Assessing the Effectiveness of Universal Health Coverage Program on Health Service Delivery in Level Five Hospitals in Kenya a Case of Makueni Level Five Hospital Makueni County Kenya

by

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APPROVAL

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I declare that this thesis is my original work and has not been submitted to any other university or college for academic credit.

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I am grateful to the Almighty God for giving me the strength to conduct this project successfully. I would like to express my thanks and gratitude to my supervisors who guided me through this study. Special thanks to my mother, family, and friends for the continuous support and encouragement they gave to me when I almost felt like giving up. Thanks to all who assisted me directly and indirectly, this has contributed a lot to my finalization of this project within the limited time frame.

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LIST OF ABBREVIATIONS AND ACRONYMS

DOI	Diffusion of Innovation
GDP	Gross Domestic Product
KEMSA	Kenya Medical Supplies Authority
MoH	Ministry of Health
NGO	Non-Governmental Organization
NHI	National Health Insurance
NHIF	National Hospital Insurance Fund
OOP	Out-of-pocket
OECD	Organization for Economic Cooperation and Development
RSSB	Rwanda Social Security Board
SDGs	Sustainable Development Goals
THE	Total Health Expenditure
UHC	Universal Health Coverage
UN	United Nations
WHO	World Health Organization

ABSTRACT

The purpose of the study was to assess the effectiveness of the universal health coverage (UHC) program on service delivery in level five hospitals in Kenya. Its objectives were to determine the effectiveness of UHC program on healthcare services delivery, identify the strategies put in place to enhance the effectiveness of service delivery, and to determine the challenges faced in implementing the UHC. The study used the descriptive research design and its target population included healthcare workers and patients who sought health services at Makueni Level Five Hospital. Simple random sampling techniques was used to select a sample size of 93 respondents. Questionnaires were used in data collection and the data was analyzed using the statistical package for the social sciences (SPSS), version 24. Regarding the strategies put in place to enhance the effectiveness of UHC program, 53(70%) of the respondents stated that free maternity had been put in place in enhancing the effectiveness of UHC. Other strategies put in place included NHIF Scheme at 35(26.3%), healthcare financing at 22(28.9%). In regard to facilities, 61(80%) of the respondents stated the facilities were adequate although not all medicines were available. Similarly, 55(73%) of the respondents indicated that UHC had improved service delivery by enabling all patients to access healthcare and expanding hospital facilities. Regarding the challenges faced in UHC implementation, 50(66%) of the respondents reported that there was a shortage of drugs in hospitals, while 38(50%) stated that the supply of health facilities and equipment was inadequate. It was concluded that that health services in Makueni Level Five hospital were accessible. The study recommended that the government needs to intensify efforts to raise the uptake of health insurance to ease the burden of healthcare costs and improve healthcare access, especially to the poor.

DEDICATION

This study is dedicated to my beloved mum and family, who have been a great source of inspiration and encouragement. They tirelessly provided me with moral spiritual and financial support.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

Introduction

The World Health Organization (WHO, 2018) defined universal health coverage (UHC) as guaranteeing access to the health care by people without incurring financial difficulties. Effectiveness on the other hand refers to the extent to which stated goals and objectives are achieved (Productivity Commission, 2013). The objective of UHC is to provide every single person with affordable, accessible, and quality to health services. The elements of effectiveness in UHC implementation therefore entails the provision of health services that are affordable, accessible and of high quality with fairness and without discrimination (KPMG Africa, 2014).

The WHO (2014) identified four key elements necessary towards effective realization of universal coverage. These include a strong, efficient, well-run health system, a system for financing health services, access to essential drugs, facilities, equipment, and a sufficient capacity of well-trained, motivated health workers. Access is a complex multi-dimensional concept (Social Protection Committee, 2013). It refers to one's ability to access health care services due to the availability of health workers and drug stock, and their capacity afford those services. Gulliford et al. (2002) contended that service availability should satisfy the people's needs for the purpose of achieving access.

Access to UHC refers to regular and organized provision of healthcare services in a way that is within the convenient reach of all the community members (WHO, 2012). The healthcare must be appropriate and sufficient in content and in amount to meet the needs of community members and it has to be provided through approaches acceptable to them.

From this definition, Penchansky and Thomas (2014) came up with the 5A's to put into perspective the dimensions of access. These include affordability, accessibility, availability, accommodation, and acceptability.

Makueni level five hospital in Makueni County was the focus in this study because according to the Standard Daily report of November 5, 2018, the county government had adopted innovative models and interventions in its health system enabling adequate utilization of resources to offer its one million residents free healthcare across all its public facilities. From the foregoing, this study assessed the effectiveness of UHC program in terms of enhancing access to the Makueni County residents.

Background to the Study

Universal health coverage is a priority policy agenda worldwide and is one of the Sustainable Development Goals (SDG). It is meant to accelerate the progress of meeting the SDG health targets by 2030 (UHC 2030 Alliance concept note, 2016). It is the third goal in the sustainable development framework whose main aim is to ensure healthy lives and to promote well-being for all at all ages. Impressive advancements have been made towards achieving the same since the year 2000, though many countries have not been able to achieve health for all (United Nations, 2018).

World Health Organization (WHO, 2019) estimated that at least 12% of the global population spends 10% of the household income on healthcare services. Consequently, UN members have focused on achieving UHC by 2030 as part of the critical SDGs. UHC promotes access to the health services by individuals or communities without suffering financial hardship (Maeda et al., 2014). Global UHC comprises quality healthcare services

and promotion in the form of prevention, treatment, proper rehabilitation, and provision for palliative care.

United Nations (UN) introduced UHC as part of the SDGs to prevent escalation of diseases and deaths through the implementation of quality healthcare (Ikegami, Hashimoto, Matsumoto, Ogata, & Babazono, 2011). The agency focused on reducing the financial consequences suffered by the citizens in the member countries when accessing healthcare services. UHC focuses on reducing the chances of using life savings, excessive borrowing, and selling assets to secure lives (Lancet, 2016). Subsequently, there has been concerted effort to reduce the escalation of the costs of healthcare by pursuing SDGs. WHO has focused on prompting countries to consider progress and inclination towards UHC by setting feasible health-related targets (Britnell, 2015). The focus of the global healthcare system is to enable children learn and adults earn a living, which promotes the full realization of long-term economic development.

Germany introduced mandatory healthcare insurance through 130 private companies (Mcintyre, Meheus, & Rottingen, 2017). The coverage comprises outpatient, hospitalization, mental health, hospice, and prescription drugs. The government further provides hospitalization, medical aids, and prescriptions. Further, Germany provides long-term care insurance to enhance the healthy living of its citizens (Ridic, Gleason, & Ridic, 2012). The government has ensured that the healthcare system receives sufficient funding from the payroll taxes but pays for the comprehensive share of the healthcare system. UHC in Germany costs at least 11.3% of its GDP (Sturchio, Kickbusch, & Galambos, 2019).

United States has made significant strides to achieve UHC through a mixture of federal-run and private insurance (Shi, 2013). The cost of private insurance remains controversial despite the revision of Medicare and Medicaid initiatives. According to Johnson, Stoskopf, and Shi (2017), the government subsidized the cost of private health insurance through Affordable Healthcare initiatives. One-third of the costs meet the high administrative cost as opposed to patient care. Additionally, 60% of the Americans depend on private insurance from the employers while 65 and older people continue to depend on Medicare (Niles, 2016). Medicaid has catered for low-income families and the Children's Health Insurance Program (CHIP).

In the sub-Saharan African countries, efforts have been made towards providing UHC for their citizens with very little success achieved. A study done by Boston University (2018) revealed the challenges facing UHC in Ghana, Kenya, Nigeria, and Tanzania. It revealed that some of the challenges facing UHC in these nations comprise large section of the citizens living in extreme poverty and not able to pay premiums, large informal sector whose members are largely not insured, high rate of dropout from insurance schemes, underfunded primary health care system, and segmented health insurance fund pool. So as to realize UHC by 2030, it will be crucial for these nations to raise adequate funds to finance their health systems and enhance the efficiency of revenue usage. In addition, the nations need to identify and offer coverage for the very poor people, reduce the number of people that are not insured, and enhance access to quality health care in remote areas (National Center for Biotechnology Information, 2018).

A majority of the countries in Africa have integrated UHC in the national health strategies and goals. There has been slow progress in translating the commitment into effective

development assistance, equitable healthcare, and domestic resources. African countries aim to deal with preventable maternal and child deaths while bolstering the resilience of their health emergencies and financial empowerment by 2030 (World Bank, 2017).

Rwanda developed Mutuelle de Santé, a community-based health insurance scheme to deal with healthcare concerns at the community level. The country introduced a scheme that now covers at least 90% of the Rwandese communities (Kagire, 2018). Mutuelle de Santé is one of the few successes UHC models in Africa that confronted challenges such as low real uptake numbers, inflated populations, and poor service delivery in the healthcare centers as well as district hospitals (Lu et al., 2012). The government took over the program and transferred its management to the Rwanda Social Security Board (RSSB) presided over by Rwandaise d'Assurance Maladie in 2000. However, the operationalization of the scheme began in 2004 following the improved mechanisms by RSSB. The country's maternal and infant mortality rates reduced from 77% in 2000 to 27% in the year 2020 (UNICEF, 2020). The UHC model of Mutuelle de Santé has a point of reference for developing countries.

South Africa did not consider UHC for its citizens until 2017 despite being the only emerging economy in Africa in the early 2000s (Maromo, 2019). South Africa introduced the National Health Insurance (NHI) to overcome the discriminative two-tier health system. The new system will overcome the uneven distribution of South Africa resources. The country spends at least 8.5% of the overall spending on healthcare (Mehl, Tamrat, Bhardwaj, Blaschke, & Labrique, 2018). Every person is covered on a continuous basis. South Africa views NHI as a substantial policy that should restructure and sustain UHC for the citizens irrespective of the monetary or employment status. NHIF

covers citizens and long-term residents who will benefit comprehensive healthcare services (Mash & Von Present in, 2017).

Kenya launched a pilot project for UHC years after Rwanda initiated its Mutuelle de Santé. The pilot program covers different counties and at least 3.2 million Kenyans, free health services offered by the government (Ligami, 2018). The pilot phase caters for outpatient care including mental illness, emergency healthcare, and consultation. Kisumu, Nyeri, Machakos, and Isiolo are among the counties where UHC is undergoing piloting. The program covers the unemployed Kenyans under the National Hospital Insurance Fund (NHIF) initiative. The Ministry of Health identified and registered the households that will benefit from the program (Okech & Lelegwe, 2015). Kenya's universal healthcare coverage further covers surgical services, medical health, treatment, and care for TB, Malaria, and HIV. However, Ligami (2018) argued that the primary aim of the UHC initiative in Kenya is to reduce maternal and child deaths as well as overall financial hardships when funding medical care.

Kenya is on the front line to implement UHC by ensuring that all people have access to health services, which are affordable, and of good quality (Chibanzi, 2018). President Uhuru Kenyatta launched the UHC 2014 with a target of achieving universal health care (UHC) by 2022. One of the reasons was because every year over a million Kenyans are trapped into poverty because of the tragic out of pocket payments due to health issues (Schultink, Eggers & Chatterjee, 2018). This forces many families to use the money meant for basic needs towards paying the medical bills hence increasing the number of the poor. Time and resources are also spent while raising funds for medical treatment.

The healthcare funds for UHC program going to counties come from government expenditure, donor funding, and household expenditure. Household expenditure comes from formal and informal insurance schemes and out-of-pocket (Maina, Akumu, & Muchiri, 2016). Level five hospitals in the 47 counties receive conditional grants as additional funds to cater for the leasing of medical equipment, free maternal healthcare, and compensation for user fees foregone. The Total Health Expenditure (THE) has increased progressively since 2012 (Munge & Briggs, 2017). Kenya spent KSh 272 billion in 2012-2013 and Ksh 346 billion in 2015 / 2016. There was a 28% increase in healthcare spending and allocations to the counties. Counties received 25% of the healthcare budget in 2015/16 from the 13% allocations in the 2012/13 financial year (Githinji, 2018).

Statement of the Problem

According to the World Health Organization (WHO, 2014), approximately 150 million people globally meet the costs of health services from their pockets, while 100 million live under the poverty line. Further, the 2016 Kenya household health expenditure and utilization survey revealed that healthcare costs account for over 40% of non-food bill in over half of the Kenyan counties. Access to UHC is anchored on the constitution of Kenya 2010, millennium development goals (MDGs), vision 2030 and President Uhuru's big 4 agenda.

Makueni County is the only county in Kenya that has successfully implemented UHC program. Through its Makueni care social welfare coverage, all the Makueni residents who have enrolled are entitled to Ambulance services, outpatient services, inpatient services as well as maternity care. Being the first count to have successfully implemented the UHC program, the county set a great precedence for all other counties in UHC implementation

(Lancet, 2016). Various studies focusing on UHC have been carried out. However, none in the researcher's knowledge have been carried out to assess its effectiveness in Makueni County. The studies done focused on different concepts of the UHC program, hence presenting a conceptual gap that this study sought to fill.

Universal Health Coverage (UHC) being a relatively new concept in Kenya, this study provides a foundation and reference material to build upon and establish further the current issues surrounding UHC. Therefore, this study sought to assess the effectiveness of the UHC program in Makueni Level Five Hospital in Makueni County, specifically to determine its effect on healthcare services access and on the provision of health facilities, medical supplies, and equipment for healthcare services in Makueni County.

Purpose of the Study

The purpose of the study was to assess the effectiveness of the UHC program in level five hospitals in Kenya with a specific focus on Makueni Level Five Hospital in Makueni County.

Objectives of the Study

1. To determine accessibility of healthcare services at Makueni Level Five Hospital.
2. To identify the strategies that were in place to enhance UHC program in Makueni Level Five Hospital.
3. To determine the challenges of implementing UHC program in Makueni Level Five Hospital.

Research Questions

1. How accessible were healthcare services at Makueni Level Five Hospital?

2. What strategies were in place to enhance UHC program in Makueni Level Five Hospital?
3. What were the challenges of implementing UHC program in Makueni Level Five Hospital?
4.

Justification for the Study

Kenya is on the front line to implement UHC by ensuring that all people have access to health services, which are affordable, and of good quality (Chibanzi, 2018). This is exemplified by the launching of the UHC program in 2014 by the President with a target of achieving UHC by 2022. The UHC program was occasioned by the fact that in every year, over a million Kenyans were trapped into poverty because of the tragic out of pocket payments due to health issues (Schultink et al., 2018). This compelled many households to use the money meant for basic needs towards paying the medical bills hence increasing the number of the poor. Time and resources are also used while raising funds for medical treatment.

The researcher chose Makueni County because it was one of the counties in the country that has successfully implemented UHC. Through its Makueni healthcare social welfare coverage, all enrolled residents are entitled to Ambulance services, outpatient services, inpatient services as well as maternity care.

The healthcare funds for UHC program going to counties come from government expenditure and donor funding. Level five hospitals in the 47 counties receive conditional grants as additional funds to cater for the leasing of medical equipment, free maternal

healthcare, and compensation for user fees foregone. The Total Health Expenditure (THE) has increased progressively since 2012 (Munge & Briggs, 2017). According to Ouma (2018), UHC has redefined the government's commitment to healthcare for all Kenyans by 2022. For example, the national government allocated Ksh 90 billion of the 2019/20 budget, which represents a 48% increase from the amount the sector received in 2017/18. The budget allocated for health care 2021 to 2022 was 112.57 billion with an increase of 6.49 billion for preventive and promotive programs.

In the face of this commitment demonstrated by the Kenyan government towards UHC for its people, this study was therefore necessary in serving as a performance score card for Makueni County's implementation of UHC program in terms of its effect on health service access by Makueni County residents and the strategies put in place to enhance the effectiveness of UHC in Makueni County. This also would create awareness on the areas that need to be improved to ensure effective delivery of universal health care to the Makueni residents.

Significance of the Study

The study aimed at assessing the effectiveness of the UHC program in level five hospitals in Kenya. First, this study generated useful data that can be used by the government and health practitioners to assess areas of improvement and solve the challenges facing UHC and thus ensure improved service delivery.

Secondly, the study findings will help to inform the healthcare planning and policy makers on the current situation as far as UHC program is concerned. This would act as a basis for

them to formulate appropriate strategies and programs that may help improve healthcare services through the UHC program.

In addition, this study will serve as a rich source of reference for the Ministry of Health, Makueni County and other counties in the country on ways to improve the UHC program. Furthermore, it created the need for concern on the importance of filling any gaps noted that limit the effectiveness of the program.

The study will make a significant contribution to the body of knowledge on UHC program towards achieving the SDG through the UHC program. The knowledge gained would be used in decision making and prompt other scholars to carry out more research on the topic in regard to the gaps noted.

Assumptions of the Study

The study was based on the following assumptions:

1. That the study's respondents were aware of UHC program and therefore understand its effect on healthcare services access.
2. There were strategies put in place to enhance the effectiveness of UHC program in Makueni County.
3. The County government of Makueni faced challenges in implementing the UHC.
4. That the respondents were willing to cooperate and give accurate information that helped the study meet its objectives.
5. The sampled respondents were a representation of the entire population.

Scope of the Study

The study focused on assessing the effectiveness of the UHC program in Makueni level five hospital in Makueni County. Respondents were the health practitioners both in the county government and the health care facilities and the health care users from selected households in the county. The study was conducted between May and June 2020.

Limitations and Delimitations of the Study

1. Unwillingness of relevant respondents to share information that meets the study's objectives. To counter this, the researcher assured the respondents of confidentiality of the information they provided and that there was no risk to them, or their position based on the information they shared.
2. The relevant respondents may have not been available for the study due to their busy work schedules. The researcher delimited this by scheduling the data collection exercise at convenient times with the respondents.
3. Some respondents provided biased information that could thus negatively influence the study's results and undermine the intent of the study. To counter this limitation, the researcher emphasized on the importance of giving accurate and objective information that not only ensured the credibility of the study but also led to improvement of the healthcare service delivery courtesy of the study's findings and recommendations.
4. Some of the information related to the study may have been sensitive hence respondents could have been hesitant to provide the information. This was countered by assuring the respondents, especially the healthcare officers that the information sought was for academic purposes. Further, the researcher sought data collection consent from management of the Makueni Level five hospital.

Definition of Terms

Access: This refers to the ease with which an individual meets the needed medical attention whenever one gets sick (Gulliford et al. 2002). In this study, access referred to how affordable, available, and suitable the medical services were provided.

Effectiveness: This is the extent to which stated objectives are met (Productivity Commission, 2013). For this study, effectiveness referred to how people have access to the health care through preventive and treatment interventions.

Health care services: This describes the prevention and management of illness, injury, and other physical and mental impairments in people delivered by healthcare professionals through the healthcare system (Ministry of Health, 2014).

Summary

Chapter one has presented the introduction to the study, its background, research problem, the purpose of the study, and its objectives. The chapter has also presented a justification for the study, the assumptions upon which the study was based, the significance of the study, its scope and limitations of the study and explained how the limitations were delimited. The next chapter reviews the literature for the study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter provides a literature review based on the study objectives including the awareness of UHC, effectiveness of UHC, strategies for enhancing effectiveness of UHC and the challenges faced in implementing UHC. The chapter further discusses the theories on which the study was anchored including the diffusion of innovation theory and Maslow's hierarch of needs theory. Empirical literature review is also discussed in this chapter drawing relevant information from different studies done by different scholars, practitioners, and academicians relating to the research. Finally, the conceptual framework is engaged to bring out the relationship between the dependent and independent variable of the studies.

Theoretical Framework

Diffusion of Innovations Theory (DOI)

This theory describes how innovations or new ideas spread through communication mechanisms with time (Zhang, Yu, Yan, & Spil, 2015). Such new ideas are initially considered as uncertain and risky. To mitigate the uncertainty, many people look out for others who are in the same situation as themselves that have already embraced the innovation. Therefore, the process of diffusion comprises of a few people who first adopt a new idea, then convey the message about the innovation among their circle of friendships (Rogers, 2003). Everest M. Rodgers originally developed the theory in 1962 (Fleiszer, Semenic, Ritchie, Richer, & Denis, 2015). Since its development, the theory has

successfully been applied in many disciplines ranging from agriculture, communication, public health, social work, and marketing.

The theory seeks to describe how, why, and at what rate a new idea and technology spreads. Rogers (2003) observed that diffusion is the procedure through which an innovation is interconnected over time between the contributors in a social system, while innovation is an idea, practice, or object that is perceived as new by an individual or another unit of adoption. Therefore, innovation diffusion theory argues that potential users make decisions of adopting or rejecting the beliefs founding the innovation which forms about the innovation (Rogers, 2003).

In public health, the theory is applied to speed up the adoption of key public health programs that basically aim at changing the conduct of a social structure (Zhang et al., 2015). In this study, the theory can be used to evaluate the adoption of UHC through viewing community member's opinion about embracing the innovation. It is important that the innovation is widely adopted for its sustainability to be achieved. Within the adoption process, there is a point at which an innovation attains critical mass. The information flows through networks. The networks nature and the roles played by opinion leaders established the likelihood of adopting the innovation. There is an influence exerted on audience behavior by leaders through their personal contact, however extra mediators known as agents of change as well as gatekeepers are also part of the diffusion process (Fleiszer et al., 2015). Innovation increases the effectiveness on any organization.

According to Zhang et al. (2015), Rogers did not give credence to the effort of mass media in every new idea or innovation. Diffusion of innovation (DOI) theory has given too much

power to opinion leaders and change agents. He believes that the leaders and agents are responsible for the adoption of the late majority, late adopters, and laggards (Zhang et al., 2015). The mass media also have a role to play when the process is at the decision stage. Another advantage of this theory is that it stimulates adoption by groups that do not want the innovation (Fleiszer et al., 2015).

The theory was relevant in this study since the UHC must have the technological aspect to increase service access, quality, and effectives in providing health coverage. This study adopted innovation diffusion theory to explain the spreading of the UHC concept from inception to implementation of the idea in Kenya.

In this study, the diffusion of innovation theory only explains how new ideas spread. It is on his basis that the study adopted the Maslow theory to explain the human motivation towards needs which are healthcare service needs in this study.

Abraham Maslow’s Theory

Maslow's hierarchy of needs is a theory in psychology proposed by Abraham Maslow. The theory provides a clarification for human motivation towards needs and it emphasizes the importance of the basic needs as fundamental for human survival. Maslow’s hierarchy of needs theory relies on the ranking of human needs based on the value they add to the people (Maslow, 1970).

The hierarchy outlined five levels of human needs, the most fundamental being physiological needs, followed by safety needs, needs for belonging and love, needs for esteem, and finally self-actualization. According to Maslow (1970), the first level of needs is the physiological needs. Needs under this category include food, shelter, clothing,

health, and education among others. If these needs are not met, this creates a situation where the person will have no possibility of attaining the higher level of needs. The physiological needs help a person to be in a comfortable state in which their bodies are in a good state of health to enable them to perform well.

The second level is the safety needs, and these include the need for insurance, employment, a secure environment among other factors. These needs emerge after the desire for food and shelter is met. It entails the need to have security, to be safe from other beings and from their environment (Maslow, 1970). The third level is the need for love and belonging. When the needs for safety and for physiological well-being are satisfied, the next class of needs for love, affection and belongingness will emerge. Maslow stated that people seek to overcome feelings of loneliness and alienation. This involves both giving and receiving love, affection, and the sense of belonging.

The next level is the 'esteem' needs which entails the need for respect of others and self, recognition, attention, and status (Maslow, 1970). Satisfying these needs makes a person feel self-confident and valuable. Similarly, failure to satisfy the needs makes the person feels inferior, weak, helpless, and worthless. At the top of the hierarchy is the self-actualization needs that involve realizing one's full potential for continued growth and individual development.

This theory was relevant in this study as it helped in understanding why quality health provision is considered a basic need which cannot be left to operate on its own without fulfilling the other needs for example a person has to be psychologically stable/ fulfilled to concentrate, after being psychologically stable a person has to be shown love since it

directly affects the psychology of an individual (Maeda et al., 2014). A sense of belonging also has to be realized for example a patient in public hospital has to receive the same warmth and love as the patient in a private hospital and also the hospitals should receive enough staffing and funding so as to help in the smooth running of the hospital and provision of quality health services.

The theory also helps in explaining the effectiveness of the UHC program in terms of providing affordable, accessible, and quality health services to every single person in Makueni County, elements which support accessibility to health services in terms of enough medical supplies, equipment, medical staff important in providing the required services to the patients (Britnell, 2015). The theory's strengths and perspectives build a framework for the understanding of human needs and the importance of being effective in providing them. Meeting the health needs of the people through effective implementation of the UHC program provides an opportunity for the people to move to higher level needs.

General Literature Review

The Concept of Universal Health Coverage (UHC)

Universal Health Coverage implies that every person and societies access the health services they require without incurring financial difficulties (WHO, 2017). It consists of the whole spectrum of quality healthcare, ranging from health awareness to prevention, treatment, rehabilitation, and palliative care. It basically comprises of all elements of the health system, health service delivery structures, the health personnel, health equipment and communications structures, information structures and quality assurance protocols (WHO, 2017). Universal health coverage is a universal agenda and one of the targets that

the nations of the world including all UN member states have agreed to try to achieve by the year 2030 as part of the SDG. This mainly addresses the Sustainable Development Goal 3 (SDG3) of ensuring health for all.

Kenya has achieved progress regarding UHC as confirmed by the many policy frameworks and changes that have been implemented. Kenya is on the front line to implement the UHC by ensuring that all people have access to health services, which are affordable, and of good quality (Chibanzi, 2018). President Uhuru Kenyatta launched the UHC goals in the year 2014 with a target of achieving health (UHC) by 2022. One of the reasons was because every year over a million Kenyans are trapped into poverty because of out-of-pocket payments due to health issues (Schultink et al., 2018). Some of the patients with conditions that could have been treated end up dying due to lack of any funds to seek treatment.

Effect of UHC on Healthcare Services Access

Access is a complex multi-dimensional concept (Social Protection Committee, 2013). It is a person's ability to access health care due to the availability of health personnel and drug stock, and their ability to financially afford those healthcare services. This definition is however narrow since access is beyond availability and affordability. Gulliford et al. (2002) noted that the available healthcare services need to satisfy people's needs in order to achieve the objective of access.

Penchansky and Thomas (2014) came up with the 5A's to put into perspective the dimensions of access. These include affordability, accessibility, availability, accommodation, and acceptability. Firstly, they describe availability as the relationship between the existing resources and the population and their needs. Accessibility on the

other hand is the relationship between the location of the facilities and the location of the population while considering the transport cost, time, and distance. Affordability is the relationship between healthcare services costs and the ability of the users to pay for them. Accommodation is the relationship between the healthcare service providers' ease of accepting the users and the users' ability to adjust to this and their view of its suitability. Finally, acceptability is the relationship between the users' beliefs about the providers' behavior and the real behavior of the providers and vice versa. The five dimensions are closely related, a fact that explains why they are part of the concept of access.

According to Penchansky and Thomas (2014), there are three measures of availability, namely the supply of healthcare personnel, health facilities and technical programs like emergency care and mental health. Social Protection Committee (2013) indicated that availability is indicated by the number of health personnel with the requisite skill combination that matches people's needs and the provision of drugs and equipment. Additionally, bed capacity is a key measure. WHO (2012) indicated that, the measures of accessibility to include the geographical distribution of health centers, and facilities and the convenience of reaching them.

Shrestha (2010) observed that there could be sufficient provision of health facilities and personnel near the people, yet they are not affordable. In such situation, individuals tend to move to other places where the services are affordable. Hence, it is significant to take into consideration the affordability element. This dimension comprises measures like the proportion of population insured, the availability of subsidized schemes for some groups and the proportion of out-of-pocket spending as a total of private spending on health (IOM, 2013).

World Health Organization (2012) provided three major objectives that enhance UHC implementation including equity, quality and affordability, where equity includes the equity in access to health services whereby everybody that requires health services should get them, and not just those that can pay for them. Quality on the other hand means that health services supplied should be suitable enough to improve the health of health service recipients. Health care equipment should be there including the dialysis machines and enough medical personnel able to manage the population of patients in health centers. Also, WHO (2012) indicates that affordability refers to the supply of financial-risk protection through making sure that the cost of health services does not expose people to the risk of financial challenges or impoverish them. Pooling of financial help via schemes such as NHIF and medical insurance covers may help in meeting of medical bills, hence saving from out-of-pocket spending.

Effect of UHC on Health Facilities, Medical Supplies and Equipment

Availability and Sufficiency of Health Facilities

Availability implies a situation of presence and in adequate levels to satisfy healthcare needs. Healthcare facilities are the key healthcare resources including wards, theatres, laboratories, hospital pharmacies, waiting lounge, doctor and nurses' stations, sanitation facilities such as bathrooms and toilets, water and power supply, postnatal wards, and newborn nurseries (Echoka, 2011).

Availability and sufficiency of resources in hospitals is key and can hugely influence patient populations that receive healthcare service in hospitals and the quality of the provided services. Kumar and Dansereau (2014) revealed that the quality of healthcare is

superior if sufficient beds, medications, equipment, energy supply and communication systems are present in hospitals.

Strategies for Enhancing Universal Health Coverage

Kenya has initiated a number of programs that facilitate universal healthcare financing in geared towards increasing coverage for quality health services, improving availability of important medication and also reducing out-of-pocket spending towards meeting health services (Mwaura, Barasa, Ramana, Coarasa, & Rogo, 2015). The Kenya health policy 2014-2030 emphasizes on healthcare financing as one of the policies geared towards the general policy objective of achieving the best possible standard of healthcare. This comprises the approaches of sourcing and managing the necessary finances to guarantee the provision of healthcare services. The main objective of the policy can only be achieved by guaranteeing efficiency, equity, accountability and transparency in resource sourcing, allocation, and utilization (Ministry of Health, 2014).

Examples of the strategies for guaranteeing financial risk protection include elimination of spending at the point of health service use particularly by the marginalized people via social health insurance and government subsidies, enhancing private sector inclusion in healthcare financing through public-private partnership agreements and designing and operationalizing a healthcare financing policy. This implies that the policy's objective is to incrementally facilitate access to healthcare service by everyone via ensuring social and financial protection via sufficient sourcing, allocation, and efficient use of financial resources for health service provision (Ministry of Health, 2014). The Kenya Healthcare Federation & Task Force (2016) posited that the Kenyan healthcare financing system is composed of different elements including financing from taxes, National Hospital

Insurance, private health insurance, employment-based health insurance, Community based health financing schemes, developmental partners, and NGOs and Out-of-pocket (OOP) spending.

Financing from taxes covers some services that are provided for free in public health centers. Such services comprise of free maternity and treatment for children below five years. National Hospital Insurance Fund (NHIF) provides financing for public and private health facilities that have been approved by the fund. Its membership is compulsory for everybody employed in the formal sector. Initially, the fund used to offer basic inpatient services but later extended its coverage to outpatient services.

With private health insurance, almost two percent of Kenyans are covered under the scheme. This comprises those covered by insurance companies and those covered in the medical insurance providers in different organizations. In this regard, about twenty-five private insurance firms provide healthcare package. With regard to employment-based health insurance, employers provide healthcare as an incentive to their employees. The finances can be controlled by the company or by a third party.

Community based health financing schemes are developed to meet the needs of low-income groups that are unable to fit in private health insurance and the National Health Insurance Fund. They are registered under the Public Service ministry and the ministry of Gender and Youth Affairs. The Out-of-pocket (OOP) payment involves those patients that pay directly from their pockets for health services at the point of consumption. This is a major constraint to accessing health services by the poverty stricken as it further drives them deep into poverty.

The NHIF scheme is a more accessible medical cover providing insurance at premiums that are considerably affordable and fitting most socio-economic groups in the country (Commission on Macroeconomics & Health (2013). The benefits of being an NHIF member comprise coverage of inpatient costs on bed, meals, treatment, and drugs. Poor participation by individuals in the informal sector in fund has been sited on the challenges they face. Individuals in the informal sector face challenges of low and irregular flow of incomes, a fact that renders them not able to do timely contributions (Filmer & Pritchett, 2016). Individuals in the informal sector similarly encounter challenges brought about by inflexible scheme design characteristics like inflexible payment schedules, penalties, and cumbersome registration and contribution procedures (Schwartz, Akin, & Popkin, 2015).

Challenges Faced in the Implementation of Universal Health Coverage

Inequalities in Health Status

The challenges in provision of UHC are numerous particularly for low- and middle-income generating nations and they comprise health inequalities. Despite progress in enhancing health measures in majority of the nations, inequalities in health status limit access to healthcare (European Commission, 2010). Inequalities are majorly controlled by socio-economic elements like education levels, income, and occupation (Joumard, Andre, Ncq, 2010). Some characteristics of health care systems, occasion inequalities in health outcomes. For instance, informal payments for health care that are dominant in majority of emerging economies burden the poor (Jakab, 2013). Another challenge is escalating cost; health care costs have been growing rapidly in the past several decades. In emerging economies, the total spending for health has increased from below 3% of GDP to 5%.

These increments have occasioned a lot of fiscal pressure on governments and financial pressure on families and business enterprises (WHO, 2012).

Inefficiencies in spending for health are huge and this comprise inefficiencies in allocating resources and in production of resources. A study by the Organization for Economic Cooperation and Development (OECD) (2016) revealed that minimizing inefficiencies in the health structures by half would increase life expectancy at birth by more than one year. In comparison, a 10% increase in health care spending per capita can increase life expectancy by 3-4 months. WHO (2012) estimated that, 20% to 40% of resources used on health are wasted. The common sources of inefficiencies comprise inappropriate and ineffective administration of drugs, medical mistakes, lack of optimal quality care, wastages, corruption, and fraud (Musgrove, 2015).

Healthcare and Personnel Availability

Medical facilities have to be available physically for the people to access Medicare services. Only 63% of the Kenyan population have access to government health services situated within one hour from their residences (International Rescue Committee 2015). Health facilities are not equally distributed across all the 47 counties of Kenya. This means that people residing in the far areas of counties need to commute for days to access medical facilities. In overall, half of the Kenyan counties have less than two medical facilities taking care of 10,000 people and less than 4 health facilities per 100 km square (Muoko & Baker 2014).

The shortage of sufficient health workers in majority of counties is one of the key challenges facing UHC. Between January and August of 2015, more than twenty-two

counties went through strikes by health workers, who indicated that the strike was occasioned by a shortage of medical personnel (Kariuki 2014). The main factors leading to the critical shortage of health workers include huge levels of desertion by medical workers, shortage of structures to identify the health workers' needs, endemic corruption levels in the counties and lack of adequate financial resource for the recruitment of health workers.

Healthcare Financing

The Kenyan Government has over the previous year's drastically reduced the health sector financing. These drastic financial reductions have consequently led to poor health services delivery, shortage of medicines and regular strikes and heightened rates of death and morbidity (Kariuki, 2014). Availability of essential drugs is an important health system component which is closely related to availability of finances. In the years 2010, the Kenyan government came up with the 'pull system' to enable the supply of essential drugs. The 'pull system' is a demand-based methodology of ensuring that health supplies are reliably available in every medical service delivery points. While the pull system was operating in many of the hospitals by the year 2013, the coming in of devolution disrupted it in a major way.

Prior to the introduction of devolution, the pull system was enabled by healthcare facilities sourcing drugs from the Kenya Medical Supplies Authority. In the devolution era, the counties health facilities are not under obligation to source from KEMSA and so they have an option of sourcing from other areas they deem fit. The consequence of this is the many avenues of corruption and mismanagement that have arisen, leading to the perennial shortage of medicines in medical facilities. The fact that procurement systems in counties are largely underdeveloped and sub-optimal, corrupt workers in county governments are

sourcing medicines at high costs. This compromises the list of essential medicines and the quality of drugs procured. There, efficient systems of monitoring are urgently required at county levels to address the drug supply question and review strategies in place for curbing corruption.

Monitoring Concerns

Ng, Fullman, Dieleman, Flaxman, Murray, and Lim (2014) considered effective coverage as an effective monitoring metric for UHC. The monitoring was observed as a challenge in a review that focused on individual and governmental interventions in tracking the progress made towards achieving universal healthcare coverage. However, Ng et al. (2014) noted that estimating the coverage of UHC was a problem due to the intricate systems deliveries. Boerma, AbouZahr, Evans, and Evans (2014) noted similar challenges when they reviewed the health interventions and financial protection efforts by different countries across the globe. The outcomes showed that health disparities and convoluted health information systems complicated the process of determining the effectiveness of the UHC and effort to attain reliable, timely, and comprehensive services to the vulnerable populations.

Health Insurance Challenges

The insurance of the UHC could be an impediment to the pursuit of health equity in different economies. Gwatkin and Ergo (2011) questioned the sustainability of UHC in countries where issues such as free health services, reproductive health, and HIV/AIDS were prevalent without proper health insurance. The review perceived that poor planning of the health system as a challenge rather than an avenue to reform the delivery of services to the vulnerable populations. A more comprehensive study by Ikegami et al. (2011) on

Japan revealed achievements as well as health insurance challenges amidst successful implementation of UHC. The primary issues were planning and developing a healthcare system that citizens could fund and tax used to subsidize costs especially for the elderly, mothers, and children. Kwon (2008) established similar insurance challenges despite South Korean's 30-years' experience in national health insurance.

According to Kwon (2008), the introduction of mandatory social health insurances and extension to the self-employed workers ensured coverage for the entire population. However, adopting a proper balancing act between social health insurance and tax options was a challenge. The country experimented single versus multiple schemes in an effort to control the escalation of healthcare expenditure. The most significant challenge emanated from the dominance by the private service providers and the increasing public-private mix of health insurance. Knaul and Frenk (2005) established that Mexico had solved a similar private insurance dilemma experienced in South Korea through structural reforms to achieve UHC. Social protection for the health of Mexicans reduced the calamitous and out-of-pocket spending to enhance efficiency, equitability in health distribution, and overall better healthcare.

Health insurance is a challenge in the achievement of UHC due to the design of the system in response to costs, income groups, and accessibility to healthcare facilities. According to Schoen et al. (2010), Sweden, Australia, Canada, U.S, UK, New Zealand, Germany, France, Netherlands, and Norway face health insurance designs during the initiation of coverage for public, private or hybrid healthcare systems. The countries had varying structures of cost sharing, but they faced comprehensive challenges of handling the expensive private health insurances without comprehensive reforms. Schoen et al. (2010)

noted that the U.S had the most expensive health insurance rates. The findings compare with the trends noted in Latin America by Atun, De Andrade, Filho, Solar, Rígoli, De Salazar (2015). Social sector reforms in the 1990s offered the appropriate basis for reducing health access and inequalities for poor citizens. The introduction of tax financed UHC as opposed to private insurance strengthened the healthcare systems and improved access by the disadvantaged populations.

Empirical Literature Review

The equity of healthcare system has been a critical concern in many countries. Chuma and Okungu (2011) analyzed the Kenyan health system to determine the equity level as the country endeavored to achieve equitable financing at the local level. Document analysis of WHO and Ministry of Health publications revealed that financing options set a precedent for purchasing, revenue generation, pooling, and overall policymaking to sustain equitable healthcare system. The research did not reveal a clear financing option, but Association of Southeast Asian Nations (ASEAN) countries have made landmark steps as per another study by Guinto, Curran, Suphanchaimat, and Pocock (2015). The authors found that ASEAN has made financing easy by creating multilevel options for citizens and migrant workers. The full integration of the region has made a significant effort to attain UHC that promotes efficiency and delivery without impediments such as financial hardship.

Jeon and Kwon (2013) studied the South Korean effort to achieve universal public insurance system. The country viewed insurance as one of the critical ways of achieving UHC. Examination of 9512 adults in a Korea Health Panel Survey showed that healthcare utilization and the subsequent expenditure was easy due to the popularity of private healthcare insurance. However, Jeon and Kwon (2013) observed the moral hazard of

private health insurance, which necessitated policy change to sustain a balance between inpatient period and overall expenditure. Wouters and McKee (2016) agree with Jeon and Kwon (2013) on the effectiveness of private insurance catering for UHC in developed countries. However, economic, financial crisis proved that market failures could be impediments to the achievement of cost reduction, equity, and accessibility of the model. Hence, the financing approach applies in specific settings alone.

Thailand has sustained an ambitious financing model for UHC using tax options and subsidizations. Hsu, Huang and Yupho (2015) undertook quantitative policy experiments with the elderly and welfare analysis to determine the effectiveness of tax options in financing Thai's health insurance system. The results revealed that a large informal sector could inhibit the capacity of Thailand to meet UHC-based inequalities due to income generation disparities and subsequent tax burdens. However, such challenges were solved with proper policies and practices in China. Tang, Brixi, & Bekedam (2013) argued that China health system reforms and increased political will to align with the WHO's suggestion solved the financing problem and initiated the development of a sustainable UHC program. The implementation of reforms factored the context of the taxpayers and their role in funding the healthcare system through a pooling mechanism.

The importance of healthcare reforms to align with the realities of the citizenry was observed in Singapore, Switzerland, Taiwan, Chile, and Israel. According to Rodwin (2010), the small and mid-sized industrial economies faced similar pressures from the healthcare systems. Government actions led to the development of a system that could promote fair payment, contracting, administration, and ownership. Rodwin (2010) argued

that the proper development of policy options ensured that the countries accommodated national politics, non-government stakeholders, and dominant cultural orientations.

Correspondingly, Mills et al. (2012) observed that Ghana, Tanzania, and South Africa had made significant progress in establishing health insurance mechanisms to address financial cushion as well as the equity of access issues in the implementation of UHC. Macha et al. (2012) realized that Ghana, Tanzania, and South Africa had considered financial reforms to promote UHC through distribution and service delivery at the local levels.

Mills et al. (2012) conducted a more comprehensive analysis of UHC utilization and application than Sarpong et al. (2010) did. The analysis of equity financing scheme of universal health insurance in South Africa, Tanzania, and Ghana revealed diverse paths used to achieve comprehensive coverage. Whereas Mills et al. (2012) established progressive healthcare financing in the three countries, South Africa struggled with indirect taxes and out-of-pocket contributions. Furthermore, the system was stratified considering the coverage for rich and poor contributors. The study could have utilized countries with similar health systems other than undertaking a comparative analysis with the emerging economy of South Africa.

The analysis of a more advanced economy of Japan by Ikegami et al. (2011) than the middle-income nations of Ghana and Tanzania expedited the establishment of a clear perspective of UHC implementation. Japan had achieved coverage for its citizen as early as 1961, but Ikegami et al. (2011) noted extensive fragmentation including 3500 plans, which inhibited cross-subsidization. Consequently, sustaining an equitable and universal healthcare coverage became a challenge due to the discrepancies in the age and

employment dynamics. Ikegami et al. (2011) noted the limitations of creating plans that are incognizant of the residential or employment status of the citizens.

De Andrade et al. (2015) studied Latin American countries to establish the social determinants of UHC and the sustainable development of the region. The countries faced challenges of tracking the progress made in the region due to the escalation of social issues of poverty and inequalities. However, Latin American nations designed and implemented healthcare programs underpinned by inter-sectoral actions and social participation to ease the monitoring process. On the other hand, Switzerland faced competing interests in healthcare and economic progress. Guessous, Gaspoz, Theler, and Wolff (2012) conducted a population-based case study to investigate the four-year revolution Switzerland underwent to track the progress of healthcare and achieve sustainable economic agenda. Results revealed that issues such as dependency, poverty, gender, and low-income brackets persuaded the Swiss government to forego health to achieve economic equality. Monitoring such economies for UHC progress was a challenge before they implemented ambitious and long-term plans for their different demographics.

Shibuya et al. (2011) studied the Japan healthcare system to determine the effort made to achieve equitable services given the shaky future due to natural incidences such as earthquakes. The review found that cost escalation could be a problem if the country cannot execute human-security value-based reform while redefining the role of the local governments.

Ibrahimi et al. (2011) undertook a qualitative study of UHC insurance in Iran to determine its sustainability. The semi-structured interviews focusing on health financing system

revealed critical obstacles in the areas of revenue collection, purchasing, and risk pooling. Furthermore, Iran case revealed increased regressive financing, high uninsured population, and non-transparent financial flow that could not benefit the underprivileged population. Correspondingly, Ataguba and McIntyre (2012) observed highs cost accessing care in South Africa despite the government piloting measures to promote equitability of the health system. The emerging economy has struggled to meet the primary needs of the population despite the growth ill-health burden among the poor native populations. However, an emerging economy China has demonstrated that controlling cost escalation of UHC is possible.

According to Tang, Tao, and Bekedam (2012), controlling the cost escalation of the UHC in China was an imperative decision. China has achieved 90% health coverage through the new cooperative medical schemes and rural population and urban basic health insurance. However, this required reform to control the costs with co-payment options alongside reformed drug procurement, bolstered application of clinical paths and treatment of patients. However, the cost escalation challenge is not as critical as aligning with monitoring recommendation as Obare, Brolan, and Hill (2014) found out in Kenya. The Kenyan case of UHC was struggling with compliance with post-2015 monitoring guidelines by the World and UHC. Kenya was struggling with interventions for chronic condition, injuries, and reporting (Obare et al., 2014).

Another study by Tangcharoensathien et al. (2011) investigated health-financing reforms in Southeast Asia. The study established that the payroll tax is rampant in Asian nations but with varying financial protection terms. The Asian countries used contributory arrangements and tax-financed structures to achieve comprehensive protection. However,

the healthcare financing reforms presented in the study cannot inform policy in a middle-income country like Kenya due to different policymaking and healthcare system.

The sustenance of quality at continental level in Africa is anchored in the efficiency of healthcare financing as per Macha et al. (2012) rather than monitoring social and economic determinants as per Marten et al. (2014). As observed by Macha et al., addressing drug stock-outs, diagnostic equipment, and staff shortages could improve the quality of UHC in the three countries.

Affordability was found to be as critical as the quality of UHC by Mehl and Labrique (2014) as countries strive to optimize the performance of their healthcare systems. The review that the use of Health strategies for enumeration, health records maintenance and enumeration would improve health system performance. Reeves et al. (2015) agreed that health system performance and affordability among low-income earners were imperative but from the perspective of 89 low and middle-income countries. The countries showed the need for financing UHC with alternative tax structures and encouraging co-payments to optimize the performance of public health systems. Consequently, Reeves et al. (2015) argued that the poor would afford neonatal care and essential healthcare services with financed UHC.

However, Chuma and Okungu (2011) revealed Kenya's progress towards achieving equitable UHC, but with little effort made towards attaining international benchmarks and reducing out-of-pocket contributions. Moreover, the connection between equitability of UHC and the performance of the health care system at the county level was not clear. The

findings emerged at a time when Kenya had not implemented financing reforms towards NHIF, which Lagomarsino, Garabrant, Adyas, Muga, and Otoo (2012) suggested.

Whereas the Big Four Agenda is set to prioritize UHC, an analysis of 2013 Service Availability Readiness Availability Mapping (SARAM) data indicates great differences in county health system readiness to offer healthcare under the devolved structures. Some counties encounter challenges in accessing healthcare services. For example, seven counties had below average numbers of facilities per 100 square kilometres and per 10,000 people. Hence, the inability to address the accessibility aspect of healthcare as one of the key goals for realizing UHC is clearly evident. The study also states that counties that performed relatively well across the indicators may still have inadequate healthcare inputs according to national or international standards, which fails to meet the second objective of providing quality health services. The failure translates into a gap in preparedness of the counties to carry out the UHC appropriately. Even though enhanced revenue might improve the readiness of counties to offer healthcare services, this assessment did not establish a particularly strong link between revenue per capita and relative performance through the sixteen indicators.

Affordability has been a critical issue in the implementation of UHC in emerging countries. According to McIntyre and Ataguba (2012), the affordability model defined the distribution and development of an efficient financial option for healthcare in South Africa. Whereas the UHC program is still under trial phase, analysis of 15-year period revealed that revenue, generation, and resource distribution to different provinces had redefined the establishment of universal care program in one of the developed countries in Africa. Jakovljevic, Groot, and Souliotis (2016) agreed with McIntyre and Ataguba (2012) that the

financing model had redefined the affordability of the UHC models in different emerging global markets. BRICS have registered increased economic growth, which has inspired the efficient distribution of resources and establishing funding strategies to enhance the affordability of healthcare services.

The affordability of care depends on the healthcare decision-making process at the national level before devolving the function to different regions. Tu et al. (2012) observed the importance of healthcare decision making when they studied the cost-effectiveness of Vietnamese Hepatitis B immunization under the UHC. The decision to focus on the vulnerable population such as children led to a reduction of carrier rate by 58% while the country averted high costs of implementing the program. Consequently, it took proper decision making to devise a program under UHC that could accomplish cost-effectiveness and affordability. Similar observations came up in another empirical research of Chinese healthcare insurance in the urban and rural areas by Wang, Zheng, He, and Jiang (2014). The country had managed to implement its urban employee basic medical insurance scheme, a new rural cooperative medical system, and urban resident basic medical insurance schemes. The 1178 participants in the study affirmed that the program had received massive support due to its promising financing healthcare system.

McPake and Hanson (2016) established that the quality of UHC depended on the management of the private-public mix. The study reviewed the role of the private sector in the achievement of UHC against the renewed focus by the government to establish sustainable plans in low and middle-income countries. The review established that proper vetting of the private sector comprising not-for-profit providers and small and medium enterprises enhanced UHC sustainability. Ooms et al. (2014) agreed with McPake and

Hanson (2016) on proper understanding between the private and public sectors but noted the rights to success defined an effective UHC application process. The study anchored its premise on the effort by WHO to achieve MDGs by ensuring that every population had proper access to the healthcare services and systems across the globe. On the other hand, fostering the needs of each demographic is imperative in the achievement of quality in UHC implementation.

The quality health gap in Kenya's effort to achieve UHC emanates from the complicated distribution of health benefits. Chuma, Maina, and Ataguba (2012) carried out cross-sectional households' surveys in 2003-2007 to determine the public, and private sectors were making efforts to deliver quality healthcare. The results revealed that the private-for-profit sector remains pro-rich while the public and non-for-profit sectors focused on the equal distribution of healthcare benefits. Kenya could have implemented an ICT-based UHC mechanism to promote the equity established by Shiferaw and Zolfo (2012) in Ethiopia. The country's UHC is dependent on the use of telemedicine to overcome the challenges and failures while expanding the successes of delivering quality healthcare to the residents. However, both Kenya and Ethiopia faced the capacity building, multi-sectoral involvement, e-government readiness, and enabling policies as critical challenges in the implementation of UHC.

Conceptual Framework

A conceptual framework refers to a tool meant to help a researcher to create awareness and understanding of the context being studied and to communicate this (Kombo & Tromp, 2014). When it is clearly illustrated, a conceptual framework becomes a tool that helps a

researcher to make sense of subsequent results. Figure 2.1 depicts the study's conceptual framework.

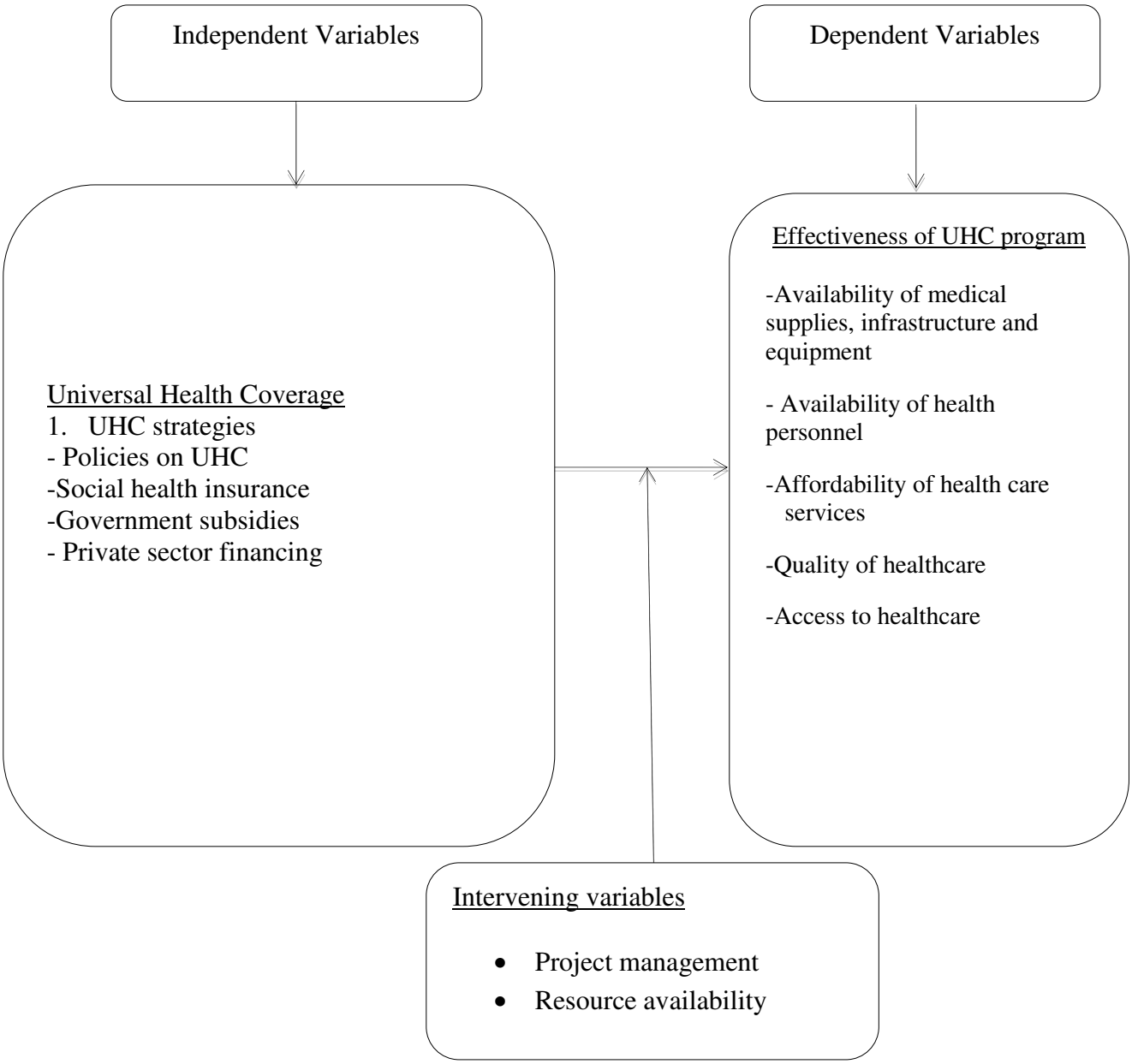

Figure 2.1: Conceptual Framework
Source: Author (2021)

Discussion

The independent variable in this study were the strategies put in place to enhance the effectiveness of UHC program (UHC policies, social health insurance, government subsidies, private sector financing) and the challenges faced in UHC implementation. The dependent variable on the other hand was the effectiveness of UHC implementation measures by affordability, acceptability, and quality of healthcare. Effectiveness of UHC is also measured by availability of drugs, facilities, health personnel & emergency programs, increase in life expectancy and reduced mortality rates. The intervening variables were the government policies that enable implementation of the UHC and how the whole agenda of UHC was managed.

The variables relate in the sense that when UHC strategies and policies were implemented including social health insurance, government subsidies and financing, UHC increased in terms of quality health services, improved availability of important medication and also reduced out-of-pocket spending towards meeting health services. Similarly, healthcare financing policies helps in achieving the best possible standard of healthcare. This comprises the approaches of sourcing and managing the necessary finances to guarantee the provision of healthcare services. All this leads to effective UHC in terms of affordable healthcare acceptable medical interventions, quality of healthcare, availability of drugs, facilities, health personnel & technical programs like emergency programs and mental health. Further, with increased level of UHC awareness among the people, more people will seek medical care well in time whenever they feel unwell, leading to increase in life expectancy and reduced mortality rates.

The presence of challenges in UHC implementation including insufficient financing cost escalation, health insurance challenges and inequalities in health status limit access to healthcare and UHC and therefore they determine the effectiveness with which UHC is implemented. For example, minimizing inefficiencies in the health structures like inappropriate and ineffective administration of drugs, medical mistakes, wastages, corruption, and fraud may guarantee availability of medication, health workforce and facilities and may increase life expectancy and reduce mortality rates.

The intervening variables of government policies, project management and resource availability enhance the relationship between the dependent and independent variables. For example, if the government mobilizes resources for the UHC program with proper government policies for UHC as a government project together with the deployment of people with the requisite managerial skills and knowledge, effectiveness in UHC implementation will be enhanced leading to affordable, accessible, available, and quality universal healthcare.

Summary

This chapter focused on the literature review relevant to the study objectives. The theoretical framework consists of a theory of diffusion, adoption, and community readiness models. Further, an empirical framework was discussed drawing relevant information from different scholars and academicians in relation to the research. Finally, the conceptual framework brought out the relationship between the dependent and independent variable of the studies.

The next chapter of the study covers the research approach that was adopted, how data was collected, the rationale behind the methods and the validity and reliability of the chosen research methods. It provides a description of the methodology the researcher used to assess the effects of universal health care on the performance of a decentralized Government health system.

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

This chapter covers the research approach that was used to assess the effectiveness of the UHC program in level five hospitals in Kenya. Research methodology are the steps of how the study is to be carried out (Stevens & Clow, 2008). The steps comprise of the research designs, data collection procedures and data analysis to be applied in carrying out the research study (Mugenda & Mugenda, 2012). The study adopted a descriptive research design and used the convenience sampling technique to select respondents for the study.

Research Design

A research design is the roadmap that guides conduct of a study including the collection of data, how the data is measured and analyzed (Kothari, 2014). A research design outlines the procedure followed for every research process (Cooper & Schindler, 2003). This study adopted a descriptive research design. Burns and Grove (2003) noted that a descriptive study is intended to paint a picture of a scenario as it naturally occurs or exists. The design can be applied in justifying current practice, making judgment, and developing theories.

Descriptive research design involves observing and describing certain behaviors of the respondents without influencing it. Kothari (2014) stated that descriptive research design studies are those studies that describe the characteristic features of a specific individual, a group, or a situation. It is best employed in illustrating attitudes towards a given issue or occurrence. A descriptive methodology was the most suitable as the study intended to

assess the application of universal healthcare care system in Makueni County and describe the level of awareness among the Makueni County residents, determine the effect of UHC program on access to healthcare, identify the strategies put in place to enhance the effectiveness of UHC program and determine the challenges faced in implementing the UHC. Judgment was made based on how well the population accesses healthcare services in the County. Additionally, the design was chosen for its inexpensive and timesaving nature when compared to other quantitative experiments (Offredy & Vickers, 2013).

Population

A population refers to all the items in a field of research. Mugenda and Mugenda (2012) described a population as comprising of all groups of people research is going to be conducted on prior to sample size selection. The population of this included all Health care workers and patients accessing health services at Makueni Level Five Hospital.

Target Population

A target population comprise of units or subjects that contain observable characteristics applied in generalizing the results of a study (Mugenda & Mugenda, 2012). The target population for this study was healthcare workers including nurses, Doctors and Clinical officers working at Makueni Level Five hospital and patients who sought healthcare services from the hospital during the one week of data collection. According to Makueni County Level Five hospital management (2020), there are 205 healthcare workers at the hospital. Further, 175 patients seek healthcare services per day totaling to 1225 in a week. Therefore, the total target population was 1430. Table 3.1 illustrates the target population.

Table 3.1: Target Population

Population category	Number
Doctors	10
Nurses	155
Clinical officers	40
Patients in a week	1225
Total	1430

Sample Size

According to Saunders, Lewis, and Thornhill (2016), a sample is a small portion that is chosen to represent the study's population. In this study, Yamane's sample size formula was used to calculate sample size. The formula provides an appropriate and accurate sample for studies targeting large populations.

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

Where n is the sample size,

N is the target population,

e is the level of precision (0.05) (acceptable level of sampling error)

Since the target population for this study was 1430, the researcher used $n=N/N+N(e^2)$ formula to compute the sample size for this study. For the sake of this research, the desired precision that was used is (e) rate of 10% (0.1) and the target population (N) of 1430 as illustrated below.

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

$$n = \frac{1430}{1 + 1430(0.1)^2}$$

$$n = \frac{1430}{15.3}$$

$$n = 93$$

Sampling Technique

Sampling is a procedure done by collecting study information from a small section of the target population which is then used to generalize the findings to the whole population (Kothari, 2014). A researcher applies a specific sampling approach to arrive at a representative sample for study. To achieve the objectives of this study, simple random sampling approach was adopted to choose a sample size. In a simple random sample every member of the population has an equal and independent opportunity of being chosen for data collection (Fraenkel & Wallen, 2010). This technique was applied since it is extremely vital to the reliability and validity of the data, and it is most representative of the entire population.

Data Collection Instruments

Data collection instruments are tools used to gather data relevant for a study such as questionnaires, interview schedules, focus group discussion schedules, observation checklist among others. This study utilized questionnaires in data collection. The main purpose of the questionnaire is to communicate to the respondents what is intended and to elicit desired responses to achieve the research objectives.

The use of questionnaires is justified by the fact that they enable the researcher to collect quantitative data in standardized way for consistency and coherence while conducting further analysis (Roopa & Rani, 2012). Equally, questionnaires are efficient and cost-effective. The suitability of questionnaire use in this study was also based on the fact that they tend to encourage accurate answers from respondents thereby eliminating bias. They are also less expensive and an impersonal mode of data collection (Crossman, 2019). The questionnaire also contained Likert scale methodology as part of data collection technique.

Types of Data

According to Levy (2001) data is categorized into primary and secondary data. Primary data are the original works of research or raw data without interpretation (Chandran 2004). Secondary information or data sources are data neither collected by the user nor specifically for the user. The study used both primary and secondary data. For this study, secondary data was obtained from past research available online that are related the current study. This data was mainly utilized in literature review. Primary data on the other hand involved the actual data collected from respondents of the study.

The nature of data can also be categorized as quantitative data and qualitative data. According to Saunders et al. (2016), quantitative data refers to numerical data or data that can be quantified to answer your research problem and ranges from simple frequency counts to complex test scores. Closed ended questions in the questionnaires were used in the collection of quantitative data. Qualitative data is based on meanings expressed through words and result in collection of non-standardized data requiring classification. The open-ended questions in the questionnaires were used in the collection of qualitative data where

respondents were required to provide explanations, or the researcher required to probe statements provided.

Data Collection Procedures

Before the data collection process begun, the researcher sought to acquire the requisite approvals to facilitate the data collection exercise. This comprised approval from the Daystar University Ethics Review Board (DU-ERB) and a research permit from the National Council for Science, Technology and Innovation (NACOSTI). The researcher also obtained a letter of introduction from Daystar University's school of Human and Social Sciences. The researcher then visited Makueni Level Five Hospital Management to seek permission to carry out the study in their institution.

After getting all the permissions, the researcher proceeded to recruit two research assistants to help in data collection. Training of the research assistants was done before administration of questionnaires. The training comprised how to explain to the respondents the purpose of the study and its objectives, assuring respondents that the information they provided was managed with utmost confidentiality and that their identity was to be kept anonymous.

The research assistants assured the participants that the information they gave was treated with strict confidence. An envelope marked "questionnaire" and thesis topic was provided so that once the patients and health workers completed the questionnaire, they sealed it to ensure confidentiality is maintained within the organization and guarded against potential victimization by the human resource division or the person designated by the company to co-ordinate the process. The researcher then proceeded to administer the questionnaires

through research assistants and co-ordinate with them to ensure respondents had adequate time to complete them. Once the data collection exercise was complete, the researcher then reviewed all the submitted, filled-in questionnaires to identify and eliminate those that were partially filled before the beginning of data entry and analysis.

Pretesting

Pre-testing was conducted to detect weakness in the design, data collection instruments and procedures that were used to carry out the study. Mugenda and Mugenda (2012) stated that pre-testing of tools helps the researcher assess the efficiency and clarity of the instruments and their uses. Cooper and Schilnder (2003) further explained that pre-testing allows errors to be identified. According to Cooper and Schindler, 10% of the sample size is adequate for a pretest study in ensuring validity of the data questionnaires. Since the sample size for the study was 93 respondents, 9 respondents were involved in the pretest, which is 10% of the sample size. The pretest was conducted at Machokos County Level Five Hospital since it has the same characteristics as Makueni County Level Five Hospital.

Data Analysis Plan

Data analysis is the process of organizing, manipulating, and considering the meaning of the collected data (Bless et al., 2008). Data analysis focuses on reducing accumulated data to manageable size, developing summaries, identifying for patterns, and applying statistical techniques such as tables, charts, and percentages (Cooper & Schindler, 2003). In this study, data analysis combined qualitative and quantitative approaches so as to derive meaning from the collected data. Quantitative data was collected and analyzed using the Statistical Package for the Social Sciences (SPSS), version 24 and recorded as percentages and frequencies. The information was then presented by use of tables, charts, and graphs.

Ethical Consideration

The goal of ethics in research is to ensure that the researcher follows the right procedure in the collection, analysis, and recommendation of the research findings. Value and judgment play a critical role when one makes ethical decisions during the research process (Ferrell, Freaedrich, & Ferrell, 2008). Hence, the researchers' judgment on the findings will be true and just to portray the exact situation at hand. However, unethical activities are pervasive and include violating non-disclosure agreements with the parties who provide data to the researcher, breaking respondent's confidentiality, misinterpretation of results, deceiving people and avoiding legal liability.

The required permissions to carry out the research were obtained from DU-ERB, NACOSTI, and from administration from the health facilities. Written informed consent was obtained for all interviews. To maintain confidentiality all interviews were conducted in hospitals, households and individual identifier variables were anonymized in the final datasets.

The study guaranteed the respondents anonymity. The questionnaires and interviews contained queries that had minimal interference with the lives of the respondents. Maintaining their identity for the purposes of the research only maximized the provision of honest responses to all the queries (Hammersley & Traianou, 2012). On the other hand, the responses were anonymized while they were not linked to the apparent profiles of the participants.

Privacy and confidentiality enhanced the integrity of the study, which hoped to use the population to accomplish its objectives and answer the research question. The voluntary

participation of the respondents was a critical element of the study. The study never coerced the participants to provide responses, which they felt could jeopardize their work or sensitive organizational information as Miller, Birch, Mauthner, and Jessop (2012) indicated. Hence, the questionnaire and interviews involved the participants who were ready to answer the questions relating to the objectives and scope of the investigation of UHC application in Makueni County.

Autonomy was a critical ethical component of the research because it involved giving the respondents the chance to explore and execute their thoughts. The study allowed the participants to make decisions without any coercion or persuasion to prevent biased results. According to Lo (2012), every respondent should have the full mental ability to make decisions guided by the questions posed by the research in a questionnaire or interview.

Summary

This chapter has covered the research approach that was adopted including how data was collected, the rationale behind the methods and the validity and reliability of the chosen research methods. It has also provided the methodology that the researcher used to assess the effectiveness of UHC. This included the research design, target population, sample size, sample technique, data collection instruments, type of data, data collection procedure, pretesting, data analysis plan and ethical considerations.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

Introduction

This chapter presents results of quantitative data analysis obtained from questionnaires administered to patient respondents and health worker's respondents. The first section describes the demographic characteristics of the respondents followed by the description of both independent and dependent variables of the study which includes strategies and effectiveness of UHC program in terms of quality, accessibility, affordability and availability of infrastructure, equipment, medical supplies, and personnel.

Analysis and Interpretation

Response Rate

Questionnaires were administered to 13 health workers at Makueni Level Five Hospital and 80 patients accessing the services at the facility. However, 10 questionnaires from health workers and 76 questionnaires from patients were dully filled and returned resulting in a response rate of 77% and 95% respectively as illustrated in Table 4.1.

Table 4.1: Response Rate

Category	No of questionnaires administered	No. of questionnaires returned	Response rate (%)
Patients	80	76	95
Health workers	13	10	77
Total	93	86	

Mugenda and Mugenda (2012) indicated that a response rate of 50% in descriptive research is adequate for analysis and reporting, 60% is good and 70% or more is excellent

implying that this study's response rate of 95% for patients and 77% for health workers was excellent.

Demographic Characteristics

Gender Distribution of Patients

The study aimed at ensuring that every individual regardless of gender was given a chance to participate. To achieve this, the respondents were asked to indicate their gender and the results were as presented in Figure 4.1.

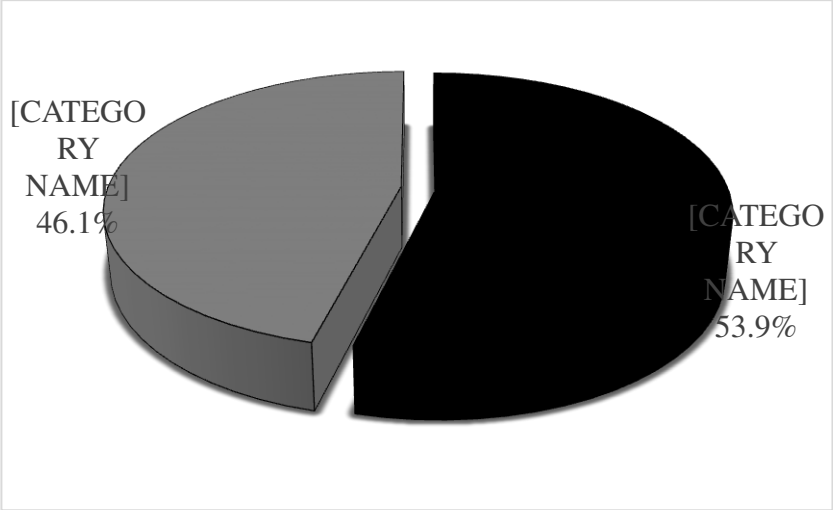

Figure 4.1: Gender of Patient Respondents

From the findings, 41(53.9%) of the patient respondents were male, while 35(46.1%) were female. This implies that both genders were represented in the study and therefore the findings in this study are attributable to both genders.

Age Distribution of Patient Respondents

Respondents were asked to indicate their age bracket and the findings are represented in Figure 4.2.

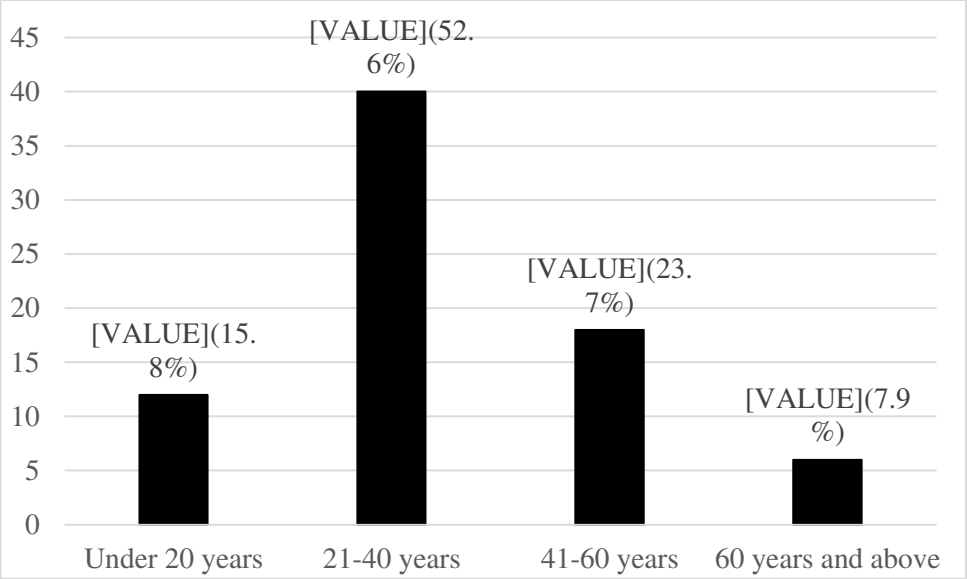

Figure 4.2: Age distribution of patients

Based on the results in Figure 4.2, 40(52.6%) of the patient respondents were aged between 21-40 years, 18(23.7%) between 41-60 years, 12(15.8%) were under 20 years, while 6(7.9%) were above 60 years. This implies that the views of respondents across ages concerning universal healthcare coverage were taken into consideration.

Highest Academic Qualification of Patients

The highest academic qualification of patients was also assessed, and findings presented in Figure 4.3.

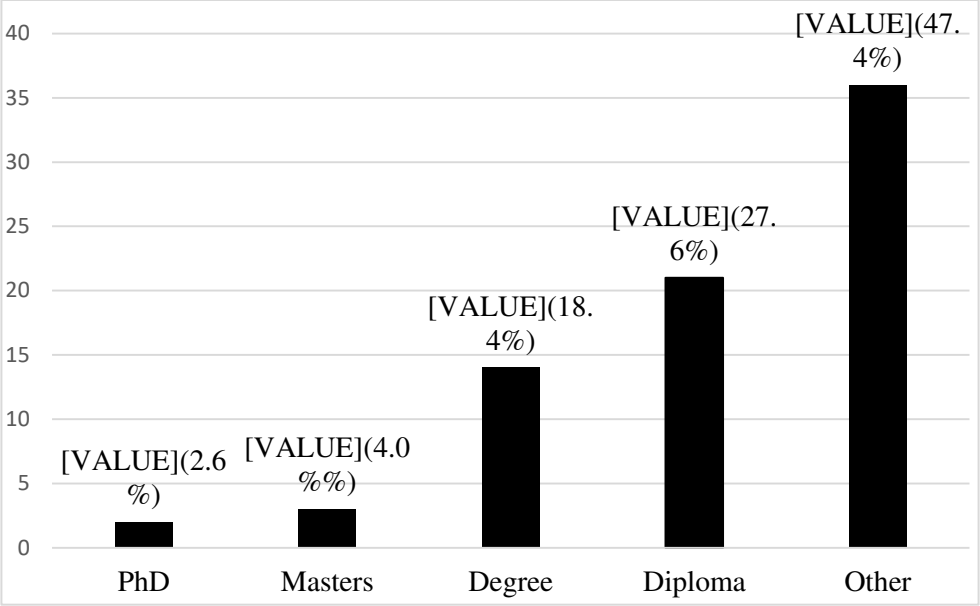

Figure 4.3: Highest Academic Qualification of Patient Respondents

As evidenced in Figure 4.3, 36(47.4%) of the patient respondents consisted of those whose highest academic qualification was below diploma, 21(27.6%) were diploma holders, 14(18.4%) were degree holders, 3(4.0%) were master's holders, while only 2(2.6%) had PhD. The finding demonstrate that the respondents were learned enough to understand the effectiveness of UHC program on healthcare services access and therefore provided reliable responses for the purpose of this study.

Patients' Economic Activities

The respondents were asked to indicate what they did for a living and the findings of the study were indicated in Table 4.2.

Table 4.2: Occupation of Patient Respondents

Activity	Frequency	Percent
Agricultural engineer	2	2.6
Business	21	27.6
Casual Jobs	4	5.2
Cateresses	1	1.3
Driver	3	3.9
Farming	15	19.7
Health worker	9	11.8
Pastor	2	2.6
Scientist	1	1.3
Security officer	1	1.3
Student	14	18.4
Tailor	1	1.3
Teacher	2	2.6
Total	76	100

Findings in Table 4.2 indicates that 21(27.6%) of the respondents were businesspeople, 15(19.7%) were farmers, 14(18.4%) were students and 9(11.8%) were health workers from elsewhere seeking medical attention. Other respondents 4(5.2%) were casual laborers and 3(3.9%) were drivers. Those who were agricultural officers, pastors and teachers had a tie at 2(2.6%), while those who were caterers, scientist, security officer and tailor had a tie at 1(1.3%). This indicates that respondents were from different background in terms of the economic activities and specialization, meaning that the study was inclusive and therefore the findings were representative of the people in the entire Makueni County.

Demographic Characteristics of Health Workers

The demographic characteristics of the health workers were important in understanding their effect and contribution on the effectiveness of universal health care program and its coverage. The findings are shown in Table 4.3.

Table 4.3: Demographic Characteristics of Health Workers

Characteristic		Frequency	Percent
Gender	Male	4	40
	Female	6	60
	Total	10	100
Position held at the facility	Clinical officer	2	20
	Departmental officer	1	10
	Doctor	2	20
	Laboratory staff	1	10
	Nurse	4	40
	Total	10	100
Qualifications/specialization	Certificate	1	10
	Degree	3	30
	Diploma	6	60
	Total	10	100
Duration served in the facility	0-1 year	3	30
	1-3 years	4	40
	3-5 years	2	20
	More than 5 years	1	10
	Total	10	100

Findings in Table 4.3 indicate that 6(60%) of the health workers who were respondents were females, while 4(40%) were male. This could imply that health facilities in Makueni County were dominated by the female gender. Further, the study found out that 4(40%) of the health workers who participated in the study were nursing officers, 2(20%) were clinical officers and another 2(20%) were doctors, while those who were departmental officers and laboratory staff had a tie at 1(10%). This implies that health workers that participated in the study were drawn from all departments in the health facilities in Makueni, hence representative of all health workers in the County health facilities. Based on the results presented in Table 4.3, half of the health workers 5(50%) were nurses.

The level of education of the respondent was also assessed to establish whether the health workers had the requisite skills to deal with their day-to-day requirements on their jobs. Findings indicated that 6(60%) were diploma holders, 3(30%) had degrees, while 1(10%) were certificate holders. With high proportion of health workers having professional qualification indicates that the health service providers had basic competence in their areas of work and therefore could adopt service quality strategies and tools towards provision of quality healthcare services and thus increasing the effectiveness of UHC and hence its coverage. These study findings agreed with those of Morgan, Ensor, and Waters (2016) that in ensuring the success and sustenance of quality social healthcare in developed and developing economies, the existence of the right technical competence is the key intervention needed to deliver healthcare benefits to every population through UHC.

Similarly, 4(40%) of the health workers had served in the County health facilities for one to three years, 3(30%) stated that they had served in the facility for a period of 0-1 years, 2(20%) had served for 3-5 years and 1(10%) reported that they had served for more than five years. Having most health workers serving for more than a year provides a strong base for competence and experiential learning on the local health issues.

UHC Affordability According to Patients

The researcher sought to understand the affordability of universal healthcare in terms of whether the patients had health insurance cards, the number of household members covered by the insurance card, the amount of insurance premiums paid in a month and whether the patients paid for the insurance monthly or yearly. Findings are illustrated in Table 4.4 to 4.8.

Table 4.4: Whether Patients had health Insurance Cards

	Frequency	Percent
Yes	62	81.6
No	14	18.4
Total	76	100

Findings in Table 4.4 indicate that 62(81.6%) patients had health insurance cards, while 14(18.4%) did not. This demonstrates that some of the Makueni County residents lacked the ability to pay for the services because of poverty and as a result use out of pocket payments (Schultink et al., 2018).

Table 4.5: Number of Household Members Covered by the Health Insurance

Number Covered	Frequency	Percent
0	1	1.6
1	8	12.9
2	7	11.3
3	6	9.7
4	1	1.6
5	3	4.8
7	3	4.8
No response	33	53.2
Total	62	100

Findings in Table 4.5 indicate that the 8(12.9%) of the patients had one person in their households, 7(11.3%) stated two people were covered and 6(9.7%) three people were covered. Those who stated five and seven had a tie at 3(4.8%), while the minority at 1(1.6%) stated that the health insurance card covered 4 household members.

Table 4.6: Monthly Contributions Paid for the Insurance card

Amount Paid	Frequency	Percent
500	42	67.7
1000	17	27.4
1500	3	4.8
Total	62	100

Table 4.6 illustrates the monthly contribution made for the insurance card. From the results 42(67.7%) of the patients indicated they paid Kshs. 500, 17(27.4%) paid Kshs 1000, while 3(4.8%) stated they paid Kshs 1500.

Table 4.7: Frequency at which Respondents Paid for the Health Insurance Card

	Frequency	Percent
Monthly	36	47.4
Yearly	26	34.2
No response	14	18.4
Total	62	100

Results in Table 4.7 indicate that 36(47.4%) of the of the patients paid for the insurance card monthly and 26(34.2%) paid for the card yearly, while 14(18.4%) of the patients did not respond. This demonstrates that the Kshs 500 monthly payable for the health insurance card was affordable as it was cost-effective within low-income earners who were the majority.

UHC Accessibility according to patients

The first objective of the study sought to assess how accessible UHC was. Therefore, the study sought to assess accessibility of UHC in terms of distance, state of infrastructural facilities, means of transport and availability of medicine and equipment. Findings are presented in Table 4.8, 4.9 and 4.10.

Table 4.8: Universal Health Coverage Accessibility

		Frequency	Percent
How far is the nearest health facility from your house?	< 5 kilometers	22	28.9
	5 kilometers	35	46.1
	>10 kilometers	19	25
	Total	76	100
		Frequency	Percent
What is the state of the road to your nearest health facility?	Murram road	41	53.9
	Tarmacked road	35	46.1
	Total	76	100
		Frequency	Percent
Means of transport used to access the health facility?	Vehicle	56	73.7
	Walking	18	23.7
	No response	2	2.6
	Total	76	100

From the findings, 35(46.1%) of the respondents reported that the nearest health facility was 5 kilometers from their houses, 22(28.9%) reported that it was less than 5 kilometers away from their houses and 19(25%) stated that the nearest health facility was more than 10 kilometers away from their houses. In regard to the state of the roads to the nearest health facility, 41(53.9%) of the respondents reported that they were connected by marram roads, while 35(46.1%) reported that the roads were tarmacked. Further, 56(73.7%) of the respondents reported they used vehicles as a means of transport to the health facility and 18(23.7%) stated they walked to the health facility. These study findings indicated that health services were accessible the Makueni residents.

Accessibility of Health Facility according to health workers

In regard to whether the facility was accessible, the health workers were required to state the means of transport used during emergencies and the means of transport used by patients. The findings are shown in Table 4.9.

		Frequency	Percent
Means of transport used during emergencies	Ambulance	8	80
	Taxi	1	10
	Motorcycle	1	10
	Total	10	100
Most common means of transport used by patients who are referred from other facilities for emergency services	public car/bus	1	10
	private car	4	40
	Ambulance	5	50
	Total	10	100

Table 4.9: Accessibility of Health Facility

Availability of Medicine and Equipment

The study sought to find out whether there was adequate funding for infrastructural facilities, drugs and equipment were available in adequate amounts. The health workers were asked to state whether there was adequate medicine and equipment and equipment maintenance. The results of the findings are shown in Table 4.10.

Table 4.10: Healthcare Financing

Is there adequate financing for		Frequency	Percent
Medicine	Yes	2	20

	No	8	80
	Total	10	100
Equipment	Yes	1	10
	No	8	80
	No response	1	10
	Total	10	100
Maintenance of buildings	yes	3	30
	no	6	60
	no response	1	10
	Total	10	100

Most of the health workers at 8(80%) indicated that funding for medicine was inadequate, while 2(20%) indicated that the funding for medicine was adequate. As to whether there was adequate funding for equipment, majority of the health workers at 8(80%) stated that funding for equipment was not adequate, while 1(10%) indicated it was adequate. Further, 6(60%) of the health workers stated that funding for buildings maintenance was inadequate, while 3(30%) affirmed it was adequate. This indicated that there was low allocation of funds for healthcare program which may directly impact on the quality of healthcare.

State of Medical Equipment

The state of equipment in a health facility determines the availability and quality of services provided. In this regard, the study sought to assess the state of equipment used for health care at Makueni Level Five Hospital to ascertain the effectiveness of UHC program. Findings of the study are shown in Figure 4.4.

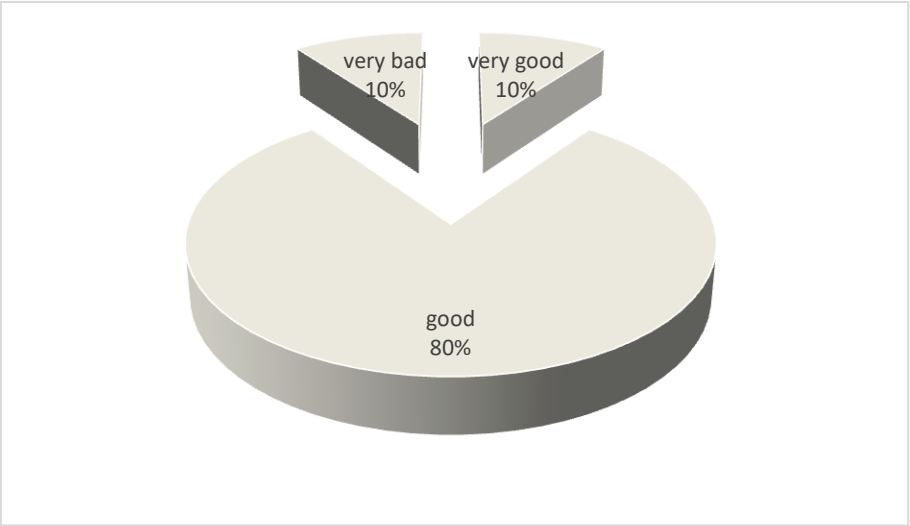

Figure 4.4: State of Medical Equipment

Findings in Figure 4.4 show that a majority of the health workers at 8(80%) stated that the medical equipment was in a good state, 1(10%) stated that the medical equipment were in a very good state while the rest 1(10%) stated that the equipment were in a very bad state. These findings imply that the medical equipment in the facility were maintained and in good state which fosters a wide range of services, quality service delivery and thus improved effectiveness in Universal Healthcare (WHO, 2017).

Comprehensive Emergency Healthcare Requiring Specialists

The study sought to assess on what happens to comprehensive emergency healthcare which requires specialists. The findings of the study are shown in Figure 4.5.

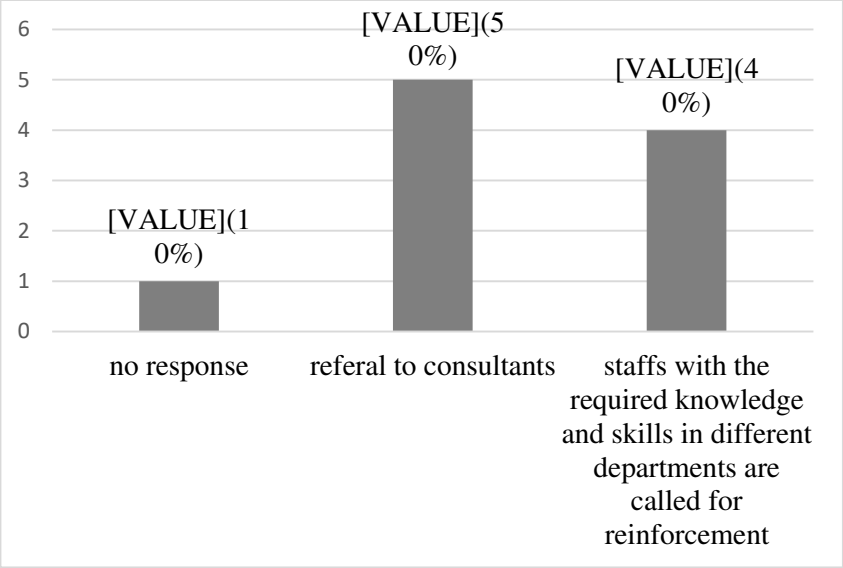

Figure 4.5: Comprehensive Emergency Healthcare Requiring Specialists

The results show that 5(50%) of the health workers indicated that when specialized emergency healthcare was required, patients were referred to consultants and specialists and 4(40%) reported that staffs with the required knowledge and skills in different departments were called for reinforcement. This implies that the Makueni Level Five Hospital was well staffed with medical officers with specialist skills.

Maternity Services

The health workers were asked to state whether they offered free maternity services in the facility, findings of which are shown in Figure 4.6.

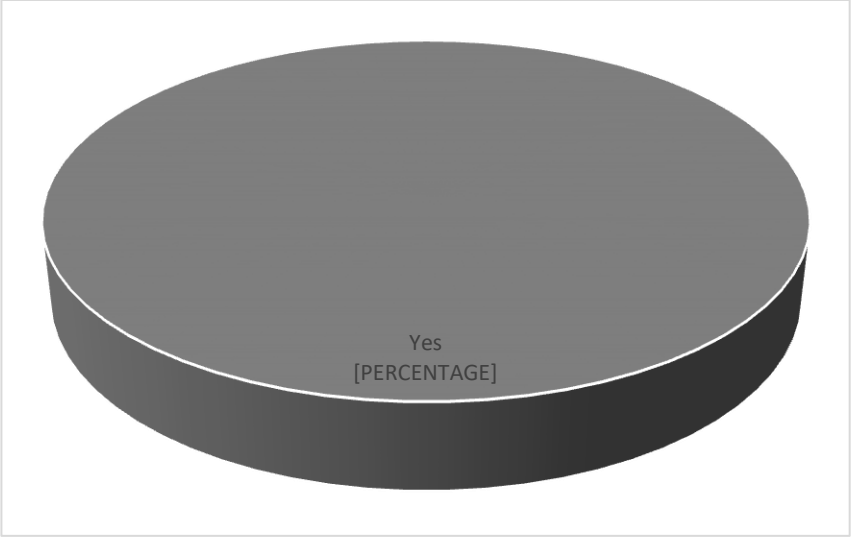

Figure 4.6: Whether the Health Facility offered Free Maternity Services

In regard to whether Makueni Level Five Hospital offered free maternity services, all respondents 10(100%) stated that they offered free maternity services in the facility. This portrayed government's effort in addressing SDG of ensuring health for all and decreasing maternal and child deaths, strengthen resilience to public health emergencies, reduce financial hardship linked to illness, and strengthen the foundations for long-term economic growth (WHO, 2018).

Inpatient Care

Respondents were asked to state whether the facilities were adequate in the hospital. Table 4.11 presents the findings of the study.

Table 4.11: Adequacy of Facilities

		Frequency	Percent
Are the facilities adequate?	Yes	5	50
	No	5	50
	Total	10	100
If no, state which essentials are not available	No response	4	40
	Burn unit	1	10
	Few ICU beds	1	10
	Fully equipped blood bank	1	10
	Oncology clinics and wards	2	20
	Palliative can units	1	10
	Total	10	100

In regard to adequacy of facilities, 5(50%) of the respondents stated they were adequate and 5(50%) stated that they were not adequate. Of those who stated that the facilities were inadequate, 2(20%) reported that oncology clinics and wards were not available, while those who reported unavailability of burn unit, ICU beds, equipped blood bank and palliative care units had a tie at 1(10%). This implies that some services were limited in the facility, while other services were not available, which may lower service delivery and hence the effectiveness of UHC.

UHC and Healthcare Facilities Improvement

The research sought to find out whether UHC had led to improvement of the facilities in Makueni Level Five hospital, findings of which are depicted in Table 4.12.

Table 4.12: UHC and Healthcare Facilities Improvement

		Frequency	Percent
Has the universal health coverage helped improve the healthcare facilities?	Yes	5	50
	No	3	30
	Do not know	2	20
	Total	10	100

The results show that 5(50%) of the health workers stated that UHC had helped improve the healthcare facility, 3(30%) stated that UHC had not helped improve healthcare facility and 2(20%) stated that they did not know. Of those who reported that the UHC had helped improve healthcare facility, they justified this by explaining that all patients were able to access healthcare and that the health facility capacity was expanded due to high number of patients. They further stated that there were enough healthcare facilities including wards, laboratories, waiting areas, and sanitation facilities such as bathrooms and toilets. This implies that the government subsidies on healthcare facilitated improvement of service delivery and facility improvement.

Availability and Maintenance of Equipment

For effective service delivery, availability of equipment and machines is eminent. It is in this view that the study sought to find out whether equipment's were available in the hospital for effective healthcare. Findings are shown in Table 4.14.

Table 4.13: Availability and Maintenance of Equipment

		Frequency	Percent
Do you have all the equipment needed to do work?	Yes	2	20
	No	8	80
	Total	10	100
Is there any equipment that was requested for but not received?	Yes	3	30
	No	7	70
	Total	10	100
If yes, mention the most important equipment requested for but not received	No response	6	60
	Patient cardiac monitor machine	1	10
	Monitor	1	10
	Suction machine and	1	10
	Nebulization machine	1	10
	Total	10	100
Are all equipment at workplace maintained in working state?	Yes	3	30
	No	7	70
	Total	10	100
If no, mention the most important equipment not maintained in working state	No response	3	30
	AC's	1	10
	autoclaving machine, nebulization and portable x-ray machines	1	10
	Biochemist machine and laboratory fridge	1	10
	cardiac monitoring machine, suction machine and oxygen concentrators	1	10
	Laundry machines	1	10
	nebulization, autoclaving and suction machines	1	10
	Suction machine	1	10
	Total	10	100

Findings in Table 4.13 indicate that 8(80%) of the health workers stated that they did not have all the equipment needed for work, while 2(20%) stated they had all the equipment. As to whether there was any equipment requested for and not received, 3(30%) of the respondents stated there was, while 7(70%) stated there was not. This implies that most

equipment requested were delivered. Some of the equipment that were not received included patient cardiac monitor machine, suction machine, and nebulization machine. In regard to whether equipment at workplace were maintained in working state, 3(30%) of the respondents affirmed they were maintained in good working state, while 7(70%) of the respondents disagreed.

The most important equipment not maintained in working state included the AC's, autoclaving machine, nebulization and portable x-ray machines, biochemist machine and laboratory fridge, cardiac monitoring machine, suction machine and oxygen concentrators and laundry machines. This demonstrates that most important equipment used in facilitating health care service were insufficient and the ones that were available were not well maintained for the provision of quality healthcare services. This in return lowered the effectiveness of UHC program in Makueni County.

Availability of Supplies

The study sought to find out whether the supplies needed to do work in the facility were available. Table 4.14 shows the findings.

Table 4.14: Availability of Supplies

		Frequency	Percent
Do you have all the supplies you need to do work?	Yes	2	20
	No	8	80
	Total	10	100
If no, mention the topmost supplies requested for but not received	no response	9	90
	drugs, face masks	1	10
	Total	10	100

Majority of the respondents at 8(80%) stated that they lacked all the supplies needed to do work with 2(20%) agreeing that they had all the supplies needed to do work. The topmost supplies requested and not received included drugs and personal protective equipment like the masks.

UHC Program and Improvement of Infrastructure Facilities, Medical Supplies and Equipment for Healthcare Services

The health workers were asked to state ways in which the UHC program facilitated improvement of infrastructure facilities, medical supplies and equipment for healthcare services, findings of which are illustrated in Table 4.15.

Table 4.15: Provision of Infrastructure Facilities and Medical Supplies

		Frequency	Percent
Do you have all the supplies you need to do work?	Yes	2	20
	No	8	80
	Total	10	100
Whether the facility has sufficient supplies of blood, drugs and equipment	No because not all drugs ordered are issued	2	20
	No because patients are referred to other hospitals for services that couldn't be provided due to machine breakdown	2	20
	No because patients stay for long in the hospital waiting for blood transfusion	1	10
	No because the public does not donate adequate blood	2	20
	No because some drugs and blood were not available when needed	3	30

Total	10	100

The study further sought the opinions of the health workers in regard to whether the facility had all the supplies they needed to do work. From the findings, 8(80%) of the health workers stated that the facility did not have sufficient supplies, while 2(20) stated it did. The health workers were further asked to indicate if the facility had reliable supplies of blood, drugs and equipment for healthcare services. Findings show that all the health workers stated that the facility lacked reliable supplies of blood, drugs and equipment. On being asked to give the reasons for their opinions, 2(20%) of them reported that not all drugs ordered were issued, 2(20%) stated that patients were referred to other hospitals for services that could not be provided due to machine breakdown and lack of enough blood, 1(10) said that patients stayed for long in the hospital waiting for blood transfusion, 2(20%) stated that the public failed to donate adequate blood, and 3(30%) stated that some drugs and blood was not available at time of need.

Gaps in Regard to Medical Equipment and Facilities in the Hospital

The gaps that existed in regard to medical equipment and facilities in the hospital as state by the respondents are shown in Table 4.16.

Table 4.16: Gaps in Regard to Medical Equipment and Facilities

	Frequency	Percent
Failure to repair broken machines in time and inadequate staff with knowledge on some essential facilities	1	10
Inadequate equipment and drugs	4	40
Inadequate hospital beds for inpatients	1	10
Lack of adequate staff with skills to use some machines	1	10
Lack of modernized and digital machines and staff with skills to operate some machines	1	10
Low and poor maintenance of equipment	2	20
Total	10	100

Findings indicate that 4(40%) of the health workers identified inadequate equipment and drugs as a gap that existed in the hospital, 2(20%) stated of low and poor maintenance of equipment, while 1(10%) of the respondents identified failure to repair broken machines in time and inadequate staff with knowledge on some essential facilities, inadequate hospital beds for inpatients, lack of adequate staff with skills to use some machines and lack of modernized and digital machines and staff with skills to operate some machines at a tie.

Strategies Put in Place to Enhance the Effectiveness of UHC Program

The second objective sought to identify the strategies put in place by the government in Makueni County to enhance the effectiveness of the UHC program. The findings are presented in Table 4.17.

Table 4.17: Strategies Put in Place to Enhance the Effectiveness of UHC Program

	Responses	
Government strategies on UHC	N	Percent
Healthcare financing	22	16.50%
NHIF Scheme	35	26.30%
Free Maternity	50	37.60%
Establishment of more health centers	26	19.50%

Findings indicate that 50(37.6%) of the patients stated that Free Maternity had been put in place in enhancing the effectiveness of UHC, 35(26.3%) of the respondents stated that NHIF Scheme was in place, 22(16.5%) stated that there was healthcare financing by the County government and 26(19.5%) stated that more health facilities were constructed. This implies that there were strategies in place that helped in healthcare financing and reduced out-of-pocket spending so as to help Makueni residents' access healthcare services.

Strategies for Effective UHC

The health workers were also asked to state the strategies put in place for effective UHC program. The study findings are shown in Table 4.18.

Table 4.18: Strategies for Effective UHC Program

Government Strategies to Enhance UHC	Responses N	Percent
Healthcare financing	5	22.70%
NHIF Scheme	8	36.40%
Free Maternity	8	36.40%
Private health insurance	1	4.50%

Findings in Table 4.18 indicate that 8(36.4%) of the respondents stated that in order for the county to be effective in the UHC program, free maternity and NHIF scheme had been put in place. Also, 5(22.7%) of the respondents stated of healthcare financing and 1(4.5%) of the respondents stated private health insurance were in place to enhance UHC program. This implies that strategies were put in place in an attempt to lift the burden of healthcare financing and reducing out-of-pocket spending in meeting health services.

Challenges Faced in Implementing UHC

The third objective of the study sought to investigate the challenges faced in the implementation of the program in Makueni County according to patient respondents. The findings are presented in Table 4.19.

Table 4.19: Challenges Faced in UHC Implementation

Challenges in Accessing Health Service	Responses	
	N	Percent
High costs of health services	35	20.30%
Shortage of drugs in hospitals	50	29.10%
Challenges in paying for health insurance	19	11.00%
Shortage of doctors and nurses	30	17.40%
Insufficient health facilities and equipment	38	22.10%

The findings show that 50(65.8%) of the patient respondents reported that there was a shortage of drugs in hospitals. This could be as a result of increased demand of the drugs which forced patients to pay for their medical service which in return increases out-of-pocket medical expenditures posing a challenge to the implementation of UHC. Further, 38(50%) of the respondents stated that supply of health facilities and equipment was inadequate, 35(46.1%) reported that the cost of health services was high, 30(39.5%) stated there was a shortage of doctors and nurses and 19(25%) reported of challenges in paying for the health insurance.

These findings agree with those of Musgrove (2015) who found that the common sources of inefficiencies comprise inappropriate and ineffective administration of drugs, medical mistakes, lack of optimal quality care, wastages, corruption, and fraud. Further, the study sought to investigate the challenges faced in the implementation of the program from the perspective of health workers. The findings are presented in Table 4.20.

Table 4.20: UHC Implementation Challenges According to Health Workers

Challenges Faced in Implementing UHC	Responses N	Responses Percent	Percent of Cases
low-income levels	10	30.30%	100.00%
low education status	1	3.00%	10.00%
High healthcare costs	7	21.20%	70.00%
Inefficiencies in spending for health	7	21.20%	70.00%
Monitoring concerns	2	6.10%	20.00%
challenges in paying for health insurance	6	18.20%	60.00%

All respondents (100%) reported that low-income levels were a challenge in implementing the UHC in Makueni County. This could be as a result of increased health expense and low economic background making it difficult in accessing healthcare services and medical expenditures posing a challenge to the implementation of UHC. Those who identified high healthcare costs and inefficiencies in spending for health had a tie at 7(70%). Also, 6(60%) of the respondents cited the challenge of paying for health insurance, 2(20%) cited of monitoring concerns, while 1(10%) stated of low education status. Other challenges that are faced in the implementation of UHC included inadequate staffing and low staff motivation, corruption, inadequate funds, low-income levels, and inefficiencies in spending on health.

Summary of the Key Findings

The study made the following key findings.

1. In terms of accessibility, 35(46.1%) of the patient respondents reported that the nearest health facility was 5 kilometers from their houses and 56(73.7%) stated that there were roads to the nearest health facility, with 56(73.7%) of the respondents reporting that they used vehicles as a means of transport to the health

facility and 18(23.7%) indicating they walked to the health facility. Further, 8(80%) of the respondents reported that ambulances were used as a means of transport during emergencies.

2. In regard to funding of medicine, 8(80%) of the health workers stated that there was inadequate funding for medicine and equipment but acknowledged that the medical equipment's were in a good state. Also, the health workers who were respondents stated there were consultants and medical specialist to provide comprehensive emergency healthcare and that there were staff with the required knowledge and skills in different departments.
3. In regard to free maternity services, all respondents agreed that free maternity services were offered in the facility and that the facility routinely provided inpatient care with beds for overnight observation where 8(80%) of the health workers stated that the condition of the facility's laboratory was very good
4. In regard to facilities, 5(50%) of the respondents stated they were adequate although oncology clinics and wards were not available. Similarly, 5(50%) of the respondents indicated that UHC had helped improve the healthcare facility by enabling all patients to be able to access healthcare and expansion of hospital facilities.
5. Some important equipment's were not in working state including the AC's, autoclaving machine, nebulization and portable x-ray machines, biochemist machine and laboratory fridge, cardiac monitoring machine, suction machine and oxygen concentrators and laundry machines. This implied that most important equipment used in facilitating health care service were insufficient and the ones

that were available were not well maintained for the provision of quality healthcare services.

6. In regard to the strategies put in place to enhance the effectiveness of UHC program, 50(37.6%) of the respondents stated that free maternity had been put in place, 35(26.3%) stated that NHIF Scheme was in place, 22(16.5%) stated that there was healthcare financing by the County government and 26(19.5%) stated that more health facilities were constructed.

7. Regarding the challenges faced in UHC implementation, 50(65.8%) of the respondents reported that there was a shortage of drugs in hospitals, which could be as a result of increased demand of the drugs, a factor that forced patients to pay for their medical service which in return increases out-of-pocket medical expenditures posing a challenge to the implementation of UHC. Further, 38(50%) of the respondents stated that supply of health facilities and equipment was inadequate, 35(46.1%) reported that the cost of health services was high, 30(39.5%) stated there was a shortage of doctors and nurses and 19(25%) reported of challenges in paying for the health insurance. Similarly, all respondents (100%) reported that low-income levels were a challenge in implementing the UHC, which could be as a result of increased health expense and low economic background making it difficult in accessing healthcare services and medical expenditures. Further, 2(20%) of the respondents cited monitoring concerns, while 1(10%) stated of low education status. Other challenges that were faced in the implementation of UHC included inadequate staffing and low staff motivation,

corruption, inadequate funds, low-income levels, and inefficiencies in spending on health.

Summary

This chapter has presented the research findings as provided by the respondents, summarizing, and presenting the data in an understandable manner. Data was organized and presented in tables and figures in accordance with the study objectives. The analyzed data is the basis upon which chapter five will be presented providing discussions, conclusions and recommendations including areas for future research.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents a discussion of the research findings, conclusions drawn from the study and recommendations. The content of the chapter is based on the data collected. The study sought to determine the effectiveness of UHC program on healthcare services access, identify the strategies put in place to enhance the effectiveness of UHC program and determine the challenges faced in implementing UHC in Makueni County.

Discussion of Key Findings

In realization of the right to UHC, specific functions and mandates have to be effectively and efficiently executed (Ministry of Health, 2016). The pursuit of equity of access to health care is inherent to the health system objective of UHC and the policies aimed at UHC, from wider health systems approaches to focalized programs and interventions, must be assessed in terms of their effect on equity of access, which requires that their design and management specifically facilitate and enable access across the social gradient, particularly by disadvantaged groups. It is therefore in this context that the research sought to assess the effectiveness of UHC program in Makueni Level Five Hospital.

The Effectiveness of UHC Program on Healthcare Services Access.

The first objective aimed at determining the effectiveness of UHC program on healthcare services access. From the study findings, 62(81.6%) of the patient respondents had current health insurance card. In regard to how much the respondents paid for the card, 42(55.3%)

of the respondents indicated they paid Kshs. 500, 17(22.4%) paid Kshs 1000, while 3(3.9%) stated they paid Kshs 1500. This demonstrates that the Kshs 500 monthly payable for the health insurance card was affordable as it was cost-effective within low-income earners. The number of household members covered by the insurance card also motivates members of the community in registering for the health insurance card since out-of-pocket expenditures on health of family members are lifted making it cheap in accessing quality healthcare services (Mash & Von Pressentin, 2017).

These findings agree with Reeves et al. (2015), who observed that for UHC program to be effective, its affordability is eminent in terms of cost-effective within low-income earners which could necessitate the need for financing UHC with alternative tax structures and encouraging co-payments to optimize the performance of public health systems.

For UHC program to be effective, accessibility to healthcare services should be taken into consideration. The study established that 75% of the patient respondents lived within 5 kilometers and this included those living less than 5kilometres and those living 5 kilometers away. This implies that the nearest health facility was 5 kilometers from respondents' houses. The study further found that most roads to the health facility were tarmacked, and some were murramed. This facilitated patient to use vehicles as a means of transport to the health facility while those who were not able to pay transport cost walked to the facility. These study findings show that health services were accessible since the hospital was close to the community members and the road infrastructure was maintained to facilitated accessibility. The study also established that during emergencies and referral of patients to the hospital, ambulances were mostly used as a means of transport. However,

other means such as taxi and motorcycle, private car/bus and public car/bus were used. This indicated that the facility was easily accessible in terms of emergence services and the activated emergence response plays a critical role in service quality.

These findings are consistent with Gulliford, van Staa, Dermott, Cassel, and Goldcare (2012), who stated that for health services to be accessible, emergency services, health workforce, medicine stock should be readily available in adequate amounts and these services should also be affordable. The finding also agrees with Penchansky and Thomas (2014) who stated that in order to achieve accessible health care, there should be good road network to enable timely use of emergency health services to achieve the best health care outcomes.

In regard to health financing, the study found out that there was inadequate funding for medicine and equipment as indicated by 8(80%) of the health workers. Similarly, there was inadequate funding for maintaining buildings which implied that there was low allocation of funds for healthcare program which directly impact on the quality of care. This is consistent with Kariuki (2014) who stated that the Kenyan Government has over the previous year's drastically reduced the health sector financing. These drastic financial reductions have consequently led to poor health services delivery, shortage of medicines and regular strikes and heightened rates of death and morbidity (Kariuki, 2014).

Similarly, majority of the health worker's respondents 8(80%) stated that they do not have all the equipment needed for work with some of the equipment such as patient cardiac monitor machine, suction machine and nebulization machine ordered for but not received. The study also found out that equipment at workplace were not maintained in working

state. This posed a threat in service delivery as comprehensive emergency healthcare requiring specialists are not handled but instead referred to consultants and specialists painting a scenario of health facilities being understaffed and often workers overloaded with work.

Olugo (2015) noted that as a devolved function, the major health financing at the county level comes through the county government, and beyond that is provided by consumers through cost-share. Counties receive about 25& of the total budget. However, at the level of individual county allocation, most counties are allocated less than 5% of the budget to health. A lot of this allocation goes into remuneration of personnel, purchase and improvement of hospital equipment and infrastructure, and purchase of drugs. Because of the low allocation, however, the money is not enough, directly impacting on the quality of care (Olugo, 2015). Further, Macha et al. (2012) observed that the sustenance of quality at continental level in Africa is anchored in the efficiency of healthcare financing and that addressing drug stock-outs, diagnostic equipment, and staff shortages could improve the quality of UHC.

The study established that the hospital lacked the supplies needed to do work where topmost supplies requested and not received included drugs and personal protective equipment like the masks. The health workers in their opinions stated that the facility lacked sufficient and reliable supplies of blood, drugs, and equipment for healthcare services where 3(30%) reported that some drugs and blood were not available at time of need and others stated that not all drugs ordered are issued, patients being referred to other hospitals for services that couldn’t be provided due to machine breakdown and that public don't donate adequately. Macha et al. (2012) observed that the sustenance of quality at

continental level in Africa is anchored in the efficiency of healthcare financing and that addressing drug stock-outs, diagnostic equipment, and staff shortages could improve the quality of UHC. This finding concurs with World Bank (2014) which stated that although access to quality health care is a constitutional right, many Kenyans cannot access quality health care due to a variety of reasons including lack of sufficient health care providers, shortage of medical equipment, drugs and facilities which compromises effective provision of healthcare (World Bank, 2014). In a similar study on health financing here in Kenya, Kariuki (2014) observed that drastic decrease in healthcare provision result to poor services, lack of drugs and frequent strikes as well as increased mortality and morbidity rates which lowers the main agenda in UHC of quality and affordable healthcare services to all especially the disadvantaged group.

However, the study findings indicated that UHC has helped improve the healthcare facility since there was expansion of hospital facility due to high number of patients recorded and all patients were able to access healthcare which implied that the government subsidies on healthcare facilitated improvement of service delivery and facility improvement. Also, UHC program has led to procurement of modernized hospital machines and free maternity services was offered in the facility. This portrayed government's effort in addressing SDGs of ensuring health for all and decreasing maternal and child deaths, strengthen resilience to public health emergencies, reduce financial hardship linked to illness, and strengthen the foundations for long-term economic growth. The facility as well routinely provided inpatient care with beds for overnight observation where the majority 8(80%) stated that the condition of the facility's laboratory was very good and 2(20%) indicated that the laboratory was good. This indicated that UHC program in Makueni Level Five Hospital

was effective to some extent. This is consistent with Lancet (2016) which observed that Makueni County remains the only county in the country to have successfully implemented UHC. That through its Makueni care social welfare coverage, all enrolled residents are entitled to Ambulance services, outpatient services, inpatient services as well as maternity care. In being the first to effectively implement the UHC program, the county set a great precedence for all other counties in UHC implementation.

Strategies put in Place to Enhance the Effectiveness of UHC Program

The study identified that Free Maternity had been put in place in enhancing the effectiveness of UHC as reported by 70.4% of the patient respondents. Other strategies put in place included NHIF Scheme at 35(26.3%), healthcare financing at 22(16.5%). According to health workers, 8(80%) stated that in order for the county to be effective in the UHC program, free maternity and NHIF scheme had been put in place. Also, 5(50%) of the health workers stated of healthcare financing strategies need to be put in place and 1(10%) of the health workers stated private health insurance were in place to enhance UHC program. This implies that strategies were put in place in an attempt to lift the burden of healthcare financing and reducing out-of-pocket spending in meeting health services. This is due to the fact that most health insurance schemes have initiatives to reach the informal sector workers and low-income earners with the voluntary membership schemes as well as low-cost private health insurance schemes.

The high uptake of NHIF could be attributed to the fact NHIF requires compulsory membership for all salaried employees with the premiums being automatically deducted through the payroll based on a person's earnings. NHIF also has high popularity since it is a national health insurance scheme. Due to the current focus by the Kenyan government

towards UHC, NHIF has been putting more efforts to expand its membership base especially in the informal sector. Recently, NHIF has also included outpatient services in its package, and this has increased the benefits its offers to its clients. This move also tends towards preventive healthcare since the members are covered for screening for various diseases (Ministry of Health, 2016). Also, the Free Maternity scheme is incorporated in the Kenya's Four Agenda with the objective of reducing maternal and neonatal mortality.

This is because Kenya has initiated a number of programs that facilitate universal healthcare financing in geared towards increasing coverage for quality health services, improving availability of important medication and also reducing out-of-pocket spending towards meeting health services (Mwaura et al., 2015). The study findings concur with Jeon and Kwon (2013) who studied the South Korean effort to achieve universal public insurance system and found that country viewed insurance as one of the critical ways of achieving UHC which showed that healthcare utilization and the subsequent expenditure was easy due to the popularity of private healthcare insurance.

Challenges Faced in implementing the UHC Program

Regarding the challenges faced in UHC implementation, 50(65.8%) of the respondents reported that there was a shortage of drugs in hospitals, which could be as a result of increased demand of services and drugs, a factor that forced patients to pay for their medical service which in return increases out-of-pocket medical expenditures posing a challenge to the implementation of UHC. Further, 38(50%) of the respondents stated that supply of health facilities and equipment was inadequate, 35(46.1%) reported that the cost of health services was high, 30(39.5%) stated there was a shortage of doctors and nurses and 19(25%) reported of challenges in paying for the health insurance. Similarly, all

respondents (100%) reported that low-income levels were a challenge in implementing the UHC, which could be as a result of increased health expense and low economic background making it difficult in accessing healthcare services and medical expenditures. Further, 2(20%) of the respondents cited monitoring concerns, while 1(10%) stated of low education status. Other challenges that were faced in the implementation of UHC included inadequate staffing and low staff motivation, corruption, inadequate funds, low-income levels, and inefficiencies in spending on health.

These findings agree with those of Musgrove (2015) who found inefficiencies comprise of inappropriate and ineffective administration of drugs, medical mistakes, lack of optimal quality care, wastages, corruption, and fraud. This was also observed by Hsu, Huang, and Yupho (2015) who undertook quantitative policy experiments with the elderly and welfare analysis to determine the effectiveness of tax options in financing Thai's health insurance system and the results of the study revealed that a large informal sector could inhibit the capacity of Thailand to meet UHC-based inequalities due to income generation disparities and subsequent tax burdens.

The study findings observed that low socio-economic levels due to poverty hindered UHC program implementation. This concurred with De Andrade et al. (2015) who found out that the countries faced challenges of tracking the progress made in the region due to the escalation of social issues of poverty and inequalities. Similarly, Guessous et al. (2012) who established that issues such as dependency, poverty, gender, and low-income brackets persuaded the Swiss government to forego health to achieve economic equality which lowered the cost of UHC.

Correspondingly, Ataguba and McIntyre (2012) observed highs cost accessing care in South Africa despite the government piloting measures to promote equitability of the health system. These challenges however can be minimized by assessing the quality health gap to achieve UHC. For instance, ensuring existence of the right technical competence in delivering healthcare benefits to every population through UHC. Also, implementation of an ICT-based UHC mechanism to promote the equity established by Shiferaw and Zolfo (2012) in Ethiopia where UHC is dependent on the use of telemedicine to overcome the challenges and failures while expanding the successes of delivering quality healthcare to the residents.

Conclusions

Based on the study findings, the following conclusions were made:

1. Regarding the effectiveness of UHC program regarding access to healthcare services, the researcher concludes that health services in Makueni Level Five hospital were accessible, and this is attributed to the free maternity services provided by the government, the NHIF Scheme and construction of more health facilities by Makueni County government. Similarly, accessibility of health services at Makueni Level Five Hospital was effective due to good roads, proximity of the hospital to the community and availability of ambulances services.
2. Free maternity services, the NHIF Scheme, the healthcare financing by the Makueni County government and the construction of more health facilities at the County improved access to health services by the County residents.
3. In regard to the challenges faced in the implementation of UHC program, the study concludes that the program faced the challenges of shortage of drugs in hospitals,

inadequate supply of health facilities and equipment, high cost of health services, shortage of doctors and nurses and the challenge of paying for the health insurance. Similarly, low economic background made access to healthcare services a challenge.

Recommendations

The following recommendations were put forward based on the study findings.

1 The government need to intensify efforts to increase the uptake of health insurance so as ease the burden of healthcare expenses and improve healthcare access to the poor.

2 To manage the challenges of faced in the implementation of UHC program including the shortage of drugs in hospitals, inadequate supply of health facilities and equipment, the Count government need to increase the health budget to enable purchase of sufficient drugs, equipment, and employment of adequate medical personnel.

3 Health insurance providers should make an effort of improving their services to make sure they meet the needs of their clients hence improve the satisfaction.

Recommendations for Further Studies

The study was done in Makueni Level Five Hospital. The experiences, responses and the functionality of the facility may be different in other hospitals and counties in regard to universal health care. It is recommended that similar studies be done in other healthcare facilities in Kenya to avail more knowledge on Universal Health Care.

The study centered on the effectiveness of UHC program in Makueni Level Five hospital. More research studies could be done on the effectiveness of UHC program monitoring concerns in attempt to bridge the gaps in the implementation of the program.

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APPENDICES

Appendix A: Questionnaire for Patients

My name is Branice Kisali a post graduate student at Daystar University under the School of Human Sciences. I am currently working on my master's thesis on the extent of application of universal health care on performance of a decentralized government health system: a case of Makueni County. The goal of this study is to elaborate how far the application of Universal Health Coverage through the devolved government system. I therefore request you to truthfully answer the following questions: this will help me in carrying out an accurate study. This study is purely for academic purposes and all information received will be treated with utmost confidentiality.

Kindly read the questions carefully, follow the instructions in each question and give your honest answer. Please do not write your name on this questionnaire or indicate any form of identification.

Your response is highly appreciated.

I have read and understood the contents in this form. My questions have been answered. I agree to participate in this study.

Signature of participant ……..

Signature of research assistant……..

Date of signed consent …….

SECTION A

Please tick [ ] the one that best describe you

1. Gender

   [ ] Male

   [ ] Female

2. Age bracket

   [ ] Under 20 years

   [ ] 21 to 40 years

   [ ] 41 to 60 years

   [ ] 60 and above

3. Please indicate your highest academic qualification

   [ ] PhD

   [ ] Masters

   [ ] Degree

   [ ] Diploma

   [ ] Other

4. What do you do for a living?

   .....

SECTION B

A) Affordability

5. Do you currently have health insurance card?

[ ] Yes

[ ] No

6. If yes how many people are covered in your house hold?.....

7. How much do you pay for the card?

[ ] 500

[ ] 1000

[ ] 1500

8. How often do you pay for the card?

[ ] Monthly

[ ] Yearly

B) Accessibility

9. How far is the nearest health facility from your house?

[ ] Less than 5kilometres

[ ] 5 kilometers

[ ] 10 kilometers and more

10. What is the state of the road to your nearest health facility?

[ ] Murram road

[ ] Tar mark road

11. What means of transport are available to the health facility?

[ ] Vehicle

[ ] Walking

C) Quality/ utilization

12. What kind of health services are you able to access using your insurance card?

[ ] All medical treatment including investigations

[ ] Medical treatment and preventive care

[ ] Medical treatment only

13. How would you rate the services rendered at the health facility you have attended?

[ ] Excellent

[ ] Good

[ ] Fair

[ ] Poor

D) Challenges

14). Which of the following challenges do you face in accessing health services? (Tick all that apply)

a) High costs of health services ( )

b) Shortage of drugs in hospitals ( )

c) Challenges in paying for health insurance ( )

d) Shortage of doctors and nurses ( )

e) Insufficient health facilities and equipment's ( )

Q14b. What other challenges are faced in the implementation of UHC?

_____

_____

Qn. 15. What strategies has the government put in place to enhance the effectiveness of universal health coverage. (Tick all that apply).

a) Healthcare financing ( )
b) NHIF Scheme ( )
c) Free maternity ( )
d) Private health insurance ( )
e) Others_____

_____

Appendix B: Healthcare Workers Questionnaire

Dear Respondent,

Hello, my name is Branice Kisali and I am a student at Daystar University pursuing a Master's degree course in Monitoring and evaluation. I am conducting a study to assess the effectiveness of the universal health coverage (UHC) program. You have been selected to join this study because you are a staff at this health facility and your views will be very important to us. It is for this purpose that I request your participation in this study by filling in this questionnaire. Please note that you are not required to provide your name/identity on the questionnaire, and your feedback will be treated with utmost confidentiality.

Your response is highly appreciated.

Agreement of the Participant

Do you agree?

Yes ( )

No ( )

I have read and understood the contents in this form. My questions have been answered. I agree to participate in this study.

Signature of participant ……..

Signature of research assistant……..

Date of signed consent …….

Please circle the appropriate answer

SECTION A: Characteristics of Respondent

Q1. Sex

a) Male ( )

b) Female ( )

Q2. Position held at the facility:

……

Q3. What are your qualifications / specialization?

……

Q4.What is your job title?

a) Doctor ( )

b) Nurse ( )

c) Clinical officer ( )

d) Student Nurse ( )

e) Other (Specify)…….

Q4. How long have you served in this facility?

a) 0-1year ( )

b) 1-3 years ( )

c) 3-5 years ( )

d) More than 5 years ( )

SECTION B: Healthcare Access

Q5. What transport do you use during emergencies?

a). Ambulance ( ) b). Taxi ( ) c). Motorcycle ( ) others specify_____

Q6. What is the most common means of transport used by patients who are referred from other facilities to this facility for emergency services?

a) Public car/bus ( )Private car ( ) Ambulance ( ) Motorcycle others (specify)_____

Q7. Is adequate funding allocated for:

Medicine Yes ( ) No ( )

Equipment Yes ( ) No ( )

Maintaining buildings Yes ( ) No ( )

Q8. What is the state of medical equipment?

Very Good ( ) Good ( )Very bad ( ) Bad ( )None ( )

Q10. What happens to comprehensive emergency healthcare which requires specialists? Explain

……

Q9. Do you offer free maternity services?

Yes ( )

No ( )

SECTION 3: Infrastructural facilities, Medical Supplies and Equipment

Qn. 10. Does your facility routinely provide inpatient care?

a. Yes ( ) b. No ( )

Qn. 11. Does this facility have beds for overnight observation?

a. Yes ( ) No ( )

Qn. 12. What is the condition of your laboratory?

a. Very Good ( ) b. Good ( ) c. Very bad ( ) d. Bad ( )

Qn. 13. Are the healthcare facilities adequate?

a. Yes ( )

b. No ( )

c. If no, state which essential facilities are not available in the space below

_____

_____

Qn. 14. Has the universal health coverage helped improve the healthcare facilities?

a) Yes ( )

b) No ( )

c) Do not know ( )

d) Other specify_____

e) If yes please

explain_____

_____

Qn. 15. Do you have all the equipment you need to do your work?

a) Yes ( )

b) No ( )

Q16. Is there any equipment that you have requested for but not received?

a) Yes ( )

b) No ( )

c) If yes, please mention the most important equipment requested for but not received

1. ……

2. ……

3. ……

4. ……

Qn. 17. Are all equipment at your work place maintained in working state?

a) Yes ( )

b) No ( )

c) If no, please mention three most important equipment not maintained in working state?

1. ……..

2. ……

3. ……

Qn. 18. Do you have all the supplies you need to do you work?

a) Yes ( )

b) No ( )

c) . If yes, please mention three top most supplies requested for but not received.

1. ……...

2. ……...

3. ……..

Qn. 19. In what ways has universal health coverage program facilitated improvement of infrastructure facilities, medical supplies and equipment for healthcare services in public health facilities?

_____

_____Q

n. 20. In your opinion, does the facility have sufficient and reliable supplies of blood, drugs and equipment for healthcare services? Please explain_____

_____

Qn. 21. What are some of the gaps in regards to medical equipment and facilities in this hospital?

_____

_____

Qn. 22. Do you think the physical infrastructure in this hospital are adequate including laboratory operating theatres and labour and delivery ward. Explain.

_____

_____

Qn. 23 What strategies has the government put in place to enhance the effectiveness of universal health coverage. (Tick all that apply).

f) Healthcare financing ( )

g) NHIF Scheme ( )

h) Free maternity ( )

i) Private health insurance ( )

j) Others_____

_____

Q 24).a) What challenges are faced in implementing the Universal Health Coverage (Tick all that apply)

f) Low income levels ( )

g) Low educational status ( )

h) High healthcare costs ( )

i) Inefficiencies in spending for health ( )

j) Monitoring concerns ( )

k) Challenges in paying for health insurance ( )

Q22. What other challenges are faced in the implementation of UHC?

_____

_____

Thank you for your participation.

Appendix C: Ethical Clearance

DAYSTAR UNIVERSITY
Excellence • Transformation • Servant-Leadership

Athi River Campus
P. O. Box 17 - 90145
Daystar University, Kenya
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VERDICT – APPROVAL WITH COMMENTS
Daystar University Ethics Review Board
Our Ref: **DU-ERB/06/08/2020/000440**
Date: 6th August 2020

To: Branice Kisali

Dear Branice,

RE: ASSESSING THE EFFECTIVENESS OF UNIVERSAL HEALTH COVERAGE PROGRAM IN LEVEL FIVE HOSPITALS IN KENYA: A CASE OF MAKUENI LEVEL FIVE HOSPITAL, MAKUENI COUNTY

Reference is made to your ERB application reference no. 070720-02 dated 7th July 2020 in which you requested for ethical approval of your proposal by Daystar University Ethics Review Board.

We are pleased to inform you that ethical review has been done and the verdict is to revise to the satisfaction of your Supervisors and Head of Department before proceeding to the next stage. As guidance, ensure that the attached comments are addressed. Please be advised that it is an offence to proceed to collect data without addressing the concerns of Ethics Review board. Your application approval number is **DU-ERB- 000440.** The approval period for the research is between **6th August *2020 to 5th August 2021*** after which the ethical approval lapses. Should you wish to continue with the research after the lapse you will be required to apply for an extension from DU-ERB at half the review charges.

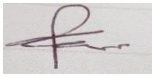
This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by Daystar University Ethics Review Board.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to Daystar University Ethics Review Board within 72 hours of notification.
iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to Daystar University Ethics Review Board within 72 hours.
v. Clearance for export of biological specimens must be obtained from relevant institutions.

vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of a signed one-page executive summary report and a closure report within 90 days upon completion of the study to Daystar University Ethics Review Board via email [duerb@daystar.ac.ke].

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and other clearances needed.

Yours sincerely,



Mrs. Purity Kiambi,
Secretary, Daystar University Ethics Review Board

"...until the day dawn and the **daystar** arise in your hearts"
2 Peter 1.19 KJV

Encl. Review Report

Appendix D: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **908933**

Date of Issue: **03/September/2020**

RESEARCH LICENSE

This is to Certify that Ms.. Branice Engesia Kisali of Daystar University, has been licensed to conduct research in Makueni on the topic: ASSESSING THE EFFECTIVENESS OF UNIVERSAL HEALTH COVERAGE PROGRAM IN LEVEL FIVE HOSPITALS IN KENYA: A CASE OF MAKUENI LEVEL FIVE HOSPITAL, MAKUENI COUNTY for the period ending : 03/September/2021.

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Appendix E: Plagiarism Report