ACCESS TO HEALTH CARE SERVICES AND ASSOCIATED FACTORS AMONG NHIF CLIENTS AT MWANANYAMALA REGIONAL REFERRAL HOSPITAL, DAR ES SALAAM

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October, 2021

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By

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A Dissertation Submitted in Partial Fulfilment for the Degree award of Master of Project Management, Monitoring and Evaluation in Health of the Muhimbili University of Health and Allied Sciences

October, 2021

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by Muhimbili University of Health and Allied Sciences a dissertation titled **"Access to Health Care Services and Associated Factors Among NHIF Clients at Mwananyamala Regional Referral Hospital, Dar es salaam",** in (partial) fulfilment of the requirements for the degree of Masters of Science in Project Management, Monitoring and Evaluation in health of Muhimbili University of Health and Allied Sciences.

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Dr. Hussein Mohamed

(Supervisor)

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Date

DECLARATION AND COPYRIGHT

I, Roshen A. Nassor, declare that this dissertation is my own 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**……

ACKNOWLEDGMENT

My special thanks go to the almighty God who gave me strength to accomplish this study. I would like to extend my appreciation to my supervisor Dr Hussein Mohamed for his tireless guidance from proposal development to completion of this study. I also have a heartfelt appreciation to my nuclear and extended family who endlessly encouraged me during the entire period of the study. My sincere gratitude goes to colleagues at MUHAS and others although it is not possible to mention each one by name.

Lastly, I am thankful to all health care workers as well as NHIF clients who provided enough support to completion of this work.

DEDICATION

I dedicate this work to my father, mother, husband and children for their wholehearted love and support throughout this work. Their advices helped endure, strengthen and courage me to pursue this achievement and to reach where I am.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Diseases
HIV	Human Immunodeficiency Virus
MoHCDGEC	Ministry of Health Community Development, Gender, Elderly and Children's
NHIF	National Health Insurance Fund
SDGs	Sustainable Development Goals
SHIB	Social Health Insurance Benefit
SPSS	Statistical Package for Social Sciences
UHC	Universal Health Care
UNAIDS	United Nations Joint Programme on HIV/AIDS
UNICEF	United Nations Children Fund
URT	United Republic of Tanzania
WHO	World Health Organization

DEFINITION OF KEY TERMS

Terminology	Definition
Access	Is the opportunity to identify healthcare needs, to seek healthcare services, to reach, to obtain or use health care services and to have the need for services fulfilled
Insurance	Is the equitable transfer of the risk of a loss, from one unit to another in exchange for money? It is a form of risk management primarily used to hedge against the risk of a contingent, uncertain loss
Health insurance	Is insurance against the risk of incurring medical expenses by estimating the overall risk of health care
Health insurance Fund	is the not for profit agency which is there to supervise the health care services among her members
Members of health insurance fund	These are the people who are benefiting health care services under the specific health insurance agency.

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ABSTRACT

Introduction: NHIF provides comprehensive benefit packages such as diagnostic tests, out-patient services, in-patient services, physiotherapy, dental services, glasses, prostheses and also offers services for retirees. These services are provided by the accredited health facilities and pharmacies; however, little information is available on the NHIF clients' accessibility and effectiveness towards improving the quality of health care services.

Objective: To evaluate the accessibility to health care services and associated factors among NHIF clients at Mwananyamala regional referral hospital in Kinondoni Municipal, Dar es Salaam.

Methods: This was a descriptive cross-sectional study that employed a quantitative approach. Convenient sampling technique was used for the selection of the study participants. Structured questionnaires were used to collect quantitative data. Descriptive statistics and chi-square tests were done to determine significant association and results were presented in tables, graphs, and charts.

Results: Access to health care services among NHIF users is affected by the institutional factors such as inadequate drug supply, inadequate laboratory equipment and inadequate number of health care workers. Health care workers factors such as attitude towards NHIF clients also affected the access to health care services among NHIF clients. In addition, client factors such as age, sex, occupation tend to affect the accessibility to health care services.

Recommendations: The NHIF should make sure all services stipulated in NHIF package are available at all the time and that clients have access to them. This applies to human resource who are inadequate in number thus affect the service provision.

CHAPTER ONE

1. INTRODUCTION

1.1 Background

Health insurance is a type of insurance that covers the whole or a part of the risk of a person incurring medical expenses. By estimating the overall risk of health risk and health system expenses over the risk pool, an insurer can develop a routine finance structure, such as a monthly premium or payroll tax, to provide the money to pay for the health care benefits specified in the insurance agreement (De Allegri et al., 2009). The benefit of risk control is administered by a central organization, such as a government agency, private business, or not-for-profit entity (Sepehri, 2014).

Health insurance is currently attracting more and more attention in low- and middle-income countries as a means for improving health care utilization and protecting households against impoverishment from out-of-pocket expenditures The World Health Organization (WHO) considers health insurance a promising means for achieving universal health-care coverage (Spaan et al., 2012). Overall, health insurance schemes have been found to improve access to health care as measured by increased utilization of health care facilities globally. There also appeared to be a favorable effect on financial protection, (Erlangga et al., 2019).

In developing countries, health services quality is facing difficulties. The coverage of health services is not only inadequate but also constrained by inadequate funding (Umeh, 2018). It is due to the reasons that health services delivery systems in developing countries face major challenges of infectious diseases, emerging lifestyle-related chronic non-communicable disease, and malnutrition (AbouZahr & Wardlaw, 2001).

Understanding the drivers of differences in the outcomes of insurance reforms in Africa has remained to be critical to inform future implementations of publicly funded health insurance. Such information is thought to guide the future achievement of the broader goal of universal health coverage in Africa (Erlangga et al., 2019), (Wiysonge et al., 2017).

The history of healthcare service provision in Tanzania dates back in 1961 when health system was largely serving its people through the user fees. After the health sector reform in 2000s, the funding gap was noticed and several alternative funding by National Health Insurance Fund (NHIF) and the Community Health Fund (CHF) were initiated by the Ministry of Health (Embrey et al., 2021). The CHF "a voluntary scheme for the informal sector in rural areas, offering citizens limited benefits in public lower- level facilities" (Randolph K. Quaye, 2019). Other health insurance schemes include social health insurance benefits (SHIB) and Tiba Kwa Kadi (TIKA).

The NHIF was established under the National Health Insurance Act, Cap 395 with the main objective of ensuring accessibility of health care services to the Tanzanian people (NHIF, 2020). The NHIF membership has increased from 602, 955 in 2014 to 640,341 total beneficiaries in 2015 (TCHMI, 2014). Currently, 763,000 Tanzanians are covered under the NHIF with only 3,472,000 beneficiaries. Combined with Community Health Fund, only 10 million out of 60 million Tanzanians beneficiaries are sufficiently covered. The goal for 2020 is to scale this up to reach 50% of the entire Tanzanian population (Lee et al., 2020).

Health care system in Tanzania has continued to depend heavily on out-of-pocket payments. This mechanism contributes to inefficiency, inequity and cost, and is a barrier to patients seeking access to care. There have been the efforts to expand NHIF services and its coverage to vulnerable groups. Unfortunately availability of health insurance has remained to be the major barrier of outpatient and inpatient health services in people in rural Tanzania (Tungu et al., 2020). Further research is needed to

understand the perceptions of both the insured and uninsured regarding the quality of care received.

The responsiveness of the health care services among the insured and non-insured people in Tanzania is not well described (Amani et al., 2020). This proposed study aimed on exploring the association of health insurance (NHIF) with responsiveness in Tanzanian population in accessing health care services.

1.2 Problem Statement

To improve the effectiveness and provision of quality health services to its people, the government of Tanzania in collaboration with various stakeholders launched several interventions and health sector policy reform, specifically the introduction of National Health Insurance Fund (NHIF) (Embrey et al., 2021). Despite, the introduction of NHIF, the Tanzanian health sector ıs still faced with insufficient medicine, human resource for health and poor quality of health care services. Such barrier is explained by health care workers factors Level of training on health equity, the technical experience and the Attitude among health care workers. On the other hand institutional factors like poor infrastructural support, laboratory facilities, fluctuation of drugs and equipment availability has been main complaint of patients as key factor affecting access to care. Reports exist that demographic patterns, awareness on NHIF package and procedures and attitude towards NHIF services (Embrey et al., 2021).

Access to health services is one of obligation of NHIF to its Tanzanian clients. However, the access and coverage of health services provided by NHIF accredited health care facilities is not readily available (Nuhu et al., 2020) as per package. Research is needed to define the coverage and levels of insufficiency for the availability of diagnostic equipment and prescribed drugs, delays in getting services and insufficient number of workforces in relation to number of clients using NHIF. Studies indicate that only 65.0% of the NHIF clients in hospitals are paying services

through NHIF but only 32% receive accurate diagnosis and treatment in accredited health facilities. In addition, only 53% of clients are comfortable with the coverage of NHIF packages to its members.

Mwananyamala RRH is among the regional referral hospitals that receives many people seeking health care services both in-patient and out patients from Kinondoni. Unfortunately, there is a knowledge gap on access to health care services among NHIF clients at Mwananyamala RRH. This calls for a need to evaluate the accessibility of services among NHIF members at Mwananyamala RRH.

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1.3 Rationale of the study

In Tanzania the main dimension is under the accessibility and effectiveness of NHIF to serve the people receiving services in the registered facilities. Again the understanding of the level of quality health care services given to the NHIF clients at Mwananyamala hospital in Kinondoni Municipal, Dar Es Salaam gave another clear picture to support the UHC (Amani et al., 2020) In addition to that, the finding provided baseline information to key stakeholders including health policy makers, Health Insurance Fund and health care facilities on the key factors to consider in the future designing of the intervention focused on improved access and quality of health care services among NHIF clients (Tungu et al., 2020) at Mwananyamala hospital in Kinondoni Municipal, Dar Es Salaam.

The findings also aimed to be used in the future design of the appropriate strategies to accelerate the provision of quality of health care services among NHIF clients at Mwananyamala hospital in Kinondoni Municipal, Dar Es Salaam and beyond. The findings aimed at providing a clear picture of what might be happening in other healthcare facilities so that, necessary steps can be initiated to improve the access and quality of health care services and ultimately contribute to the achievement of the

Sustainable Development Goals (SDGs) in particular SDG 3, of ensuring good health and well-being among NHIF clients and general population.

1.4 The Conceptual Framework

The conceptual framework is a pictorial/visual presentation that, explains the relationship between variables under the study that are explained by the Andersen model of 1960s. It indicates how the independent variables affect dependent variable as well as linkages between them (Figure 1). Where by the independent variables are the institutional factors, individual factors as well as health care workers' factors which affect Access to health care services among NHIF clients as a dependent variable

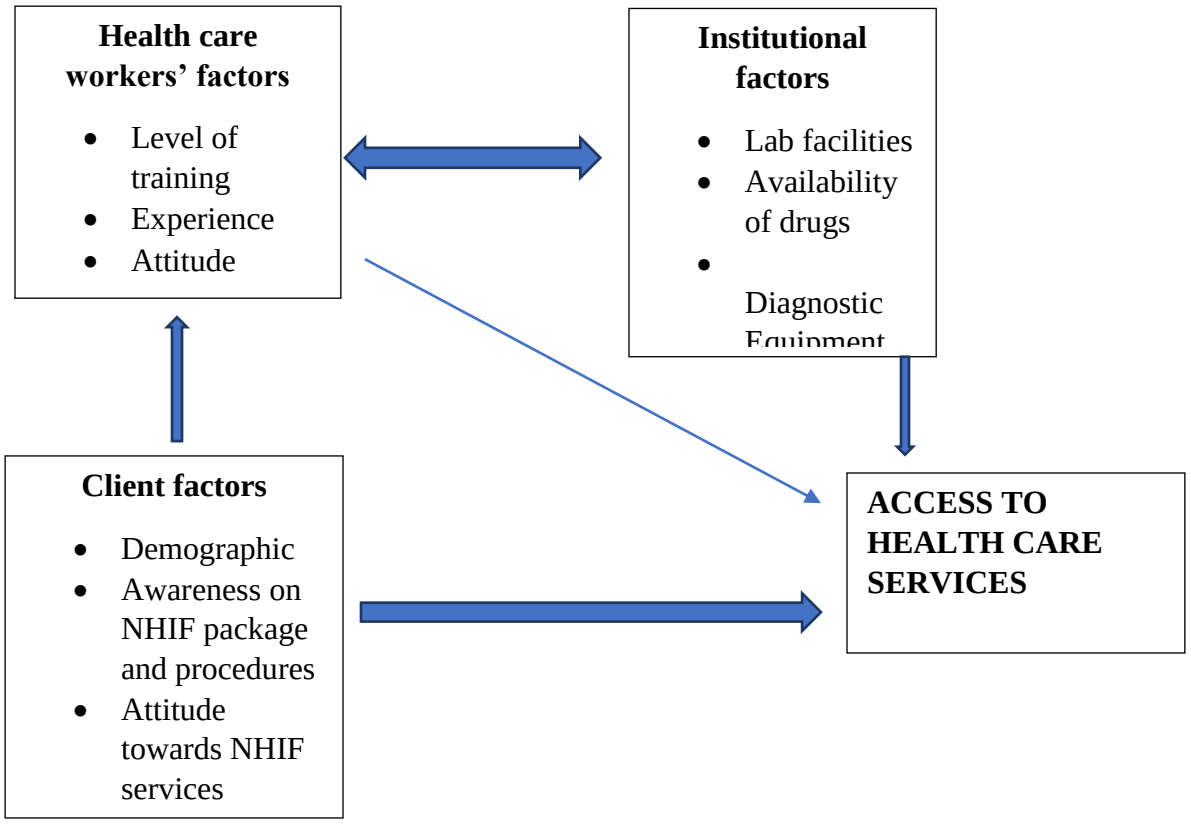

Figure 1: Conceptual Framework (Source: Author)

1.5 Main Research Question

What are the factors that affect access to health care services among NHIF clients at Mwananyamala Regional referral hospital?

1.5.1 Specific Research Questions

i. What services are covered by the NHIF package?
ii. What are the health care worker's factors that affect access healthcare services as per NHIF package at Mwananyamala RRH?
iii. What are the client factors that affect access healthcare services as per NHIF package at Mwananyamala RRH?
iv. What are the institutional factors that affect access to healthcare services as per NHIF package among NHIF clients at Mwananyamala RRH?

1.6 Objectives

1.6.1 Overall objective

The main objective of the study was to determine access to health heath care services among NHIF clients at Mwananyamala Regional referral hospital in Dar Es Salaam.

1.6.2 Specific Objectives

The specific objectives of the study were to:-

i. Determine health care services provided by the NHIF package
ii. Assess healthcare workers' factors influencing the accessibility to healthcare services among NHIF clients at Mwananyamala RRH
iii. Assess NHIF client factors influencing access to healthcare services at Mwananyamala RRH
iv. Determine institutional factors that affect access to healthcare services as per NHIF package at Mwananyamala RRH

CHAPTER TWO

2 LITERATURE REVIEW

2.1 Overview

Quality of health care is determined by effective and efficient health care financing system that an organization has. However, the world is facing challenges in financing and providing health care. Documentary evidence revealed billions of poor people especially those who live in low and middle income countries lack access to quality health care services because of the weaknesses in financing and health care delivery (So & Wright, 2012).

The World Health Organization health financing policy emphasizes that the health system as a financing strategy is a key determinant to population health and wellbeing. This is particularly true in the poorest countries where the level of health spending is still insufficient to ensure equitable and quality health care services is provided. Tanzania, like many countries in sub-Saharan Africa, share the similar to the tight public health care budget and the need to improve access to quality health services (McIntyre et al., 2008).

Developing Countries

Health financing reforms for universal health cover- ages (UHC) in low and middle-income countries (LMICs) have mainly focused on two health financing functions: revenue collection and pooling (Wagstaff & Neelsen, 2020). There is, however, increasing global recognition of the importance of the third healthcare financing function of purchasing as an important policy tool towards achieving UHC (Kruk et al., 2018). UHC emphasizes financial protection and equitable access to good- quality health services according to one's healthcare needs. Purchasing, which refers to the transfer of pooled resources to healthcare providers for the provision of healthcare services (Umeh, 2018), provides a critical link between healthcare financing and health- care service delivery, and facilitates efficiency, equity and quality in health

systems performance. Purchasing can either be passive or strategic. Passive purchasing is the transfer of pooled resources to providers based on historical or predetermined bud- gets while strategic purchasing involves a deliberate process of determining which services to buy, from who and at what cost with the aim of maximizing health system performance (Panzer et al., 2020).

LMICs present unique challenges for quality improvement efforts. These challenges include weak health systems arising from inadequate human resource capacity, low utilization of data for health care improvement, scarcity of state-of-the-art technology for diagnostic and therapeutic services, and minimal involvement of patients and civil society to demand better quality and safety (Yaya & Sanogo, 2019). Furthermore, community and socioeconomic barriers, such as lack of access to evidence-based medicine resources, poor insurance systems, and varied disease burdens, compound the complexity of addressing health care quality in resource limited settings of countries like Tanzania. These issues are deeply interconnected, and attempts to resolve any one of them may have little impact if the entire system is not considered. (Embrey et al., 2021).

Situation in East Africa

Previous empirical work on purchasing arrangements in East Africa is focused on the purchasing practices of the NHIF, county governments, private and community-based health insurers (Mbau et al., 2020). The previous study on NHIF, conducted in 2014, aimed to de- scribe and analyze the purchasing arrangements between NHIF and the government, healthcare providers and citizens (Munge et al., 2018). That study, which was con- ducted before the introduction of the new NHIF reforms described further below, identified significant weaknesses in the purchasing actions between the NHIF as a purchaser and the government, citizens and healthcare providers. For example, along the NHIF-government axis, the absence of an overarching regulatory framework for health service purchasing undermined NHIF's performance. Along the NHIF-

citizen axis, the process for service entitlement design was delinked from citizen preferences, needs and feedback. Along the NHIF-provider axis, weaknesses included inadequate use of quality and efficiency- improvement strategies such as treatment guidelines and generic essential medicines lists (Mbau et al., 2018).

In Tanzania, access to quality health care services has been considerably ignored in the past few decades and has attracted growing interest among researchers, policy-makers and the general public to study the difference between private and public access of care (King et al., 2021). Researchers and policy-makers are increasingly seeking to develop more systematic ways of measuring and benchmarking the access of quality health care of different providers (Kumaranayake et al., 2000). In general, access to quality health care services is now reported as part of overall health system performance reports in most of East African countries (Umeh, 2018) but the barrier of variance are not well known.

Situation in Tanzania

In Tanzania, despite efforts by the Government, through the Ministry of Health, Community, Development, Gender, Elderly and Children's and Social Welfare (MoHCDGEC), to improve the quality of health care services through different approaches such as Health Quality Improvement Framework (So & Wright, 2012), still health service provision is constrained by a number of factors in terms of poor infrastructure, unavailability of drugs and/or medical equipment's and limited human resource for health (Amani et al., 2020).

Quality of health care is a standard of performance in relation to the safe intervention with the capacity to improve health among individuals basing on the available resources (Conry et al., 2012). A financing system with an organization determines the effective and efficient quality of health care in an organization where by in Tanzania health care services are provided through the public and private sector, with the central

government through the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) being the largest provider whereby health care is available depending on one's income and accessibility. People in urban areas have better access medical facilities compared to those in rural areas (Vasan et al., 2014).

After independence in 1961, health care facilities were redirected towards the introduction free medical health services in Tanzania but later after a series of major economic and social changes in 1990's, it was difficult for the government to maintain its commitment to providing free medical care, the Ministry of Health initiated discussions and put forward a Proposal for Health Sector Reform. The aim of the reform was to redefine health priorities and improve the institutions in which these policies were implemented in order to improve the quality of health services and increase equity in service accessibility and utilization (Kumaranayake et al., 2000).

In 1993 the MOH adopted a "user fee" policy, the aim of which was to address the financing gap and increase the resources available for the health sector. However, it was noted that with time user fees alone could not address the funding gap and several alternative funding options were explored such as the National Health Insurance Fund (NHIF) and the Community Health Fund (CHF) (Embrey et al., 2021)/

NHIF provides comprehensive benefit packages such as diagnostic tests, out-patient services, in-patient service care at fixed rates per day, minor and major surgery, in- and out-patient specialized services, physiotherapy, dental services, glasses, prostheses and also offers services for retirees (NHIF, 2020). These services are provided by the accredited health facilities and pharmacies. However, there are some promised service packages, which are not fully provided, which impact the provision of quality health care services. This study is therefore designed to evaluate the accessibility and effectiveness of NHIF in providing quality health care services among NHIF clients at Mwananyamala Regional Referral Hospital in, Dar Es Salaam.

2.2 National Health Insurance Fund in Tanzania

Health insurance is defined as insurance against the risk of incurring medical expenses among individuals. According to MoHCDGEC health insurance policy has a relatively longer history in Tanzania, since 1993 than other health financing schemes currently running in the country, NHIF was established by the Act of Parliament No. 8 of 1999 and began its operations in June 2001. The scheme was initially intended to cover public servants but recently there have been provisions which allow private membership. The public formal sector employees pay a mandatory contribution of 3% of their monthly salary and the government as an employer matches the same. This scheme covers the principal member, spouse and up to four below 18 years' legal dependents. There has been a steady increase in coverage from 2.0% of the total population in 2001/2002 to 7.1% in 2011 (Umeh, 2018).

Apart from few documents' evidence regarding NHIF in Tanzania, very little is known about NHIF as a tool for improving the quality of health care services and financing health care. Despite, NHIF scheme being in operation in all regions and districts in Tanzania mainland, there is still evidence of poor quality of health care services provided from the facilities designated by NHIF to provide services to its members (NHIF, 2020).

2.3 Benefits of NHIF

Recently, NHIF provides comprehensive portable benefits packages such as diagnostic tests, out-patient services, in-patient service care at fixed rates per day, minor and major surgery, in- and out-patient specialized services, physiotherapy, dental services, glasses, prostheses and also offers services for retirees (Sepehri, 2014). These services are provided by the accredited health facilities and pharmacies. However, there are some promised service packages, which are not fully provided. As per planning, NHIF anticipate by 2015 to be able to offer all promised services appropriately; in addition

to that there is an expectation of extending access to East Africa in case a member is on official duties within the region (Spaan et al., 2014).

2.4 Health system factors as a tool to improve health care services

Improvement in the quality of health care is a pivotal entry point for health systems strengthening. Quality improvement (QI) approaches play a role in improving the quality of health services delivered across the various levels of the health system – primary, secondary and tertiary. QI approaches to support the identification of various service delivery gaps, produce solutions to address identified gaps and mitigate potential service delivery bottlenecks. The experience surrounding QI approaches in improving care in specific areas such as maternal, neonatal and child health, HIV/ AIDS, TB/Malaria programs is well documented. Technical programs and development agencies have adhered to various definitions of quality improvement (WHO, 2016). The quality of health services can be improved through various ways such as Increased availability of medical supplies and equipment's, improved infrastructure and upgraded facilities such as increased number of investigational rooms, theatre, maternity wards**,** adequate water, and power supplies, constructing or upgrading waiting areas, and upgrading operating theatres and increased effective utilization health care services.

2.5 Client Satisfaction on the quality of health care Services

Client satisfaction on the quality of health care services is potentially a direct indicator of system performance. Participation of clients is increasingly being linked with improvements in the quality of health care and improved health outcomes. Client satisfaction is a major outcome measure for health care so monitoring it is crucial. Generally, it helps clients get a say in health care provision, evaluation and improvement (Kennedy, 2017). Different dimensions of client satisfaction have been assessed during various studies. For example, one set of dimensions includes clinical effectiveness and outcomes; access to services; organization of care; humanity of care

and the environment while another includes tangibles; reliability; responsiveness; assurance and empathy. For this study, client satisfaction is defined as the gap between what clients expect to receive as a service and what they actually get (Sawyer et al., 2013).

A number of studies have examined and reviewed the constraints to quality health care services offered to NHIF members, which includes, affordability of premiums, poor and limited referral services, Poor management and lack of trust. However, few studies focused on evaluating the implementing challenges of NHIF on the improved quality of health care services. This study is therefore; designed to evaluate the accessibility and effectiveness of NHIF registered facilities in providing quality health care services among NHIF clients in Kinondoni Municipal, Dar es Salaam.

2.6 Healthcare workers' factors influencing the accessibility to healthcare service among NHIF clients

Access can be defined as the opportunity to identify healthcare needs, to seek healthcare services, to reach, to obtain or use health care services and to have the need for services fulfilled. Five dimensions of accessibility (Approachability; Acceptability; Availability and accommodation; Affordability; Appropriateness) has been postulated by (Levesque et al., 2013)

Healthcare workers' factors influencing the accessibility to healthcare service among NHIF clients includes the availability of providers who will accept a person's insurance health care providers attitude towards NHIF client, the health care providers level of competency and ease in making an appointment with a given provider (NHIS, 2018).

2.7 NHIF client factors influencing access to healthcare services

A study conducted in Kenya found that, among factors affecting the NHIF client access to healthcare services includes their level of education, personal income and those employed in formal sectors. In a Nicaraguan Study on the NHIF client access to healthcare services includes health status of member of a household (if the head of house is chronically ill), and the risk of future health events occurring (such as the number of children in the household) were significantly associated with access to health care (Mwangi & Oluoch, 2019; Thornton et al., 2010). Institutional factors that affect access to healthcare services. Availability of health centers in locality ensures the easiness to access health services, the availability of health care centers if lacks insurance services will hinder client's attendance also, geographical areas especially in rural areas which lacks sufficient supply of specialists and super specialist services. Other institutional barriers include inadequate transportation, either because travel time is excessive, because no public transportation is available and the person does not have a car or other alternative transportation, or because the cost of transportation is prohibitive (Douthit et al., 2015)

CHAPTER THREE

3 METHODOLOGY

3.1 Study design

The study was cross-sectional study. This design was chosen because data from population were collected from many different individuals at one specific point in time.

3.2 Study area

The study was conducted in Mwananyamala Regional Referral Hospital in Kinondoni, Municipal Council. Mwananyamala Regional Referral Hospital is located in Kinondoni Municipal Council serving a population of more 2.2 million people of Kinondoni Municipality. The hospital is under by the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC). It was established in July 1973 as a Mother and Child Health Clinic (MCH Clinic) while today it serves as referral hospital in Dar Es Salaam. In 1983 it was upgraded as the District Hospital, with four wards and bed capacity of 112. Currently the hospital bed capacity is 254 with bed occupancy of 317. It is a referral hospital for other Kinondoni and Ubungo Public and Private Health Facilities. The hospital attends 1,500 up to 1,800 patients per day (MOHCDGEC, 2021).

3.3 Study population

The study population for this study was health care providers and registered NHIF clients.

3.4 Inclusion and exclusion criteria

3.4.1 Inclusion Criteria

Health care workers working in Mwananyamala hospital and the registered NHIF clients visiting the hospital at the time of the study

3.4.2 Exclusion Criteria

- Those in critical condition

- Those, who will not sign consent form to participate in the study
- Participants who will ask payment for participation in the study

3.5 Sample size and sampling technique

3.5.1 Sample size

The Sample size was calculated were using previous prevalence of accessibility of health care services among patients attending public health care facilities at Kinondoni, Municipal. Therefore, prevalence of accessibility of health care services, which is 32% with standard normal deviate of 1.96 for 95% confidence interval and 5% margin of error.

The formula for sample size calculation derived from (Israel, et al, 1992).

Therefore, minimum sample size was calculated as follows;

For a large population:

$$n = \frac{z2p\,(100-p) \times Df}{\varepsilon 2}$$

Where

n= required sample size

Z= Critical value of the standard normal distribution for the 95% confidence interval around

the true proportion which is 1.96

P= proportion of health care services among NHIF patients attending public health care facilities expected previous prevalence of interest to be studied which is 65%, which is the prevalence of accessibility.

$$n = \frac{1.962\ 65\ (100-\ 65) \times 1}{52} \approx 350$$

N= 350

Assuming it is enough to asses 10 patients for each health care worker.

Therefore, the minimum required sample will be 35 heath care workers and 350 patients.

3.5.2 Sampling technique

The sampling technique was convenient sampling techniques also known as availability sampling; it is a type of non-probability sampling where by every study participant selection is based on their ready availability. In this sampling method respondents was found typically whoever is convenient.

3.6 Data collection methods and tools

3.6.1 Data collection methods

Data was collected quantitatively using pre-tested structured questionnaire. Questionnaire was prepared in English language and translated into Kiswahili .To assist in the process of data collection, research assistants were trained for two days. Prior commencing with the process of data collection, participants was requested to voluntary sign consent form. The participants signed consent form, was invited for an interview. Study participants were approached by the principal researcher and research assistants. The research information will start to be collected after the objective, purpose and risk associated with the research being explained to the study participants.

3.6.2 Data collection instrument/tools

A structured questionnaire with structured questions was used for data collection. A questionnaire was administered by the research assistants and the principal investigator to the study participants from all the selected facilities.

3.7 Study variables to be measured

3.7.1 Dependent (outcome) variable

Access to healthcare services

3.7.2 Independent (determinant) variables

Socio-demographic characteristics, health system factors, health care provider's factors and NHIF clients

3.8 Data management and analysis

The collected data were sorted, edited, entered, and then imported into SPSS statistical package version 24 for analysis.

Descriptive statistical measures like mean and standard deviation were performed. Frequencies were produced for demographic characteristics of the categorical variables. The association between dependent variable and independent variables was assessed using odds ratios with respective 95% CI. To control for potential confounders p-value of less than 0.2 in the univariate analysis was included in the multivariate analysis. Variables with p-value less than 0.05 in the multivariate binary logistic regression were considered statistically significant.

3.9 Pretesting of the data collection tool

Data collection tools were pre- tested among NHIF clients attending at Muhimbili National Hospital, Dar Es Salaam. The pretesting of the data collection tool was conducted before data collection to ensure reliability and trustworthiness of the tool, by checking each question against the overall study questions. The questionnaire was adjusted by taking out all irrelevant questions that was not needed to answer one or more of the study objectives. The pretesting process is very important to ensure necessary amendments and refining of the data collection tool.

3.10 Validity and Reliability

Data quality was ensured from all the process of data collection, coding, entry, and analysis. During data collection, adequate supervision was provided to research assistants to ensure validity and reliability of the data collection tool. In addition, to ensure the validity of the study, the English version of the questionnaire was translated into the local language (Kiswahili) for better understanding by both data collectors and study participants.

3.11 Ethical considerations

Permission to conduct the study was obtained from the Muhimbili University of Health and Allied Sciences Institutional Review Board. The permission to conduct the study was requested from all appropriate authorities starting from Kinondoni Municipal Executive Directors (DED) and Mwananyamala Referral Hospital, where data will be collected. In addition, written consent was obtained from the selected participants at Mwananyamala Referral Hospital. Voluntary participation was encouraged, and the participants was assured of confidentiality. Privacy and confidentiality was highly maintained by avoiding unauthorized persons from accessing study information. Anonymity was maintained by using participants ID. No names of the key informants were recorded. The detail of the study will be clearly explained to the participants. The detail of the consent form included purpose of the study with respect to the benefits associated with the study. The data collected was saved in a password protected computer to avoid access from unauthorized personnel. No harm is expected from this study as there was no invasive procedure for this study.

CHAPTER FOUR

4 RESULTS

4.1 Introduction

This chapter presents the results of analyzed data from both NHIF workers and clients at Mwananyamala regional referral hospital in Kinondoni Municipality.

4.1.1 Demographic characteristics of study population

The respondent's demographic characteristics are presented in Table 1

Table 1: Demographic characteristics of NHIF clients

Variable	Category	Frequency	Percent	Valid Percent	Cumulative Percent
Sex	M	206	58.9	41.1	41.1
	F	144	41.1	58.9	100.0
	Total	**350**	**100.0**	**100.0**	
Age	23 and younger	32	9.1	9.1	9.1
	24-35 years	85	24.3	24.3	33.4
	36-55 years	135	38.6	38.6	72.0
	56 and older	98	28.0	28.0	100.0
	Total	**350**	**100.0**	**100.0**	
Occupation	Employed	92	26.3	26.3	26.3
	Unemployed	122	34.9	34.9	61.1%
	Self employed	136	38.9	38.9	100.0
	Total	**350**	**100.0**	**100.0**	
Marital status	Single	101	28.9	28.9	28.9
	Married	202	57.7	57.7	86.6
	Widowed	44	12.6	12.6	99.1
	Divorced	3	9	9	100.0
	Total	**350**	**100.0**	**100.0**	
Religion	Christian	195	55.7	55.7	55.7
	Muslim	155	44.3	44.3	100.0
	Total	**350**	**100.0**	**100.0**	

4.1.2 Demographic characteristics of health care workers

The demographic characteristics of health care workers is presented in Table 2

Table 2: Health care workers demographic characteristics

Variable	Category	Frequency	Percent	Valid Percent	Cumulative Percent
Age	23 years and younger	1	2.9	2.9	2.9
	24-35 years	17	48.6	48.6	51.4
	36-55 years	16	45.7	45.7	97.1
	56 years and older	1	2.9	2.9	100.0
	Total	35	100.0	100.0	
Sex	Female	16	45.7	45.7	45.7
	Male	19	54.3	54.3	100.0
	Total	35	100.0	100.0	
Cadre	Doctor	16	45.7	45.7	45.7
	Nurse	13	37.1	37.1	82.9
	Laboratory technician	2	5.7	5.7	88.6
	Pharmacist	4	11.4	11.4	100.0
	Total	35	100.0	100.0	
Education level	MD specialist	6	17.1	17.1	17.1
	Medical doctor	10	28.6	28.6	45.7
	Registered nurse	10	28.6	28.6	74.3
	Health attendant Transport	3	8.6	8.6	82.9
	Laboratory technician	1	2.9	2.9	85.7
	Laboratory technologist	1	2.9	2.9	88.6
	Pharmacist	3	8.6	8.6	97.1

Variable	Category	Frequency	Percent	Valid Percent	Cumulative Percent
	Pharmacist assistant	1	2.9	2.9	100.0
	Total	35	100.0	100.0	
Level of experience	Less than one year	4	11.4	11.4	11.4
	One year	9	25.7	25.7	37.1
	More than one year	22	62.9	62.9	100.0
	Total	35	100.0	100.0	

Results of Table 1 show a total of 206 male and 144 female respondents who participated in the research as NHIF clients, made 206 (58.9%) of male and the remaining 144 (41.1%) female respondents respectively. Both combined made up 135 (38.6%) of respondents ranging between 36-55 years old; 98 (28%) were 56 years and above; 85 (24.3%) were between 24-35 years; while only 32 (9.1%) were 23 years and younger. More than third being 136 (38.9%) of them were self employed; where 122 (34.9%) were unemployed and the remaining 92 (26.3%) were employed. In addition, 57.7% (202) were married; 10 (28.9%) were single while 44 (12.6%) were widowed and only 3 (0.9%) were divorced or separated. And last but not least, 195 (55.7%) were Christians while 155 (44.3%) were Muslims.

Results of Table 2 show a total of 19 male and 16 female respondents who participated in the research as health care workers made 19 (54.3%) of male and the remaining 16 (45.7%) female respondents respectively. Both combined made up 17 (48.6%) of respondents ranging between 24-35 years; 16 (45.7%) were between 36-55; 1 (2.9%) were 56 and above; while the rest 1 (2.9%) were 23 years and younger. About a half 16 (45.7%) of them were doctors; where 13 (37.1%) were nurses; 4 (11.4%) were pharmacists and only 2 (5.7%) were laboratory technicians. Results also show that among the 35 surveyed health workers 22 (62.9%) had more than one year of experience; 9 (25.7%) had worked for one year and 4 (11.4%) were with less than one year of experience. In addition, 10 (28.6%) were Medical doctors and 10 (28.6%) were

registered nurses; 6 (17.1%) were MD specialists; 3 (8.6%) were Health attendant transport and Pharmacists; while the remaining 1 (2.9%) were Laboratory technicians, Laboratory technologists and Pharmacist assistants.

4.2 Health care services provided by the NHIF package

In Tanzania, NHIF health care services reach out to registered clients. The researcher probed to get the full sense of those who are supposed to be attended to. The first research question sought to determine services being covered by the NHIF package at among the 350 sampled populations. This study surveyed both male and female respondents who attend Mwananyamala hospital to identify members.

4.2.1 Membership and drivers for becoming a member

As widely known that health insurance is an insurance against the risk of incurring medical expenses by estimating the overall risk of health care. The study wanted to establish membership status and determine fundamental reasons for joining NHIF. The following Table 3 and Table 4 show the results.

Table 3: NHIF Members

NHIF Members (N=350)				
	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	100.0	100.0	100.0	100.0
No				
Total	350	100.0	100.0	

Table 3 shows that all 350 (98.3%) of the surveyed respondents were NHIF members. The information given on Table 4 answers about why the surveyed respondents opted to join NHIF

Table 4: Reasons for joining NHIF

Reason for joining NHIF (N=350)					
		Frequency	Percent	Valid Percent	Cumulative Percent
	For taking care of my health when am sick	300	85.7	86.0	86.0
	Because I have chronic illness	35	10.0	10.0	96.0
	It is paid by the institution	15	4.3	4.3	100.0
	Total	349	99.7	100.0	
Total		350	100.0		

Results of Table 4 show that the main reason for joining NHIF, according to the majority 300 (86%) is for personal health care when sick. The second reason with minimum level of significance is attached to chronic diseases as indicated by 35 out of 350 respondents (10%) as a reason for joining NHIF; while only 15 (4.3%) respondents revealed that it was paid by the institution.

In the quest to unearth the reality on the effectiveness of NHIF, the semi-structured question administered to 350 respondents to determine whether or not NHIF covered cost on health services**,** brought about these results: 304 (87.1%) out of 350 respondents said NHIF covered all their health services costs while only 45 (12.9%) said it didn't cover at all. The study went on to determine whether prescribed drugs were covered as well, results show that 156 (55.4%) out of 350 although illegible NHIF beneficiaries had not their prescribed drugs covered by NHIF treatment while only 156 (44.6%) had theirs covered.

The study also wanted to determine on health care services accessibility while using NHIF card whenever needed through a questionnaire administered to 350 respondents. The results show that 317 (94.8%) respondents had access to health care services while using NHIF whenever they need it while only 32 (5.2%) respondents didn't have access to health care services while using NHIF.

4.3 NHIF Clients factors for accessibility to healthcare Services

The second research questions of this study sought to find out clients factors that influence and or affect access to healthcare services as per NHIF package. Client factors were pre-determined in the conceptual framework of this study as NHIF clients demographic factors (4.3.1), Awareness of NHIF package and procedures (4.3.2), and Attitude towards NHIF services (4.3.3).

4.3.1 NHIF Demographic factors

Demographic factors were taken as variables that included sex, age, occupation, marital status and religion as given on Figure (4.1). Results of Figure 4.1 show that 206 (58.9%) of the surveyed NHIF clients were men and 144 (41.1%) were women. More men than women benefit from NHIF; more than third 38.6% (135) age range lies between 36 and 55 of the beneficiaries; dominated by 136 (38.9%) self-employed; while more than half 202 (57.7%) married and similarly more than 195 (55.7) Christians. Of all the variables shown here, gender and occupation sound to be the influencing factors for access to health care services among NHIF clients.

4.3.2 Awareness of NHIF package and procedures

The target population for this study was primarily NHIF clients. Out of 350 under NHIF health care provision, 118 (33.8%) NHIF clients' source of fund was a contribution from relatives/colleagues as their insurance, 110 (31.5%) from own sources; 94 (26.9%) got theirs from institution while 27 (7.7%) from spouse. This indicates that about third of the study population are supported by relatives to join

NHIF, and about third of them use own pocket money to join. 329 (94.8%) said they have access to health care services while using NHIF. It is obvious that relatives and individual pocket money influence access to health services.

4.3.3 Attitude towards NHIF services

The results further indicate that majority 300 (86%) of NHIF clients take care of their health when they are sick as a reason why they joined NHIF. 10% (35) of them joined because they have chronic illness while only 14 (4%) joined because it is paid by the institution. Various reasons explain the facts as to why NHIF clients are attracted by its services. But what is the level of satisfaction of clients enjoying the benefits of NHIF services.

4.4 Health workers factors for accessibility to healthcare Services Among NHIF clients

Health care workers make up very significant actors in facilitating clients' access to health services. The third research question of this study sought to find out health care workers factors that influence and or affect access to healthcare services as per NHIF package. These factors were measured in the level of education, level of experience and their attitude towards treatment of NHIF clients as given in sections 4.4.1 through

4.5 Level of training

One of the pre-determined variables in the conceptual framework was the level of training or in other words the level of education as indicated in the table below (Table).

Table 5. Health care level of education

	Frequency	Percent	Valid Percent	Cumulative Percent
MD specialist	6	17.1	17.1	17.1
Medical doctor	10	28.6	28.6	45.7
Registered nurse	10	28.6	28.6	74.3
Health attendant Transport	3	8.6	8.6	82.9
Laboratory technician	1	2.9	2.9	85.7
Laboratory technologist	1	2.9	2.9	88.6
Pharmacist	3	8.6	8.6	97.1
Pharmacist assistant	1	2.9	2.9	100.0
Total	35	100.0	100.0	

Table results show that 10 (28.6%) are medical doctors and registered nurses, 6 (17.1%) are MD specialist, 3 (8.6%) are Health attendant transport and Pharmacists while the remaining 1 (2.9%) are Laboratory technician, Laboratory technologist and Pharmacist assistant. Looking at the results, the maximum number in the range is 10. This indicates that majority of the health workers were medical doctors and registered nurses.

4.4.2 Level of experience

Another pre-determined variable in the conceptual framework was the level of experience as shown on the table below (Table 6).

Table 6. Level of experience

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than one year	4	11.4	11.4	11.4
One year	9	25.7	25.7	37.1
More than one year	22	62.9	62.9	100.0
Total	35	100.0	100.0	

Results of the table show that 22 (62.9%) have more than one year of experience, 9 (25.7%) have one year of experience and 4 (11.4) have less than one year of experience.

4.5.1 Attitude

From a questionnaire administered to 35 health workers the following were observed. The findings reveal that 29 (82.9%) of the health workers treat NHIF users equally as cash users with slightly a few expectations of 6 (17.1%) who do not treat them equally, leaving to understand what could be the drivers for this slight dissimilarity.

The study also explored factors about NHIF health care workers who attend both NHIF users and cash users. The findings reveal that 85.7% (30) of NHIF users are being attended by the same health care workers who attend cash users with a slight marginal difference of 5 (14.3%) who do contrary to fact, which remains to be recommended as to query why NHIF users should not be attended by the same health care workers who attend cash users.

Besides factors about NHIF health care workers who attend both NHIF users and cash users, the study went on assessing the dynamics of NHIF users being admitted to same wards as cash users. The results clarify that 32 (91.4%) NHIF users are being admitted to same wards as cash users with slightly 3 (8.6%) contrasting this, leaving questions for recommendation as to why this happens.

In addition, the study sought to assess factors for NHIF users being forced to stay longer on a waiting queue. The results show that 19 (54.3%) of the NHIF users are compelled to stay longer on a waiting queue following the size of attendees, but this is contrasted by 16 (45.7 %) of NHIF users who find staying longer on a queue as having no any harmful effect on them. It was found out that about 22 (62.9 %) of both NHIF users and cash users stay on the same queue while waiting for health care service against 13 (37.1) who disagreed of that fact.

The findings reveal that NHIF users are not forced to stay on a long queue because cash users are of priority. About 34 (97.1%) of NHIF users were of the view that they were not forced to stay on a long queue because cash users were of priority, but this was contrasted by a small percent where only 1 (2.9%) who admitted that the contrary is true, by showing that NHIF users were forced to stay on a long queue because cash users were of priority.

Moreover, the study wanted to assess whether or not there were any shortage of health care workers in the target health facility. Majority of the respondents being 32 out of 35 health workers (91.4%) agreed that there was a shortage of health care workers in the target health facility, while only 3 (8.6%) disagreed. However, shortage of health care workers in a health facility was not of any reason for giving priority health services to cash users compared to NHIF users as admitted by all 35 respondents (100%). Among those who said No, 26 (75%) mentioned long queue as the reason and 7 (18.8%) mentioned insufficient number of health care workers as the reason and only 2 (6.3%) mentioned that some health care workers prefer cash payments rather than NHIF.

Table 7: Health workers summarized findings

	Yes	No	Total
health workers treat NHIF users equally as cash users	26 (82.9%)	9 (17.1%)	35
NHIF users are being attended by the same health care workers who attend cash users	30 (85.7%)	5 (14.3%)	35
NHIF users are admitted to same wards as cash users	32 (91.4%)	3 (8.6%)	35
NHIF users are forced to stay on a long que due to their large in number	19 (54.3)	16 (45.7)	35
NHIF users are forced to stay on a long que because cash users are of priority	1 (2.9%)	34 (97.1%)	35
Both NHIF users and cash users stays on the same queue	22 (62.9%)	13 (37.1%)	35

4.6 Institutional factors affecting access to healthcare services

The fourth research question of this study sought to determine institutional factors that affect access to healthcare services as per NHIF package. The pre determined Institutional factors were lab facilities, availability of drugs and diagnostic equipment as they were given in the conceptual framework. These services are provided by the accredited health facilities and pharmacies.

4.6.1 Availability of lab facilities

Availability of lab was another pre-determined variable in the conceptual framework. Through its questionnaire administered to 35 health workers, the study sought to determine institutional factor facilitating access to health care services. The results

show that inadequate laboratory equipment in a health facility was a reason for clients to wait for a long time for health services as indicated by 25 (71.4%) of the respondents. On the contrary, 10 (28.6%) indicated that this was not a reason for clients to wait for a long time for health services.

It was discovered that shortage of laboratory equipment in the target health facility was an issue for health service provision. Results show 30 (85.7%) of the respondents admitted on this; while 5 (14.3%) disagreed. In addition to this, the study further surveyed on inadequacy of drug supply in the health facility as whether being the reason for giving health services priority to cash users. Results show that 33 (94.3%) of the respondents experienced inadequate drug supply in the health facility as not being the reason for giving priority health services to cash users while only 2 (5.7%) (2) experienced that being the reason.

Another factor that was surveyed was to determine whether there was shortage of drug supply in the target health facility. Results confirm that 27 (77.1%) of service beneficiaries experience a shortage of drug supply in the health facility; while (8) 8 (22.9%) had never experienced such a shortage of drug supply in the health facility. Most frequent reasons revealed by 21 (60.8%) are the fact that some respondents assumed not to be covered by NHIF; where 11 (33.5%) of the respondents notified that health facilities had lack of drugs and 5.7% were unaware.

4.6.2 Availability of drugs

Availability of drugs was also a pre-determined variable in the conceptual framework as given hereunder on the three consecutive tables below. From a questionnaire administered to 35 health workers, the study also sought to assess whether or not inadequacy of drug supply in the health facility was a reason for giving priority health services to cash users.

Table 8: Availability of drugs impact on access to health care

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	2	5.7	5.7	5.7
	No	33	94.3	94.3	100.0
	Total	35	100.0	100.0	

Results of table 8 indicate that from 35 respondents, 33 (94.3%) acknowledged that drug supply in the health facility was not the reason for giving priority health services to cash users while only 2 (5.7%) said it was a reason for giving priority health services to cash users.

Table 9: Shortage of drugs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	27	77.1	77.1	77.1
	No	8	22.9	22.9	100.0
	Total	35	100.0	100.0	

Results of the table indicate that from 35 respondents, 27 (77.1%) agreed that there was a shortage of drug supply in the health facility, while only 8 (22.9%) mentioned that there was no shortage of drug supply in the health facility.

Table 10 Shortage of health care workers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	32	91.4	91.4	91.4
	No	3	8.6	8.6	100.0
	Total	35	100.0	100.0	

Results of Table 10 show that 32 (91.4%) out of 35 respondents agreed that there was a shortage of health care workers in this health facility while 8.6% said No. Results of the table indicate that from 35 respondents, 32 (91.4%) acknowledged that there was

shortage of health care workers in the health facility; while only 3 (8.6%) said it was a reason for giving priority health services to cash users.

4.4.3 Diagnostic Equipment

Furthermore, a questionnaire was administered to 350 respondents to investigate on the diagnostic equipment in the target health facility. The study sought to find out whether NHIF covers all laboratory investigations. The results show that 318 (90.9%) of the respondents perceived that NHIF covers all their laboratory investigations; while only 32 (9.1%) disagreed. In the quest to find out more on laboratory investigations and what the driver was in case NHIF covered the investigations, it was found out that laboratory investigations were not under NHIF as said by 26 (81.3%) of the respondents; where 4 (12.5%) put that hospital did not have enough equipment for other investigations and only 2 (6.3%) said they didn't know.

The study further wanted to determine whether health care facilities under NHIF were readily found near residence areas. Out of all the surveyed respondents, 311 (88.9%) said health care facilities under NHIF were near their residence areas; while 39 (11.1%) said the facilities under NHIF were not near their residing area. On a question whether beneficiaries ever failed to obtain health services due to health facilities being distant, 324 (92.6%) of the respondents said they had not failed to obtain health services due to health facilities being distant, while 26 (7.4%) said they had failed for that reason. Another question sought to find out whether they receive health care services timely while using NHIF at the health facility, 317 (90.8%) of the respondents said they received health care services timely while using NHIF at the health facility while; 32 (9.2%) said they did not. These results indicate that more than 80 percent of NHIF users are found within the neighborhood with health facilities.

Table 11: Factors about equipment and heath facility

	Category	Frequency	Percent
1	NHIF covers all laboratory investigations	318	90.9
2	Health care facility near home	311	88.9
3	Health care provision at specified facility on time	317	90.8
4	Laboratory investigation cost covered by NHIF	318	90.9
5	Laboratory investigation cost not covered by NHIF	32	9.1
6	Laboratory investigation not under NHIF	26	81.3

All NHIF clients are assumed to receive health care services from within the government quality improvement framework. The study results show that health care workers do not affect clients' provision of health care services when using NHIF as indicated by 323 (92.3%) NHIF clients; while 26 (7.7%) indicated that health care workers do.

For those who said health care workers do affect their provision to health care services using NHIF, 168 (48.1%) mentioned that some health care workers prefer cash payments rather than NHIF and 155 (44.4%) mentioned that they noted a negative attitude among health care workers; while 26 (7.4%) observed difficult in scheduling an appointment with doctors.

The study also sought to find out whether health services were paid while using NHIF. The results show that about 51.1% of health beneficiaries were asked to pay for health services while using NHIF; while 48.9% said they had never been asked to to do so. Among those who have been asked to pay for the service, 80.4% said they were asked to pay for Drugs; while 11.7% for laboratory and 7.8 for other related medical services.

Health care workers do not affect clients' provision of health care services when using NHIF (92%), however some health care workers prefer cash payments rather than NHIF (44%). Study further reveals that 80.4% happened to have been asked to pay for Drugs. If drugs were readily available obviously this could not happen. This suffices to say that availability of drugs to some extent affects access to health services. The findings reveal that NHIF users are allowed to enjoy the services while on the contrary some prefer cash payment, are conflicting arguments. The study further sought to find out whether there was denial of access to health care services. 88.6% said they have never been denied access of health services while using NHIF in a facility, while 11.4 mentioned they have been denied. Out of those that have been denied, 60% were so due to lack of NHIF services in that particular day; where 32.5% were denied due to other factors and 7.5% were denied because of expired NHIF cards. It can be seen that both facilities and equipment have significant causal factors to access to health services.

Table 12 Cross-tabulation on ttreatment vs sshortage of Drugs

Do you treat NHIF users equally as cash users? * Is inadequate drug supply in the health facility the reason for giving priority health services to cash users- Cross tabulation					
			Is inadequate drug supply in the health facility is the reason for giving priority health services to cash users		Total
			Yes	No	
Do you treat NHIF users equally as cash users?	Yes	Count	2	27	29
		Expected Count	1.7	27.3	29.0
	No	Count	0	6	6
		Expected Count	.3	5.7	6.0
Total		Count	2	33	35
		Expected Count	2.0	33.0	35.0

We would expect to observe 33 out of 35 who don't agree with the fact that they treat NHIF users equally as cash users on the basis of inadequacy of drug supply in the health facility as a the reason for giving priority health services to cash users while only 2 agree.

Table 13 Chi-square test on treatment vs. shortage of Drugs

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.439[a]	1	.508		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.777	1	.378		
Fisher's Exact Test				1.000	.682
Linear-by-Linear Association	.426	1	.514		
N of Valid Cases	35				
a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .34.					
b. Computed only for a 2x2 table					

The result is statistically insignificant since the P value (0.508) is not less than 0.05, which means treatment of NHIF and Cash users is independent to the inadequate drug supply in the health facility which is the reason for giving priority health services to cash users.

Table 14: Regression analysis

Variables Entered/Removed[a]			
Model	Variables Entered	Variables Removed	Method
1	Is there is a shortage of health care workers in this health facility, Is there is a shortage of laboratory equipment in this health facility, Is there shortage of drug supply in this health facility.[b]	.	Enter
a. Dependent Variable: Do you treat NHIF users equally as cash users?			
b. All requested variables entered.			

Table 15: Adjusted R square

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.332[a]	.110	**.024**	.378
a. Predictors: (Constant), Is there is a shortage of health care workers in this health facility, Is there is a shortage of laboratory equipment in this health facility, Is there shortage of drug supply in this health facility.				

Looking at the Adjusted R square, we see that fair treatment between NHIF users and Cash users has 2.4% impact on health care workers lab equipment and drug supply shortages. Since the Significance value is not less than 0.05 (0.298) then there is no significant impact of NHIF users and Cash users to the Shortage of health care facilities, Lab equipment and drug supply in the facility**.** Further discussions are carried forward to chapter five.

CHAPTER FIVE

5 DISCUSSION

5.1 Introduction

This chapter discusses the results presented and analyzed in chapter four of this study. The information discussed was collected from 350 respondents. The results are relevant in that the study has successfully attempted to answer all the research questions. Following some intuitional factors contrary to the standards provided by the government for quality improvement and health care services provision. The major assumption was evaluate access to health care services and associated factors among NHIF clients.

The findings of this study reveal that 206 male and 144 female are actual NHIF clients, making 58.9% of male and the remaining 41.1% female respectively and 54.3% of male and remaining 45.7% female were health workers. This implies more men than women are both members of NHIF and staff of health facilities in the research area which requires a further analysis of knowing why. This study was limited to only knowing the slight difference pictured out here. More women need to join as they are most occupied with family issues including children and general needs in the community.

One third (38.9%) of clients were self employed; 34.9% unemployed and 26.3% employed; while about a half of workers (45.7%) were doctors; 37.1% nurses; 11.4% pharmacists and only 5.7% laboratory technicians. Demographic factors may as well influence or affect access to health care services when it comes to the question of money. Some of the clients were single parents (28.9%); 12.6% widowed and only 0.9% divorced or separated. This has strong correlation with adherence to NHIF. Findings for example reveal that finding sources to join NHIF included own pocket

money source (31%); relatives' support (33.7%); spouse's support (7.7%), and institution (26%).

It can be argued that the above mentioned sources are inadequate due to economic challenges faced by most people in the sub-Saharan countries, Tanzania included. In line with this, in Kenya for example, health sector comprised three owners systems, namely government (40%) which own hospitals, referrals, health centers and dispensaries; second, the non-governmental organizations (15%) and private business organizations (43%). It was seen that health care financing depended on out-of-pocket payments (51%) (Davies et al., 2019), which consolidate the findings of this study.

Findings of this study also reveal that more than half of NHIF clients have experienced a denial of access to health services due to lack of nearby NHIF services, some unknown reasons and card expiry date. What could be the factors behind denial of access in a very broad context? This is contrary to the fact that NHIF is widely known to be responsible for providing comprehensive benefit packages such as diagnostic tests, out-patient services, in-patient service care at fixed rates per day, minor and major surgery, in- and out-patient specialized services, physiotherapy, dental services, glasses, prostheses and also offers services for retirees. These findings slightly share some common grounds with the national statistics that show that only 10 out 60 million of Tanzanians beneficiaries are sufficiently covered by NIHF (Lee et al., 2020). This is a few number compared to the need. The statistics further indicate that the goal was for 2020 to scale up to reach 50% of the entire Tanzanian population (ibid). Again this is undoubtedly not yet the case until now. More effort need to be done to achieve this goal.

Attitude determines an influential factor for optimizing access to health care services. Some of the most significant reasons influencing the attitude are the fact that clients choose to join NHIF in order to take care of own health when sick as. The majority of

clients joined for this reason (85.7%). More than one third (35%) of the clients have chronic illnesses which has been the reason as to why they joined NHIF. Last but not least, are a few clients (4%) who get institutional support. Staying longer on the queue waiting for services and the lack of access to other health services dissatisfies.

All NHIF clients are assumed to receive health care services from within the government quality improvement framework. The study sought to find out whether health care workers affect provision to health care services when using NHIF. The study results show that health care workers do not affect provision of health care services when using NHIF as indicated by 92.3% of the respondents; while 7.7% indicated that health care workers do. This is possibly because of some enabling demographic factors of the urban Tanzanians. This study is limited in some specific issues like those that are to do with rural Tanzania. This aspect is meaningful in uncovering hidden factors of rural. Very unfortunately health insurance for outpatient and inpatient health services in rural Tanzania is limited (Tungu et al., 2020). A study should be conducted to find more on to optimize the need for access for rural especially women, children and old men.

The findings reveal a number of institutional determinant factors affecting access to healthcare services as per NHIF package. It was found that health care workers provision to health care services using NHIF because of cash money preference. This has affected around 48.% of the NHIF beneficiaries. It was also found that 44.4% are affected due to negative attitude among health care workers. Not only money and negative attitude towards NHIF usage issues but also unable to schedule appoints to visit doctors. More or less 7% of the beneficiaries experience difficulties to schedule visits with doctors. This reminds of the various calls for institutional reform. In conjunction with this, government has launched several interventions and health sector policy reform, specifically the introduction of NHIF (Embrey et al., 2021). This shows

a number of barriers, which include lack of finance, commitment, responsibility issues. Management responsibility and accountability remain paramount here.

Notwithstanding the above issues, some scholars open a room for alternative look by shedding light that health could be thought of as a shared responsibility, of course which could primarily involve the issue of fund, where Aye and colleagues associate this with economic role of solidarity and social capital in accessing modern health care services in the Ivory Coast (Aye M, et al., 2002), far west of the African continent. These scholars support a shared responsibility. More importantly, there are still other barriers not associated with funding as discussed below.

Another factor is availability of lab facilities near residence areas. More than eighty percent (88.9%) experienced health care facilities under NHIF near their residences; also 92.6% experience health facilities near to their homes; however 41% or so claim that drugs are paid for and lack in some facilities. The barrier here is payment and lack of drugs in some facilities as hereby perceived. What this study has also identified is time consumption when waiting for health services, but has not incorporated transport factor which is another significant hindrance. The transport value is added to these findings as essential institutional barrier as posited by (Douthil et al., 2015). This remains a recommendation for further study and for management consideration in attempting to expand NHIF services to reach the stated goal of 50% as earlier stated.

When we looking at Table 15 results of chapter four, show that P value (0.508) is not less than 0.05, which means treatment of NHIF and Cash users is independent to the inadequate drug supply in the health facility which is the reason for giving priority health services to some cash users. Also, the Adjusted R square (Table 17), gives us a fair treatment between NHIF users and Cash users has 2.4**%** impact on health care workers lab equipment and drug supply Shortages. Since the Significance value is not

less than 0.05 (0.298) then there is no significant impact of NHIF users and Cash users to the Shortage of health care facilities, Lab equipment and drug supply in the facility**.**

Quality improvement efforts need more investment in terms of time and money. Improvement is needed for health facilities, lab equipment and supply of drugs. This study is a complementary attempt to others studies conducted in East Africa. The findings show that there is not enough supply of drugs and sometimes facilities being insufficient although available. In conjunction with this Yaya posits that ther is a need for involvement of patients and civil society to demand better quality and safety (Yaya & Sanogo, 2019).

One of a very striking emerging issue in this study is that there are illegal practices being made by health workers to NHIF clients such of payment preference contrast to the actual focus of the government. This study finds interest in the East Africa focus on the purchasing practices of the NHIF, county governments, private and community-based health insurers (Mbau et al., 2020).

Policy-makers are hereby called to enforce mechanisms that have to enable more access to a wider range of the Tanzania community through systemic ways of benchmarking access of quality health care of different provider (Kumaranayake et al., 2000).

CHAPTER SIX

6 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Access to health care services among NHIF users is affected by the institutional factors such as inadequate drug supply, inadequate laboratory equipment and inadequate number of health care workers. Health care workers factors such as attitude towards NHIF clients also affected the access to health care services among NHIF clients. In addition, client factors such as age, sex, occupation tend to affect the accessibility to health care services.

6.2 Recommendations

The NHIF should make sure all services stipulated in NHIF package are available at all the time and that clients have access to them. This applies to human resource who are inadequate in number thus affect the service provision

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APPENDICES

APPENDIX **1A: CONSENT FORM ENGLISH VERSION**

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES (MUHAS)

DIRECTORATE OF RESEARCH AND PUBLICATIONS

ID-NO……

Consent to participate in an interview

Introduction

Greetings! My name is Roshen Nassor I am a Master's student from Muhimbili University of Health and Allied Sciences. I am currently pursuing a Master of Science in Project Management Monitoring and Evaluation in Health Care Intervention, as part of fulfillment for the award of this degree, I am researching as part of my studies with the main objective of "Access to health care services and associated factors among NHIF clients at Mwananyamala regional referral hospital, Dar es Salaam"

Purpose of the study:

The purpose of this study is to evaluate the accessibility to health care services and associated factors among NHIF clients at Mwananyamala regional referral hospital ,Dar es Salaam". You are one of the respondents of this study, this means, I will ask you few questions regarding the implementing challenges of NHIF on the improved quality of health care services in Kinondoni Municipal, Dar Es Salaam" I will record and note down what you will be telling me. This will take approximately 45 minutes of your valuable time

What Participation Involves

If you agree to participate in this study, you will be required to sign this consent form and answer the questions that you will be asked by me.

Benefits

You will not get direct benefits from the study, but the information provided by you will help to feed in more information in the literature on the accessibility and effectiveness of NHIF registered facilities in providing quality health care services among NHIF clients in Kinondoni Municipal, Dar es Salaam. The information will also be useful source of information to other key stakeholders from the Ministry of Health, Community Development, Gender, Elderly and Children's, and other Social Health Insurance Funds and policymakers in the future designing of intervention focused on improving the quality of health care services among registered NHIF clients.

Risks

This study involves no invasive procedures so we expect that no harm will be done to any participant

Confidentiality

I wish to assure you that, this information will be treated in confidentiality between you and the researcher. All the information collected in the questionnaire forms will be entered into the computer with only the study identification number.

Voluntary participation

Taking part in this study is voluntary, that is, you can decide to participate or not. You can stop participating in this study at any time, even if you have already given your consent. Refusal to participate or withdraw from the study will not involve penalty or loss of any benefits to which you are otherwise entitled.

Who to contact if you have any question about this study

In case of any questions about this study please don't hesitate to contact Principle Investigator, Roshen; Muhimbili University of Health and Allied Sciences (MUHAS), P.O. Box 65001, Dar Es Salaam(Tel. No. +255786201266). And any questions about the right to conduct this study, you may call Chairman of University Research and Publication Committee, Dr. Bruno Sunguya P.O.Box 65001, Dar Es Salaam Tel, 2150302-6, and Dr Hussein Mohammed who is the supervisor of this study.

Do you agree? Yes…….. No……

Participant agrees ……..... Participants do not agree. ……...…

I, …… Have read the contents of this consent form and my questions have been adequately answered. I, therefore, agree to participate in this study.

Signature of the participant ……Date ……

Signature of the interviewer …….. Date ……

APPENDIX 1B: CONSENT FORM KISWAHILI VERSION

CHUO CHA SAYANSI ZA TIBA MUHIMBILI

KURUGENZI YA UTAFITI NA MACHAPISHO

FOMU YA RIDHAA

Namba ya utambulisho……..

Utambulisho

Habari, jina langu ni Roshen Nassor Mimi ni mwanafunzi wa Shadaha ya uzamili kutoka Chuo Cha sayansi na Tiba Muhimbili. Kwa sasa nafanya Shahada ya sayansi ya uzamili katika ufuatiliaji na usimamizi na tathmini ya miradi ya afya na kama sehemu ya kutimiza tuzo ya shahada hii, ninahitaji kufanya utafiti na kutoa matokeo, ambayo yatakuwa muhimu kwa utafiti wangu, chuo kikuu na jumuiya kwa ujumla. Ninafanya utafiti juu ya " Tathmini ya ufanisi wa mfuko wa taifa wa bima ya afya (NHIF) katika kuboresha ubora wa huduma za afya miongoni mwa wateja waliosajiliwa na Mfuko wa bima ya afya katika hospitali ya rufaa Mwanyamala Manispaa ya Kinondoni, Dar Es Salaam”

Madhumuni ya utafiti

Utafiti huu unafanyika kwa kutimiza sehemu ya mahitaji ya Shahada ya sayansi ya uzamili katika ufuatiliaji na usimamizi na tathmini ya miradi ya afya. Matokeo yatatumika na wadau, Wizara na bodi za mifuko ya hifadhi ya jamii katika kuboresha huduma bora za afya baada ya kutambua changamoto za mpango huu na kuzifanyia kazi. Pia matokeo ya utafiti huu yatasaidia kuongeza wigo mpana wa mpango wa kuboresha upatikanaji wa huduma huduma za afya ili kuweza kutoa huduma bora za

afya miongoni mwa wagojwa waliosajiliwa na mfuko wa bima ya afya na kupunguza idadi ya vifo vinavyosababishwa na ukosefu wa upatikanaji wa huduma bora za afya.

Vihatarishi

Utafiti Huu hausishi vitendo vyovyote vya kudhuru mwili wako kwa hiyo hatutegemei mshiriki yoyote kupata madhara.

Usiri

Taarifa zote zitakazokusanywa zitashughulikiwa kwa usiri wa hali ya juu kati yako na mtafiti. Taarifa hizi zitaingizwa kwenye mfumo wa komputa kwa namba na sio kwa majinayenu.

Ushiriki wa hiyari

Kushiriki kwako katika utafiti huu ni wa hiyari. Una weza kujitoa katika utafiti muda wowote hata kama ulikubali kujiunga hapo mwanzo. Kukataa kushiriki au Kujitoa katika utafiti hakuta kuwa na adhabu yoyote wala hupotezi haki zako za hapo awali.

Mawasiliano

Tafadhali, kama utakuwana maswali yoyote kuhusu utafiti huu wasiliana na mtafiti mkuu: Roshen wa S.L.P. 65001,chuo cha sayansi za tiba Muhimbili Dar esSalaam, au Mwenyekiti wa kamati yau tafitinauchapishaji Dr Bruno Sunguya, S.L.P 65001, Dar Es SalaamTel No: 022-2150302-6.

Je unakubali kushiriki katika utafiti huu? Ndiyo…….. Hapana……

Mimi …….....……...… , …… nimesoma /nimeelezwa yaliyomo yote katika fomu hii na maswali yangu yote yamejibiwa.nakubali kushiriki katika utafiti huu.

Sahihiyamshiriki …… …….Tarehe ……

Sahihiyamtafitimsaidizi …… ……Tarehe ……

APPENDIX IIA: DATA COLLECTING TOOL

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

FOR HEALTH CARE WORKERS (ENGLISH VERSION)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

SCHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES

ACCESS TO HEALTH CARE SERVICES AND ASSOCIATED FACTORS AMONG NHIF CLIENTS AT MWANANYAMALA REGIONAL REFERRAL HOSPITAL,

DAR ES SALAAM

Candidate's number:

Region: _____

District: _____

Ward: _____

Date of data collection d d m m y y y y

demographic

1.	Sex	1. Male 2. Female
2.	Age	
3.	Occupation	1. Employed 2. Unemployed 3. Self employed

4. Marital status	1. Single 2. Married 3. Widowed 4. Divorced
5. Religion	1. Christian 2. Muslim 3. Other
To assess NHIF client factors influencing access to healthcare services at Mwananyamala RRH	
6. Are you a member of NHIF?	1. Yes 2. No
7. What is the source of funding for your insurance?	1. Own source 2. Contributed by relatives /colleague 3. My spouse 4. Institution
8. What is the reason for you to join NHIF?	1. For taking care of my health when am sick 2. Because I have chronic illness 3. It is paid by the institution 4. Other
9. Are health care facilities under NHIF near your residing area?	1. YES 2. NO
To determine health care services provided by the NHIF package	
10. does NHIF cover all your health services?	1. Yes 2. No
11. Do you have access to health care services while using NHIF whenever you need it?	1. Yes 2. No
12. Does NHIF covers all your prescribed drugs under treatment?	1. Yes 2. No
13. If no on question 11, why?	1. not covered by NHIF 2. The health facilities do not have some drugs 3. I don't know

14. Does NHIF cover all your all your laboratory investigations?	1. Yes 2. No
15. If no on question 14, why?	1. There are laboratory investigations not under NHIF 2. Hospital does not have enough equipment for other investigations. 3. I don't know
16. Have you ever failed to obtain health services due to health facilities being distant?	1. Yes 2. No
To determine institutional factors that affect access to healthcare services as per NHIF package at Mwananyamala RRH	
17. Do you receive health care services timely while using NHIF at the health facility?	1. Yes 2. No
18. If no on question 17 ,why ?	1. Some health care workers prefer cash payments rather than NHIF 2. Long que 3. Inadequate number of health care workers
To assess healthcare workers' factors influencing the accessibility to healthcare services among NHIF clients at Mwananyamala RRH	
19. Does Health care workers affect your provision to health care services when using NHIF?	1. Yes 2. No
20. If yes on question 17, above why?	1. They have negative attitude 2. It is difficult to plan an appointment with doctors 3. Some health care workers prefer cash payments rather than NHIF
21. Have you ever been asked to pay for health services while using NHIF?	1. Yes 2. No
22. If yes on question number 21, which are the services you paid for?	1. Drugs 2. Laboratory 3. Consultation 4. Other

23. Have you ever been denied access of health services while using NHIF in a facility?	1. Yes 2. No
24. If yes on question number 23, why?	1. Expired NHIF card 2. In availability of NHIF services at that particular day 3. Others
25. Are you satisfied by the services of your NHIF?	1. Yes 2. No
26. What dissatisfy you in the NHIF?	1. Long que 2. Lack of access to other health services 3. No challenges at all

APPENDIX IIB: ZANA YA KUKUSANYIA DATA KWA WATUMIAJI WA NHIF (KWA KISWAHILI)

CHUO CHA AFYA NA SAYANSI CHA MUHIMBILI (MUHAS)

SHULE YA AFYA YA UMMA NA SAYANSI YA JAMII

UPATIKANAJI WA HUDUMA ZA AFYA NA SABABU ZINAZOHUSIANA NA UPATIANAJI WA HUDUMA HIZO KATI YA WATUMIAJI WA BIMA YA NHIF KATIKA HOSPITALI YA RUFAA MWANANYAMALA, DAR ES SALAM

Namba ya utambulisho:

Mji : _____

Mkoa : _____

kata: _____

tarehe ya ukusanyaji wa data | d | d | m | m | y | y | y | y |

Maelekezo : zungushia jibu sahihi

1. Jinsia	1. Me 2. Ke
2. Umri	
3. Kazi	1. Nimeajiriwa 2. Nimejiajiri 3. Sijaajiriwa
4. Hali ya ndoa	1. Sijaolewa 2. Nimeolewa 3. Mjane 4. Mtalaka
5. Dini	1. Mkiristo 2. Muislamu 3. Zenginezo
6. Je wewe ni mwanachama wa bima ya afya ya NHIF?	1. Ndio 2. Hapana
7. Je ni kipi chanzo cha mapato yako ya bima ya afya ?	1. Nimelipia mwenyewe 2. Nimechangiwa na ndugu /jamaa 3. Mwenza 4. Taasisi
8. Nini sababu ya kujiunga na bima ya NHIF?	1. Ili inisaidie nkiwa naumwa 2. Kwasababu nina ugonjwa wa kudumu 3. Nalipiwa na taasisi 4. Zenginezo
9. Je bima ya NHIF inakuwezesha kupata huduma zote za kiafya ?	1. ndio 2. hapana
10. je bima ya afya ya NHIF inakuwezesha kupata huduma za afya muda wowote unapohitaji ?	1. Ndio 2. Hapana
11. Je vituo vinavyotoa huduma za afya chini ya NHIF zipo karibu na makazi yako ?	1. Ndio 2. Hapana

12. Je ukiwa na bima ya afya ya NHIF inakuwezesha kupata dawa zote ulizoandikiwa kwenye kituo cha afya ?	1. Ndio 2. Hapana
13. Kama hapana kwenye swali namba 12, kwanini ?	1. Kuna baadhi ya dawa hazitolewi kwa wanaotumia NHIF 2. Kuna ukosefu wa baadhi ya dawa kwenye kituo cha afya 3. Sijui
14. Je unapata huduma zote za maabara ukiwa na bima ya NHIF ?	1. Ndio 2. Hapana
15. Kama hapana kwenye swali namba 14 , kwanini	1. Kuna baadhi ya vipimo vya maabara havipo kwenye bima ya NHIF 2. Hospitali haina vifaa vya maabara vya kutosha kwa baadhi ya vipimo 3. Sijui
16. Je umewahi kukosa huduma za kiafya kwa sababu ya kuwa mbali na vituo vya afya ?	1. Ndio 2. Hapana
17. Je unapata huduma za kihospitali kwa wakati ukiwa unatumia bima ya NHIF ?	1. Ndio 2. hapana
18. Kama hapana kwenye swali namba 17, kwanini ?	1. Baadhi ya wahudumu wa afya wanawapa kipaumbele wagonjwa wanaotoa pesa kama njia ya malipo kuliko wanaotumia bima ya afya . 2. Foleni kubwa 3. Idadi ndogo ya watoa huduma ya afya
19. Je wahudumu wa afya wana athiri upatikanaji wako wa huduma za afya ukiwa unatumia bima ya NHIF katika kituo ?	1. Ndio 2. Hapana

20. Kama ndio swali namba 19 ,kwanini ?	1. mtizamo hasi 2. Ni vigumu kumwona daktari kwa mtu mwenye bima ya afya ya NHIF 3. Baadhi ya wahudumu wa afya wanawapa kipaumbele wagonjwa wanaotoa pesa kama njia ya fedha taslim kuliko wanaotumia bima ya afya
21. Je umewahi kutakiwa ulipie huduma zozote za kiafya ukliwa unatumia bima ya NHIF?	1. Ndio 2. Hapana
22. Kama ni ndio kwenye swali namba 21 , je ni huduma zipi ?	1. Madawa 2. Maabara 3. Kumwona daktarin 4. Zinginezo
23. Je umewahi kukosa huduma za kiafya ukiwa unatumia bima ya afya katika hospitali husika?	1. Ndio 2. Hapana
24. Kama ni ndio kwenye swali 23 , kwanini?	1. Kadi ya NHIF ilikwisha muda wake wa matumizi 2. Kutokupatikana kwa huduma za afya zitolewazo chini ya NHIF kwa siku hiyo 3. Zinginezo
25. Je unaridhishwa na huduma za afya zitolewazo chini ya NHIF ?	1. Ndio 2. Hapana
26. Je ni kitu gani hakikuridhirishi kwenye mpango huu wa NHIF ?	1. Foleni kubwa 2. Kukosa baadhi ya huduma za afya 3. Hakuna changamoto zozote .

APPENDIX IIC: DATA COLLECTING TOOL AMONG HEALTH CARE WORKERS

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

SCHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES

ACCESS TO HEALTH CARE SERVICES AND ASSOCIATED FACTORS AMONG NHIF CLIENTS AT MWANANYAMALA REGIONAL REFERRAL HOSPITAL,

DAR ES SALAAM

Namba ya utambulisho:

Region : _____

District : _____

Ward : _____

date of data collection : | d | d | | m | m | | y | y | y | y |

1. Age	
2. Sex	1. Male 2. Female
3. Cadre	1. Doctor 2. Nurse 3. Laboratory technician 4. Pharmacist
4. Level of education	1. MD specialist 2. Medical doctor 3. Medical officer 4. Registered nurse 5. Health attendant 6. Laboratory technician 7. Laboratory technologist 8. Pharmacist 9. Pharmacist assistant
5. Level of experience	1. Less than one year 2. One year 3. More than one year
6. Do you treat NHIF users equally as cash users?	1. yes 2. no
7. A doctor who attends NHIF users is different to a doctor who attends cash users	1. yes 2. no
8. NHIF users are admitted to a different ward as cash users	1. yes 2. no
9. NHIF users are forces to stay on a long que due to their large in number	1. yes 2. no
10. NHIF users are forced to stay on a long que because cash users are of priority	1. yes 2. no
11. both NHIF users and cash users stays on the same que	1. yes 2. no
12. inadequate laboratory equipment in a health facility is the reason for clients to wait for a long time for health services	1. yes 2. no
13. there is no shortage of laboratory equipment in this health facility	1. yes 2. no
14. Inadequate drug supply in the health facility is the reason for giving priority health services to cash users	1. yes 2. no

15. There is no shortage of drug supply in this health facility.	1. Yes 2. No
16. Shortage of health care workers in a health facility is a reason for giving priority health services to cash users compared to NHIF users	1. yes 2. no
17. there is no shortage of health care workers in this health facility	1. yes 2. no

APPENDIX IIIA: ETHICAL CLEARANCE LETTER

UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

OFFICE OF THE DIRECTOR - RESEARCH AND PUBLICATIONS

Ref. No.DA.282/298/01.C/ Date: 08/07/2021

MUHAS-REC-07-2021-751

Roshen Aziz Nassoro,
MSc. PMMEH, School of Public Health and Social Sciences
MUHAS

RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: ACCESS TO HEALTH CARE SERVICES AND ASSOCIATED FACTORS AMONG NHIF CLIENTS AT MWANANYAMALA REGIONAL REFERRAL HOSPITAL, DAR ES SALAAM

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: 08/07/2021
EXPIRATION DATE OF APPROVAL: 07/07/2022

STUDY DESCRIPTION:
Purpose:
The purpose of this hospital based cross sectional study is to determine the factors that affect access to health care services among NHIF clients at Mwananyamala Regional referral hospital.

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-%20848.pdf and in the MUHAS archives

The PI is required to:

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

Dr. Bruno Sunguya
Chairman, MUHAS Research and Ethics Committee

Cc: Director of Postgraduate Studies

APPENDIX IIIA: INTRODUCTION LETTER

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.769/2019

12th July, 2021

The Executive Director,
Mwananyamala Regional Referral Hospital,
P.O. Box 61665,
DAR ES SALAAM

Re: INTRODUCTION LETTER

The bearer of this letter is Roshen Aziz Nassoro, a student at Muhimbili University of Health and Allied Sciences (MUHAS) pursuing MSc. Project Management Monitoring and Evaluation in Health.

As part of her studies she intends to do a study titled: "***Access to Health Care Services and Associated Factors Among NHIF Clients at Mwananyamala Regional Referral Hospital, Dar es Salaam.***"

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

Kindly provide him the necessary assistance to facilitate the conduct of his research.

We thank you for your cooperation.

Ms. Victoria Mwanilwa
For: DIRECTOR, POSTGRADUATE STUDIES

cc: Dean, School of Public Health and Social Sciences, **MUHAS**
cc: Roshen Aziz Nassoro