current stock levels, with providers receiving allocations accordingly, typically twice a month. During peak malaria seasons, additional supplies are requested to meet heightened demand, demonstrating a responsive approach to maintaining supply continuity. Similar findings were reported in Mozambique (36), where the utilization of mRDTs and ALU increases during the rainy season compared to the dry season. While iCCM tools are generally reliable, logistic system issues such as non-functional features can hinder effectiveness, necessitating continuous updates and practice. Studies in Mozambique ((36) and Bangladesh (13,34). emphasize the importance of collaborative supply chain management and responsive logistical systems to ensure service continuity, especially during peak seasons and natural disasters.

5.1.2 Transport for implementing iCCM services

Transportation logistics for iCCM providers present challenges, particularly in areas with difficult terrain. While bicycles and motorcycles are provided, their effectiveness is limited in some areas, necessitating the use of alternative modes like boats. Many providers incur transportation costs out-of-pocket due to inadequate infrastructure support, impacting service accessibility and delivery efficiency. A study conducted in Bangladesh concluded that iCCM services can persist during a natural disaster, though they may face considerable disruptions (34).

5.1.3 Capacity building

The findings in this study suggest that the extensive training received by iCCM providers is crucial for effective malaria case management. This training emphasized practical skills through hands-on practice, group discussions, and interactive exercises to enhance

provider competency. Mentorship and supervision visits played a significant role in ongoing professional development, ensuring adherence to clinical protocols and fostering collaborative relationships between health facilities and providers.

Additionally, the training sessions addressed critical gaps beyond formal education, equipping iCCM providers with essential skills and knowledge for managing malaria cases effectively. Similar studies have highlighted the importance of such training and capacity building efforts (34,37–39).

Furthermore, it is also reported that the integration of technology improves data management efficiency and ensures the accuracy and accessibility of health records (40). Overall, training sessions prepared iCCM providers to deliver high-quality healthcare, communicate effectively, and implement sustainable health strategies within their communities.

Health facility support extended beyond initial training to include continuous guidance and participation in community health initiatives, further strengthening the capacity of iCCM providers. These insights align with findings from three counties Uganda, Zambia and South Sudan (39) emphasize the importance of comprehensive training, mentorship, and facility support in improving healthcare outcomes in rural settings.

5.1.4 Mentorship, supervision visits and feedback mechanism

Based on the findings of this study, the health facility in charge emphasized the crucial role of mentorship in the continuous professional development of iCCM providers engaged in community health services. Mentorship includes regular field visits and structured feedback mechanisms designed to enhance providers' skills and adherence to protocols. Similar findings on the importance of supervision and feedback have been reported elsewhere (41,42).

The structured nature of mentorship involves thorough checks on documentation and procedures during field visits. Additionally, the study emphasized the importance of community feedback in promoting collaboration and improving service delivery. Regular

meetings, which include community representatives, provide opportunities for iCCM providers to address concerns directly and collectively strategize for improvement.

The linked health facilities actively engage with the community and manage resources efficiently to bolster capacity building. By involving village leaders and community members, they increased awareness of available services like malaria testing and treatment and creating a supportive environment for ICCM providers. Regular visits by health facility in-charges to oversee and assist community health workers further improve the effectiveness of health services. This approach aligns with the findings from systematic review conducted in the low and middle-income countries highlight the importance of ownership by the benefiting communities as well as local and central governments (43).

5.1.5 Community Engagement

The findings reveal that community involvement through proactive education and mobilization efforts by Community Health Workers (CHWs) and local leaders significantly influences the adoption and utilization of iCCM services. The initiatives involved local leaders in disseminating information about available services, thereby promoting utilization among community members. The influence of community leaders was critical in mobilizing community members and addressing their concerns, which facilitated acceptance and uptake of iCCM services. Effective communication strategies, including outreach clinics and regular community meetings, were instrumental in educating residents about malaria prevention and treatment. These efforts not only increased knowledge about healthcare options but also promoted positive health behaviors within the community

Similar studies have highlighted the importance of comprehensive community involvement in healthcare programs. For instance, research by Gilmore, et al. and Haldane et al. emphasize frequently and comprehensive community engagement (44,45).

while Amanda. et al. emphasized the role of community leaders in planning, mobilizing resources and support for health initiatives.

5.1.6 Approachability of iCCM services by Community

The findings from this study reveal that the accessibility of iCCM services by community members in Muleba DC is significantly improved through continuous community engagement and education. The regular meetings led by CHWs) and community leaders are effective in educating the community about healthcare services, including their purpose, benefits, and accessibility. This proactive engagement promotes understanding among community members and encourages them to adopt proactive health-seeking behaviors. These findings are consistent with evidence synthesized in a systematic review (46), which demonstrate how Community awareness is crucial for the success of iCCM services and how is approached by community, as highlighted in various literature on community health interventions (24,28,47).

This proactive engagement promotes understanding among community members and encourages them to adopt proactive health-seeking behaviors.

As iCCM services become established, community attitudes shift positively, with residents appreciating the local availability of malaria treatment, which previously posed challenges due to distance and financial constraints (20). This heightened awareness contributes to behavioral changes, such as more residents opting for formal medical testing and treatment rather than relying on traditional methods. Peer-to-peer information sharing within communities further enhances this process of awareness and encourages comprehensive healthcare utilization.

5.1.7 Communication of information about iCCM services within the community

The dissemination of iCCM services relies on various communication channels to ensure community awareness of available services. Outreach clinics, community meetings, and gatherings at places of worship serve as primary platforms for communication, where community health workers deliver crucial messages.

Phone communication also plays a significant role in informing community members about upcoming healthcare visits. iCCM providers primarily focus on delivering treatments, while community health workers (CHWs) operate at the sub-village level, conducting regular education sessions on malaria symptoms and preventive measures.

Other Research findings have shown that Community health workers played significant roles in malaria interventions, focusing on prevention, case management, and health promotion activities (48,49). Despite these efforts, challenges in communication and collaboration persist, necessitating improved strategies such as leveraging phone contacts for emergencies and utilizing WhatsApp groups for feedback.

5.1.8 Roles of community leaders in iCCM implementation

This study has noted that community leaders play important roles in disseminating information about iCCM services, mobilizing community members to utilize available resources, and advocating for improved health outcomes within their communities. Their involvement is essential for promoting sustainable health interventions and ensuring that healthcare initiatives meet the needs of the local community.

Community leaders, particularly village or street chairpersons, have been consistently highlighted in literature as crucial stakeholders in the implementation and success of community health programs, including iCCM services. Studies underscore their role as facilitators of community engagement, effectively bridging gaps between healthcare providers and community (26,43,45).

5.1.9 Challenges affecting implementation and effectiveness of iCCM services

The study findings show challenges affecting the accessibility and effectiveness of iCCM services in the community. Environmental factors like proximity to lakes and issues during the rainy season significantly hinder geographical access to healthcare services, a finding consistent with prior research on environmental barriers (34,35) Study conducted in Kenya (50) similarly highlight how geographical and seasonal factors can impede access to healthcare services in rural areas.

Additionally, irregular scheduling of service providers contributes to care delays, combined with transportation difficulties residents encounter when accessing service points. Furthermore, incomplete treatment arises when patients diagnosed with both malaria and other conditions receive only malaria medication due to the unavailability of medications for other illnesses. This finding aligns with research from Uganda(46), which indicates that stock-outs and logistical challenges often result in incomplete treatments in community health programs

5.2 Limitation of the study

The study mainly focused on malaria, which means it might not fully capture the broader scope of iCCM services that address other common childhood illnesses, potentially limiting the understanding of iCCM overall effectiveness in managing multiple health conditions. Additionally, while community health workers were included, the study did not involve a wider range of community members or patients receiving iCCM services, which may restrict insights into the program's impact. Future research could incorporate a wider range of community perspectives, including patients and broader community members, to provide a more comprehensive view of the implementation impact. Despite these limitations, the findings generated in this study have provided insights on how the iCCM is implemented.

5.3 Strength of the study

The study is highly relevant, as it was conducted in an area with a high malaria burden, which enhanced the significance of its findings for malaria control by focusing on improving access to services in hard-to-reach areas. The findings offered a comprehensive evaluation of key aspects such as capacity building, resource availability, and community engagement. Additionally, the use of qualitative methods, including in-depth interviews, provided rich, context-specific insights into how iCCM was implemented, which could inform further improvements in similar settings.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This study sheds light on key elements of the implementation of iCCM program, particularly focusing on the availability of resources, building capacity, and engaging the community.

Strong collaboration between health facilities and iCCM providers helps to support consistent access to malaria commodities like malaria Rapid Diagnostic Test (mRDT) kits and Artemether-Lumefantrine (ALU) medications, especially during peak malaria seasons when the demand is highest. However, challenges such as frequent stockouts, irregular scheduling of service providers contribute to care delays and transportation difficulties persist which disrupt services.

Providing comprehensive training, ongoing mentorship, and supervision ensures that iCCM providers have the necessary skills and follow protocols correctly. Engaging local leaders in community initiatives raises awareness and encourages the use of iCCM services, fostering healthier behaviors among residents. Effective communication through outreach clinics and community meetings educates people about malaria prevention and treatment. Overcoming systemic challenges like transportation and environmental barriers is vital for making healthcare more accessible, particularly in remote areas.

These findings emphasize the need to address logistical inefficiencies, enhancing training and equipment, and strengthening community involvement to optimize the delivery and effectiveness of iCCM services. Furthermore, enhancing training programs for iCCM providers is essential to equip them with the skills and knowledge required for effective malaria diagnosis and treatment. This includes not only initial training but also ongoing professional development to keep providers informed about the latest guidelines and practices

6.2 Recommendations

1. **Linked health facilities should ensure continuous availability of essential commodities**: The Health Facility management should work together with National Malaria Control Programme (NMCP) to establish a collaborative framework between linked health facilities and iCCM providers to promptly restock essential supplies like mRDT kits and ALU medications. Implement effective communication channels and responsive logistical systems to address stockouts swiftly and prevent disruptions in malaria treatment, as highlighted by findings on stock management and seasonal demand variations.
2. **Health Facility management needs to collaborate with Malaria implementing partners to enhance capacity-building efforts**: Prioritize comprehensive training and refresher training programs that emphasize practical skills and hands-on experience for iCCM providers. Include ongoing mentorship and supervision to reinforce protocol adherence and clinical competence. Extend support beyond initial training with continuous professional development opportunities, reflecting the importance of mentorship and community health initiatives in sustaining provider capacity.
3. **Health Facility management needs to collaborate with NMCP and malaria implementing partners to promote community engagement strategies**: The NCMP and malaria implementing partners should continue to involve local leaders in community engagement initiatives to increase awareness and utilization of iCCM services among community members. Utilize effective communication strategies such as outreach clinics and community meetings to educate residents about malaria prevention and treatment, aligning with findings on the role of community leaders and communication channels.
4. **Linked health facilities should optimize logistical systems**: Implement systematic ordering processes based on real-time stock levels to ensure timely supply replenishment during peak malaria seasons. Linked health facilities should ensure that essential commodities are always available. The NMCP should

address system issues promptly to maintain the reliability of iCCM tools and supplies, as highlighted by findings on logistical challenges and responsive supply chain management.

5. **Health facility management needs to work with district government to improve transportation support**: Enhance transportation logistics by providing suitable modes of transport like bicycles, motorcycles, and boats where applicable, to mitigate challenges in accessing remote areas. Implementing partners should collaborate with district teams to address out-of-pocket expenses for providers to improve service accessibility and delivery efficiency, reflecting findings on transportation challenges and alternative transport modes.
6. There is a need to conduct a quantitative study to establish the effectiveness of iCCM and its associated factors and expand the research to include more areas where iCCM is implemented.

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8.0 APPENDICES

8.1 Appendix I: Consent forms English version

MUHIMBILI UNIVERSITY COLLEGE OF HEALTH SCIENCES
DIRECTORATE OF RESEARCH AND PUBLICATIONS, MUHAS

CONSENT FORM.

Introduction

This Consent form has 2 parts:

- Information sheet (information to the participants about the research)
- Consent part (for signature if the participant has agreed to participate in the research)

Part 1: Information sheet

Introduction

Consent to participate in study.

Greetings! My name is JOSEPH JOACHIM JOSEPH. I am a university student pursuing master's degree in project management Monitoring and Evaluation in Health at Muhimbili University of Health and Allied Sciences. As part of my degree requirements at Muhimbili University of Health and Allied Sciences (MUHAS), I am conducting research to evaluate the effectiveness the integrated community cases management in Muleba district in Kagera Region

Purpose of the research

This research aims to gather data on the implementation of integrated community case management. Your participation is sought because your valuable insights are believed to provide crucial information aligning with the primary objectives of this study.

Requirement for the participation

If you agree to take part in this study, you will need to respond to a set of questions designed for the research through interviews. Additionally, your consent will involve allowing me to observe to gather the necessary information on the implementation of integrated community case management.

Confidentiality

Your participation in this study is completely confidential. Your information will only be used for research purposes and will not be shared with anyone outside the study team. We will never disclose your name or any other identifying information.

Right to withdraw and alternatives

Your decision to be part of this study is completely voluntary. If you decide not to participate or choose to withdraw at any time, there will be no negative consequences, penalties, or loss of any entitled benefits. Your choice to participate or not is entirely in your hands, and you can stop your involvement whenever you wish, even if you've already given your consent.

Benefits

The provided information will contribute to comprehending the implementation of iCCM, the available resources for iCCM implementation, capacity of iCCM provider and explore how the community is engaged in the implementation of iCCM programs. This interview will not take more than 30 minutes, please speak freely. The is no right or wrong answers.

Risks

Participating in this study is not anticipated to cause any harm to you or your family.

Whom to Contact: If you have any questions or concerns regarding this study, please feel free to reach out to the principal investigator, Joseph Joachim Joseph (PMMEH), at MUHAS, P.O. BOX 65001, Dar es Salaam, mobile number 0756713713. For inquiries about your rights as a participant, you may contact, Chairman of Senate Research and Publications Committee (SRPC) of Muhimbili University of Health and Allied sciences, Dr. Bruno Sunguya, phone number: 0685 217 272 or P.O. Box 65001 Dar es Salaam.

Signature (Researcher).....
Part two: Consent
Do you agree?

Participants agree_____, not agree _____
I _____have read the content in this form,

my questions have been answered, I agree to participate in this study.

Name of participant _____
Signature of participant _____
Date _____
Day/Month/Year

Researcher's Statement
I certify that the participant has been given the opportunity to ask questions and all the questions he or she has asked have been answered correctly according to my understanding. I certify that the participant has given consent to voluntary participate without coercion or deceit.
A copy of this consent form has been provided to the participant.
Name of researcher _____
Signature of researcher _____
Date _____
Day/Month/Year
Participant Phone number: _____

8.2 Appendix II: Consent form - Swahili version

CHUO KIKUU CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI.
KAMATI YA UTAFITI NA MACHAPISHO, MUHAS

FOMU YA RIDHAA

Utangulizi

Fomu hii ya idhini ina sehemu mbili:

- Fomu ya taarifa**(Taarifa kuhusiana na utafiti kwa washiriki)**
- Hati ya idhini **(Kwa ajili ya sahihi ikiwa mshiriki amekubali kushiriki)**

Sehemu ya 1: Fomu ya taarifa

Utambulisho

Salamu! Naitwa JOSEPH JOACHIM JOSEPH. Mimi ni mwanafunzi wa chuo kikuu wa shahada ya uzamili katika Usimamizi wa Miradi ya Ufuatiliaji na Tathmini ya Afya katika Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili. Kama sehemu ya mahitaji yangu ya shahada katika Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili (MUHAS), nafanya utafiti ili kutathmini ufanisi wa utekelezaji wa huduma za malaria ngazi ya jamii (iCCM) katika wilaya ya Muleba mkoani Kagera.

Lengo la utafiti

Utafiti huu unalenga kukusanya taarifa juu ya utekelezaji wa usimamizi wa huduma za malaria ngazi ya jamii (iCCM). Ushiriki wako unatafutwa kwa sababu maarifa yako muhimu yanaaminika kutoa taarifa muhimu zinazolingana na malengo ya msingi ya utafiti huu.

Usiri

Ushiriki wako katika utafiti huu ni wa siri kabisa. Taarifa zako zitatumiwa tu kwa madhumuni ya utafiti na hazitashirikishwa na mtu yeyote nje ya timu ya utafiti. Hatutafichua kamwe jina lako au habari nyingine yoyote ya kutambulisha

Mahitaji katika ushiriki

Kama utakubaliana kushiriki katika utafiti huu, utahitajika kutoa majibu kwa seti ya maswali yaliyoundwa kwa ajili ya utafiti huu kupitia mahojiano. Aidha, ridhaa yako itajumuisha kuniruhusu kufanya uchunguzi ili kukusanya taarifa muhimu kuhusu utekelezaji wa huduma za malaria katika ngazi ya jamii.

Haki ya kujitoa au vinginevyo

Uamuzi wako wa kuwa sehemu ya utafiti huu ni wa hiari kabisa. Ukiamua kutoshiriki au kuchagua kujiondoa wakati wowote, hakutakuwa na, adhabu, hutapoteza haki yako yoyote. Chaguo lako la kushiriki au kutoshiriki liko mikononi mwako kabisa, na unaweza kuacha kuhusika wakati wowote unapotaka, hata kama tayari umetoa kibali chako.

Madhara/Hatari

Kushiriki katika utafiti huu hakutarajiwi kusababisha madhara yoyote kwako au kwa familia yako.

Faida

Taarifa zitakazotolewa zitachangia kufahamu jinsi huduma za malaria katika ngazi ya jamii (iCCM) zinavyotekelezwa, rasilimali zilizopo kwa ajili ya utekelezaji wa iCCM, uwezo wa mtoa huduma wa iCCM, na kuchunguza jinsi jamii inavyoshiriki katika utekelezaji wa mipango ya iCCM. Mahojiano haya hayatachukua zaidi ya dakika 30, tafadhali zungumza kwa uhuru. Hakuna majibu sahihi au makosa.

Wajibu wa mtafiti mwanajamii aliyekubali kushiriki

Mtafiti atawajibika kumuelekeza au kumpatia maelezo sahihi yeyote anayetaka kujua kuhusu lengo la utafiti huu.

Mawasiliano

Ikiwa una maswali au wasiwasi wowote kuhusu utafiti huu, tafadhali jisikie huru kuwasiliana na mpelelezi mkuu, Joseph Joachim Joseph (PMMEH), katika

MUHAS, P.O. BOX 65001, Dar es Salaam, nambari ya simu 0756713713. Kuhusu haki zako katika ushiriki, waweza kuwasiliana na Mwenyekiti wa kamati ya Seneti ya Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili inayohusika na Tafiti na Machapisho, Dkt. Bruno Sunguya kwa simu nambari 0685 217 272 au SLP 65001 Dar es Salaam.

Sahihi (Mtafiti) ……

Sehemu ya pili: Hati ya idhini

Je, Umekubali?

Mshiriki amekubali ( ), Mshiriki hajakubali ( )

Mimi

_____Nimepitia/niliele

wa na kuridhia maelezo yote yaliyotolewa katika fomu hii. Kwa hiyo, kwa ridhaa yangu mwenyewe, nakubali kushiriki katika utafiti huu

Jina la Mshiriki_____

Sahihi ya Mshiriki _____

Tarehe _____

Siku/mwezi/mwaka

Maelezo ya mtafiti au muomba idhini

Nathibitisha kuwa mshiriki amepewa fursa ya kuuliza maswali na maswali yote aliyouliza yamejibiwa kwa ufasaha kwa mujibu wa ufahamu wangu. Nathibitisha kuwa mshiriki ametoa idhini ya kushiriki kwa hiari yake mwenye bila shuruti wala kurubuniwa.

Nakala ya fomu hii ya idhini imetolewa kwa mshiriki;

Jina la mtafiti/ muomba idhini_____

Sahihi ya mtafiti/ muomba idhini_____

Tarehe _____

Siku/mwezi/Mwaka

Nambari ya simu ya mshiriki----------

8.3 Appendix III: Guide for interviewing iCCM provider

INSTRUCTIONS

As an interviewer, please follow these instructions:

1. Confidentiality: Ensure that the interviews are conducted in a confidential manner, respecting the privacy of the participants throughout the process.
2. Participant Introduction and ID Assignment: Begin each interview by introducing yourself, and assign a unique ID number to each interviewee to maintain anonymity.
3. Duration: Inform participants that the interview is expected to take approximately 20 to 30 minutes.
4. Recording: Clearly tape record the interviews to capture accurate information. Additionally, take field notes to complement the recorded interviews and provide context where necessary.

Participants details

Date of interview …….....
Duration at current position…….....
Duration at workplace…….....
Education level……...…….
Age……... Interview Start time …...…….…… …..
Sex……... Interview Finish time…….……

INTERVIEW QUESTIONS

Available resources for iCCM implementation

1. How is the availability of essential commodities, such as Antimalarial drugs (ACT), diagnostic tools (mRDT), and reporting tools ensured in iCCM service delivery?
2. Have you faced any stockouts or shortages? If so, how did these disruptions impact service delivery?
3. Is the logistic system efficient and reliable? Are there any bottlenecks or delays in the supply chain?
   (Probe: How often are deliveries made? How transparent is the inventory management system? What communication channels are used to report and address supply issues?)

4. How would you describe the quality and functionality of the iCCM equipment you have access to?

Capacity building provided to iCCM provider.

5. What types of training/ educational activities have you received with regards to handling malaria case management? How effective was the training in preparing you to deliver iCCM services?
   (Probe: What is the format and content of the training programs? Are there opportunities for hands-on practice and skills development?)
6. Share feedback on how the training and mentorship programs or support from supervisors provided.
   (Probe: What aspects were most helpful, and what areas could be improved? Are there any specific skill gaps or knowledge needs that are not currently addressed?)
7. How are supervision visits conducted and feedback provided?
   (Probe Is the frequency and quality of supervision sufficient for maintaining your confidence and competency in diagnosing and manage malaria cases?)

Community engagement in the implementation of iCCM programs

8. What role do community leaders play in supporting iCCM implementation?
9. How is information about iCCM services disseminated within the community, and what channels are most effective?
   (Probe: Are there any formal mechanisms for community input? How are community voices and priorities incorporated into the program?)
10. What specific initiatives or programs have been implemented to encourage participation?
    (Probe: What specific strategies are employed to address cultural or social barriers that might affect community engagement in iCCM?)
11. How accessible and convenient are iCCM services for community members? What are the biggest barriers to accessing these services?
    (**Probe:** Operating hours and locations of iCCM service points? Are there any transportation issues? Are there any language barriers?)
12. Are there any specific misconceptions or concerns about iCCM services circulating in the community? How are these being addressed?
    What do you think should be done to improve community engagement in iCCM implementation?

8.4 Appendix IV: Guide for interviewing health facility in-charge

INSTRUCTIONS

As an interviewer, please follow these instructions:

1. Confidentiality: Ensure that the interviews are conducted in a confidential manner, respecting the privacy of the participants throughout the process.
2. Participant Introduction and ID Assignment: Begin each interview by introducing yourself, and assign a unique ID number to each interviewee to maintain anonymity.
3. Duration: Inform participants that the interview is expected to take approximately 20 to 30 minutes.
4. Recording: Clearly tape record the interviews to capture accurate information. Additionally, take field notes to complement the recorded interviews and provide context where necessary.

Participants details

Date of interview …….....
Duration at current position…….....
Duration at workplace…….....
Education level……...…….
Age……... Interview Start time …...…….……..
Sex……... Interview Finish time…….…….

INTERVIEW QUESTIONS

Available resources for iCCM implementation

1. How are financial resources distributed among different components of iCCM, such as training, outreach, and commodity procurement?
   (Probe; Can you identify any challenges or constraints related to the availability and allocation of financial resources for iCCM?)
2. How do you ensure collaboration and coordination between healthcare facility and iCCM providers?
3. Probe: What are the incentives for iCCM providers? How does the workload and compensation compare to other healthcare roles?
4. How is the availability of essential commodities, such as Antimalarial drugs (ACT) and diagnostic tools (mRDT), ensured in iCCM service delivery?
   Probe: What mechanisms are in place to address any disruptions in the supply chain for essential iCCM commodities?

To find out how capacity building is provided for iCCM implementation.

5. What role does the health facility play in providing continuous capacity building to iCCM providers?
6. What types of training/ educational activities and mentorship programs for iCCM provider to handling malaria case management?
   (Probe: What is the format and content of the training programs? How are mentors/trainers recruited and trained?)
7. How are supervision visits conducted and feedback provided?

To explore how the community is engaged in the implementation of iCCM programs.

8. What role do community leaders play in supporting iCCM implementation?
9. How is information about iCCM services disseminated within the community, and what channels are most effective?
   (Probe: Are there any formal mechanisms for community input? How are community voices and priorities incorporated into the program?)
10. What specific initiatives or programs have been implemented to encourage participation? What are the most effective strategies for engaging different community groups?
    (Probe: What specific strategies are employed to address cultural or social barriers that might affect community engagement in iCCM?)
11. How accessible and convenient are iCCM services for community members? What are the biggest barriers to accessing these services?
    (Probe: Operating hours and locations of iCCM service points? Are there any transportation issues? Are there any language barriers?)
12. Are there any specific misconceptions or concerns about iCCM services circulating in the community? How are these being addressed?
13. What do you think should be done to improve community engagement in iCCM implementation?

8.5 Appendix V: Guide for interviewing community members

INSTRUCTIONS

As an interviewer, please follow these instructions:

1. Confidentiality: Ensure that the interviews are conducted in a confidential manner, respecting the privacy of the participants throughout the process.
2. Participant Introduction and ID Assignment: Begin each interview by introducing yourself and assign a unique ID number to each interviewee to maintain anonymity.
3. Duration: Inform participants that the interview is expected to take approximately 20 to 30 minutes.
4. Recording: Clearly tape record the interviews to capture accurate information. Additionally, take field notes to complement the recorded interviews and provide context where necessary.

Participants details

Date of interview …….....
Duration at current position…….....
Duration at workplace…….....
Education level……...…….
Age……... Interview Start time …...…….……
Sex……... Interview Finish time…….…….

INTERVIEW QUESTIONS

To explore how the community is engaged in the implementation of iCCM programs.

Community Awareness:

1. To what extent is the community knowledgeable about the purpose, benefits, availability and accessibility of iCCM services?
2. What are the primary sources of information about iCCM for community members?
   (Probe What communication channels and strategies have been successful in raising awareness and motivating community members to utilize iCCM services?)
3. Have you noticed any changes in community attitudes or knowledge towards iCCM over time?

Accessibility and Utilization:

4. Do you think iCCM services are readily accessible and convenient for community members?
5. What challenges do you see community members facing in accessing iCCM services?
   (Probe; What factors have contributed to increased or decreased utilization of iCCM services in your community?)
6. How does the health facility actively engage with the community to promote ICCM service utilization?

Community Engagement:

7. How involved are community members in iCCM program planning and decision-making?
8. What role do community leaders play in mobilizing and supporting iCCM activities?
9. How can iCCM implementation be further adapted to better address the specific needs and preferences of your community?
10. How have you been involved in the implementation of iCCM programs in your community?
11. What are your suggestions for improving communication and collaboration between the community and iCCM providers?

8.6 Appendix VI: Mahojiano kwa mtoa huduma (iCCM provider)

MUONGOZO

Tafadhali fuata maagizo haya:

1. Usiri: Hakikisha kuwa mahojiano yanafanywa kwa njia ya siri, kwa kuheshimu usiri wa washiriki katika mchakato mzima.

2. Utangulizi wa Mshiriki na Mgawo wa Kitambulisho: Anza kila mahojiano kwa kujitambulisha, na mpe nambari ya kipekee ya kitambulisho kwa kila mhojiwa ili kudumisha kutokujulikana.

3. Muda: Wajulishe washiriki kwamba mahojiano yanatarajiwa kuchukua takriban dakika 20 hadi 30.

4. Kurekodi: Rekodi kwa uwazi mahojiano ili kunasa taarifa sahihi. Zaidi ya hayo, andika maelezo ya uwandani ili kukamilisha mahojiano yaliyorekodiwa na kutoa muktadha inapobidi.

Tarehe ya mahojiano …….....

Uzoefu katika nafasi ya sasa …….....

Uzoefu kazini …….....

Kiwango cha elimu ……

Umri…… Muda wa kuanza mahojiano …….

Jinsia…… Muda wa kumaliza mahojiano …….

MASWALI

Rasilimali zilizopo kwa ajili ya utekelezaji wa iCCM

1. 1. Je, upatikanaji wa bidhaa muhimu, kama vile dawa za kutibu Malaria (ACT), zana za uchunguzi (mRDT), na zana za kuripoti unahakikishwa vipi upatikanaji wake katika utoaji wa huduma za iCCM?
2. Je, umekumbana na kuisha au upungufu wowote wa bidhaa muhimu? Ikiwa ndivyo, je, usumbufu huu uliathiri vipi utoaji wa huduma?

3. Je, mfumo wa vifaa ni ufanisi na wa kuaminika? Je, kuna vikwazo au ucheleweshaji wowote katika ugavi?

   (**Hoji**: Uwasilishaji hutolewa mara ngapi? Mfumo wa usimamizi wa hesabu una uwazi kiasi gani? Ni njia gani za mawasiliano hutumika kuripoti na kushughulikia masuala ya ugavi?)
4. Je, unaweza kuelezeaje ubora na utendaji kazi wa vifaa vya iCCM unavyoweza kufikia?

Kujenga uwezo kwa mtoa huduma wa iCCM.

5. Ni aina gani za mafunzo/elimu umepokea kuhusu kushughulikia kesi za malaria? Je, mafunzo yalikuwa na ufanisi gani katika kukutayarisha kutoa huduma za iCCM?

   (**Hoji**: Muundo na maudhui ya programu za mafunzo ni nini? Je, kuna fursa za kufanya mazoezi kwa vitendo na kukuza ujuzi?)
6. Tushirikishe kuhusu jinsi programu za mafunzo na ushauri au usaidizi kutoka kwa wasimamizi yanavyotolewa.

   (**Hoji**: Ni vipengele vipi vilivyosaidia zaidi, na ni maeneo gani yangeweza kuboreshwa? Je, kuna mapungufu yoyote maalum ya ujuzi au mahitaji ya maarifa ambayo hayajashughulikiwa kwa sasa?)
7. Je, ziara za usimamizi zinafanywaje na mrejesho kuhusu ziara unatolewaje?

   (**Hoji:** Je, ziara hufanywa mara kwa mara na ubora wa usimamizi unatosha kwa kukujengea uwezo wako katika kuchunguza na kutibu wagonjwa wa malaria?)

Ushiriki wa jamii katika utekelezaji wa programu za iCCM

8. Ni jukumu gani linalofanywa na viongozi wa jamii katika kusaidia utekelezaji wa iCCM?
9. Taarifa kuhusu huduma za iCCM hupatikana vipi ndani ya jamii, na njia zipi ni zenye ufanisi zaidi?

   (**Hoji:** Je, kuna njia rasmi za kushirikisha jamii? Vipi sauti na vipaumbele vya jamii vinajumuishwa katika programu?)
10. Ni miradi au programu gani maalum imeanzishwa ili kukuza ushiriki wa jamii?

(**Hoji:** Ni mikakati gani maalum inayotumika kushughulikia vizuizi vya kitamaduni au kijamii vinavyoweza kuathiri ushiriki wa jamii katika iCCM?)

11. Je, huduma za iCCM zinapatikana kwa urahisi kiasi gani kwa wanajamii? Je, ni vikwazo gani vikubwa vya kupata huduma hizi?

    (**Hoji**: Saa za kazi na maeneo ya vituo vya huduma vya iCCM? Je, kuna matatizo yoyote ya usafiri? Je, kuna vizuizi vyovyote vya lugha?)
12. Je, kuna imani/dhana potofu au wasiwasi wowote unaoenea katika jamii kuhusu huduma za iCCM? Je, haya yanashughulikiwaje?
13. Unadhani nini kifanyike kuboresha ushirikishwaji wa jamii katika utekelezaji wa afua ya iCCM?

8.7 Appendix VII: Mahojiano kwa kwa msimamizi wa kituo cha afya

MUONGOZO

Tafadhali fuata maagizo haya:

1. Usiri: Hakikisha kuwa mahojiano yanafanywa kwa njia ya siri, kwa kuheshimu usiri wa washiriki katika mchakato mzima.

2. Utangulizi wa Mshiriki na Mgawo wa Kitambulisho: Anza kila mahojiano kwa kujitambulisha, na mpe nambari ya kipekee ya kitambulisho kwa kila mhojiwa ili kudumisha kutokujulikana.

3. Muda: Wajulishe washiriki kwamba mahojiano yanatarajiwa kuchukua takriban dakika 20 hadi 30.

4. Kurekodi: Rekodi kwa uwazi mahojiano ili kunasa taarifa sahihi. Zaidi ya hayo, andika maelezo ya uwandani ili kukamilisha mahojiano yaliyorekodiwa na kutoa muktadha inapobidi.

Tarehe ya mahojiano

…….....

Uzoefu katika nafasi ya sasa

…….....

Uzoefu kazini

…….....

Kiwango cha elimu

……

Umri…… Muda wa kuanza mahojiano

…….

Jinsia…… Muda wa kumaliza mahojiano

…….

MASWALI

Rasilimali zilizopo kwa ajili ya utekelezaji afua ya malaria ngazi ya Jamii (iCCM)

1. Je, rasilimali za kifedha zinagawanywaje kati ya sehemu tofauti za malaria ngazi ya Jamii (iCCM), kama vile mafunzo, uenezi, na ununuzi wa bidhaa?

   (**Hoji:** Je, unaweza kutambua changamoto au vizuizi vyovyote vinavyohusiana na upatikanaji na ugawaji wa rasilimali za kifedha kwa huduma za malaria ngazi ya Jamii (iCCM)"
2. Jinsi gani mnahakikisha ushirikiano na uratibu kati ya kituo cha afya na watoa huduma wa iCCM?

   (**Hoji:** Ni motisha gani wanazopata watoa huduma za malaria ngazi ya Jamii (iCCM) ? Jinsi gani mzigo wa kazi na fidia inavyolinganishwa na majukumu mengine ya afya?)
3. Jinsi gani upatikanaji wa bidhaa muhimu, kama vile dawa za kutibu malaria (ACT) na zana za uchunguzi (mRDT), unahakikishwa katika utoaji wa huduma za malaria ngazi ya Jamii (iCCM)?

   (**Hoji:** Kuna njia zipi zilizowekwa kushughulikia usumbufu wowote katika mlolongo wa usambazaji wa bidhaa muhimu za malaria ngazi ya Jamii

Kujenga uwezo kwa mtoa huduma wa malaria ngazi ya Jamii (iCCM).

4. Je, Kituo cha afya kina jukumu gani katika kuwajengea uwezo watoa huduma wa CCM?
5. Ni aina gani za mafunzo na programu za uongozi hutolewa kwa watoa huduma wa iCCM zinazolenga kujengea uwezo wa utambuzi na kutibu ugonjwa wa malaria?

   (Hoji: Muundo na maudhui ya programu za mafunzo ni yapi? Jinsi waelimishaji/waongozaji wanavyochaguliwa na kufundishwa?)
6. Ziara za usimamizi hufanywaje na mrejesho hutolewaje?"

Ushiriki wa jamii katika utekelezaji wa afua ya huduma za malaria ngazi ya Jamii (iCCM)

7. Ni jukumu gani linalofanywa na viongozi wa jamii katika kusaidia utekelezaji wa iCCM?
8. Taarifa kuhusu huduma za malaria ngazi ya Jamii (iCCM) hupatikana vipi ndani ya jamii, na njia zipi ni zenye ufanisi zaidi?
   (**Hoji:** Je, kuna njia rasmi za kushirikisha jamii? Vipi sauti na vipaumbele vya jamii vinajumuishwa katika programu?)
9. Ni miradi au programu gani maalum imeanzishwa ili kukuza ushiriki wa jamii?
   (**Hoji:** Ni mikakati gani maalum inayotumika kushughulikia vizuizi vya kitamaduni au kijamii vinavyoweza kuathiri ushiriki wa jamii katika afua ya huduma za malaria ngazi ya Jamii (iCCM))
10. Je, huduma za malaria ngazi ya Jamii (iCCM) zinapatikana kwa urahisi kiasi gani kwa wanajamii? Je, ni vikwazo gani vikubwa vya kupata huduma hizi?
    (**Hoji**: Saa za kazi na maeneo ya vituo vya huduma za malaria ngazi ya Jamii (iCCM)? Je, kuna matatizo yoyote ya usafiri? Je, kuna vizuizi vyovyote vya lugha?)
11. Je, kuna imani/dhana potofu au wasiwasi wowote unaoenea katika jamii kuhusu huduma za malaria ngazi ya Jamii (iCCM)? Je, haya yanashughulikiwaje?
12. Unadhani nini kifanyike kuboresha ushirikishwaji wa jamii katika utekelezaji wa afua ya huduma za malaria ngazi ya Jamii (iCCM)?

8.8 Appendix VIII: Mahojiano kwa wanajamii

MUONGOZO

Tafadhali fuata maagizo haya:

1. Usiri: Hakikisha kuwa mahojiano yanafanywa kwa njia ya siri, kwa kuheshimu usiri wa washiriki katika mchakato mzima.

2. Utangulizi wa Mshiriki na Mgawo wa Kitambulisho: Anza kila mahojiano kwa kujitambulisha, na mpe nambari ya kipekee ya kitambulisho kwa kila mhojiwa ili kudumisha kutokujulikana.

3. Muda: Wajulishe washiriki kwamba mahojiano yanatarajiwa kuchukua takriban dakika 20 hadi 30.

4. Kurekodi: Rekodi kwa uwazi mahojiano ili kunasa taarifa sahihi. Zaidi ya hayo, andika maelezo ya uwandani ili kukamilisha mahojiano yaliyorekodiwa na kutoa muktadha inapobidi.

Tarehe ya mahojiano …….....

Uzoefu katika nafasi ya sasa ……..**.....**

Uzoefu kazini …….....

Kiwango cha elimu ……

Umri…… Muda wa kuanza mahojiano …….

Jinsia…… Muda wa kumaliza mahojiano …….

MASWALI

Ushiriki wa jamii katika utekelezaji wa programu za iCCM

Uhamasishaji wa Jamii

1. Je, ni kwa kiasi gani jamii ina ufahamu kuhusu madhumuni, manufaa,na upatikanaji wa huduma za malaria ngazi ya Jamii (iCCM)?
2. Je, ni vyanzo gani vya msingi vya taarifa kuhusu huduma za iCCM kwa wanajamii?

   (**Hoji:** Ni njia gani za mawasiliano na mikakati iliyofanikiwa katika kuongeza uelewa na kuhimiza wanajamii kutumia huduma za malaria ngazi ya Jamii (iCCM)?)
3. Tangu huduma hii imeanza, Je, umeona mabadiliko yoyote katika mitazamo au maarifa ya jamii kuhusu huduma za malaria ngazi ya Jamii (iCCM)?

Upatikanaji na Matumizi

4. Je,unadhani kwamba huduma za malaria ngazi ya Jamii (iCCM) zinapatikana kwa urahisi na kwa njia rahisi na haraka na bila usumbufu?
5. Je, ni changamoto zipi unaziona watu wakikabiliana nazo katika kupata huduma za iCCM?

   (Hoji; Ni mambo gani yamechangia kuongezeka au kupungua kwa matumizi ya huduma za malaria ngazi ya Jamii (iCCM) katika jamii yako?)
6. Je, kituo cha afya kinashirikiana vipi na jamii ili kuhamasisha matumizi ya huduma za malaria ngazi ya Jamii (iCCM)?

Ushirikiano wa Jamii

7. Je, wanajamii wanahusika vipi katika kupanga na kufanya maamuzi ya programu ya huduma za malaria ngazi ya jamii (iCCM)?

8. Ni jukumu gani linalofanywa na viongozi wa jamii katika kusaidia utekelezaji wa huduma za malaria ngazi ya jamii (iCCM)?
9. Ni nini kinaweza kuboreshwa au kubadilishwa ili watu wengi zaidi watumie huduma za malaria katika ngazi ya jamii (iCCM)?
10. Umefanya nini au umehusika vipi kusaidia huduma za malaria katika ngazi ya jamii (iCCM) ifanye kazi vizuri hapa kwenu?
11. Una mapendekezo gani au unadhani nini inapaswa kufanyika ili watu weweze kuwasiliana vizuri na kushirikiana zaidi na wahudumu wa malaria katika ngazi ya jamii?

8.9 Appendix IX: Ethical Clearance from IRB of MUHAS

UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR – RESEARCH, PUBLICATIONS AND INNOVATIONS

Ref. No.DA.282/298/01.C/ Date: 11/03/2024

MUHAS-REC-03-2024-2086
Joseph Joachim Joseph
Shool of Public Health and Social Sciences
MUHAS

RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: Evaluation of implementation of integrated community case management in Muleba district in Kagera 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: 11/03/2024
EXPIRATION DATE OF APPROVAL: 11/03/2025

STUDY DESCRIPTION:
Purpose:
The purpose of this process evaluation that deploys a case study design is to assess available resources, investigate capacity-building methods for integrated Community Case Management (iCCM) providers, and explore community engagement in the implementation of iCCM programs in Muleba District Council.

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-%2015329.pdf and in the MUHAS archives.

8.10 Appendix X: Introduction letter to Regional Administrative Secretary (RAS) Kagera from DPS MUHAS

UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR – POSTGRADUATE STUDIES

In reply quote;
Ref. No. HD/MUH/T.594/2022 28th March, 2024

REGIONAL ADMINISTRATIVE SECRETARY,
P.O BOX 299,
BUKOBA.

RE: INTRODUCTION LETTER OF JOSEPH JOACHIM JOSEPH

We would like to inform you that the carrier of this letter is Joseph Joachim Joseph with registration number HD/MUH/T.594/2022 a student in the school of public health and social sciences at Muhimbili University of Health and Allied Science (MUHAS), pursuing MSc Project Management Monitoring and Evaluation in Health.

As part of his studies, he will be doing a research titled **"EVALUATION OF IMPLEMENTATION OF INTERGRATED COMMUNITY CASE MANAGEMENT IN MULEBA DISTRICT IN KAGERA REGION".**

The Ethical Clearance for doing the said research has been given by the University.

Kindly request your assistance and cooperation to our student.

Yours Sincerely,

Ms. Victoria Mwaniiwa
For: DIRECTOR, POSTGRADUATE STUDIES

cc: Joseph Joachim Joseph

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

8.11 Appendix XI: Permission letter for Data Collection from Regional Administrative Secretary (RAS) Kagera region

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA

MKOA WA KAGERA
Anwani ya Simu: "REGCOM"
Simu ya mdomo: (028) 2220215-18
Fax No. (028) 2222341
(028) 2221356
E-mail: ras.kagera@tamisemi.go.tz
Tovuti: www.kagera.go.tz
Unapojibu tafadhali taja:
Kumb Na. DC.228/252/02/60

Ofisi ya Mkuu wa Mkoa,
4 Barabara ya Luhangisa,
S. L. P. 299,
35111 - Bukoba,
TANZANIA.

17 Aprili, 2024

Mkurugenzi Mtendaji,
Halmashauri ya Wilaya,
S.L.P. 131,
MULEBA.

YAH: UTAMBULISHO WA NDUGU JOSEPH JOACHIM JOSEPH

Tafadhali rejea somo tajwa hapo juu.

2. Ofisi ya Mkuu wa Mkoa imepokea barua yenye Kumb.Na.DA.282/298/01'C'/2086 ya tarehe 11/03/2024 kutoka Chuo cha MUHAS ikuhusu mada tajwa.

3. Mtajwa hapo juu ni mwanafunzi wa Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili (MUHAS) **(Reg Na. HD/MUH/T.594/2022)** akisomea shahada ya uzamili katika Usimamizi wa Miradi ya Ufuatiliaji na Tathmini ya Afya (Msc. in Project Management Monitoring and Evaluation in Health).

4. Ili kukamilisha masomo yake anatarajia kufanya utafiti kutathmini **ufanisi wa utekelezaji wa huduma za malaria ngazi ya jamii (iCCM)** katika Halmashauri ya Wilaya ya Muleba.

5. Kwa barua hii, namtambulisha kwako ndg. **Joseph Joachim Joseph** naomba umpokee na kumpa ushirikiano kipindi chotea atakachokuwa katika Halmashauri yako. Utafiti huu utaanza kuanzia mwezi Aprili, 2024 hadi Julai, 2024.

Utafiti huu umepata kibali kutoka Baraza la chuo kikuu Muhimbili

Tafadhali mpokeeni na kumpa ushirikiano.

Dkt. Samwel Laizer
Kny: **KATIBU TAWALA MKOA**
KAGERA.

Nakala: Katibu Tawala Mkoa,
KAGERA. – Aione kwenye jalada

" Ndg. Joseph Joachim Joseph,
S.L.P. 65001,
DAR ES SALAAM,

8.12 Appendix XII: Turnitin Receipt

turnitin

Digital Receipt

This receipt acknowledges that Turnitin received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

Submission author:	Joseph Joachim Joseph
Assignment title:	DISSERTATION FOR COHORT 15
Submission title:	Joseph JJ-Dissertation_iCCM implementation Muleba DC
File name:	Joseph_JJ-Dissertation_iCCM_implementation_Muleba_DC.docx
File size:	845.09K
Page count:	76
Word count:	17,996
Character count:	110,890
Submission date:	01-Jul-2024 06:03PM (UTC+0300)
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EVALUATION OF IMPLEMENTATION OF INTEGRATED COMMUNITY CASE MANAGEMENT IN MULEBA DISTRICT IN KAGERA REGION

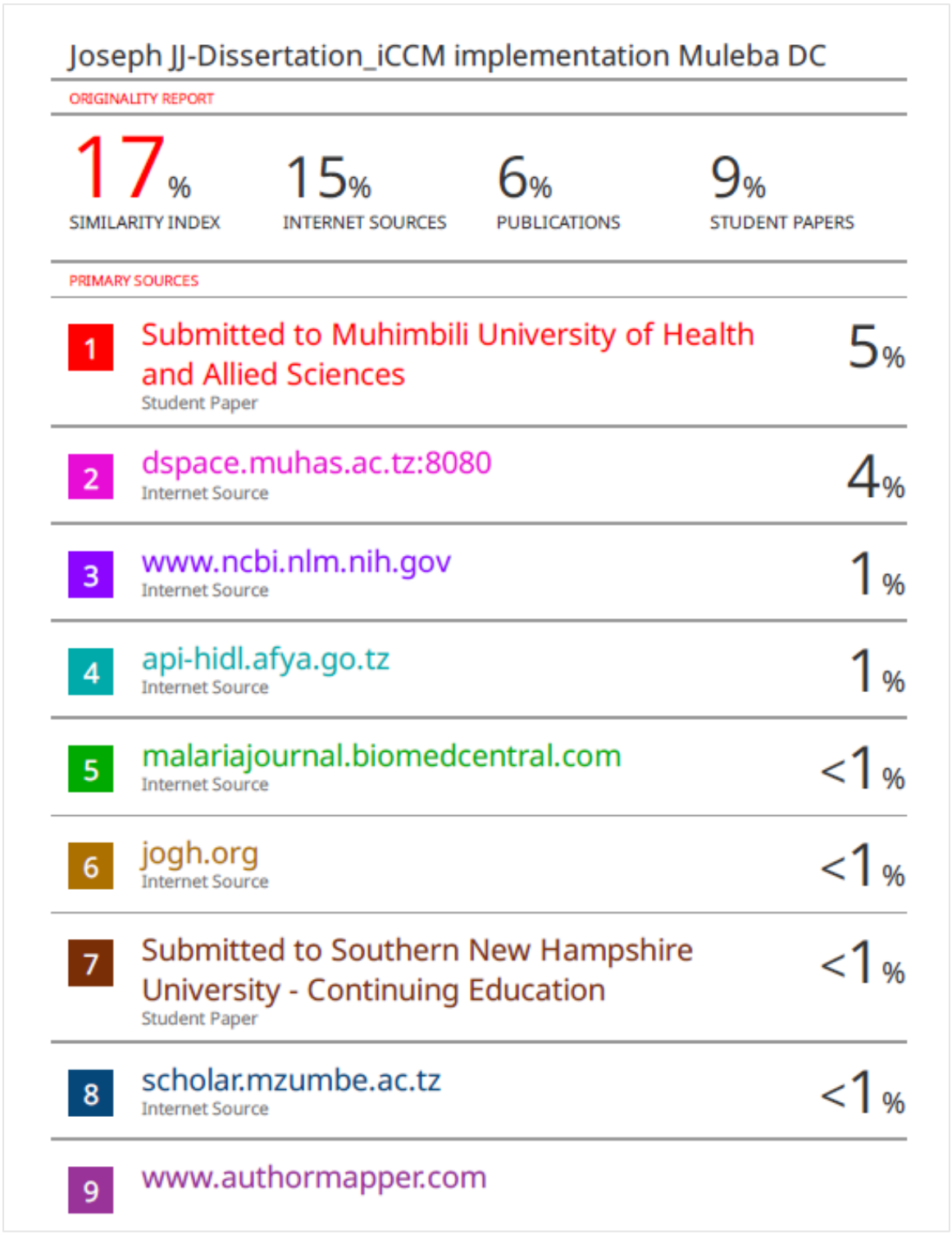
Joseph Joachim Joseph, (BSc.)

Master of Science in Project management monitoring and evaluation in health (PMMEH) Dissertation
Muhimbili University of Health and Allied Sciences
June 2024

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8.13 Appendix XIII: Plagiarism



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