

**FACTORS AFFECTING PERFORMANCE OF HEALTH SERVICES IN IMENTI  
NORTH SUB-COUNTY, KENYA**

**HELEN KIANIRA**

**SSC-G-4-1650-21**

**A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF EDUCATION,  
HUMANITIES AND SOCIAL SCIENCES IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF BACHELOR OF  
SCIENCE IN COMMUNITY DEVELOPMENT OF GREYSA UNIVERSITY**

**NOVEMBER 2024**

## DECLARATION

This research project is my original work and has not been presented for a similar purpose in any other institution


Signature.....

Date.....03/13/2024

Helen Kianira

SSC-G-4-1650-21

This research project has been submitted with my approval as a university supervisor

Signature.....

Date.....3/12/2024

Name: Madam Sarah Njuguna

Department: Humanities and Social Sciences

Gretsa University

## CONTENTS

DECLARATION .....	i
CONTENTS.....	ii
LIST OF TABLES .....	v
LIST OF FIGURES .....	vi
ABBREVIATION AND ACRONYMS .....	vii
OPERATIONAL DEFINITION OF TERMS .....	viii
ABSTRACT.....	ix
CHAPTER ONE: INTRODUCTION.....	1
1.0 Introduction .....	1
1.1 Background of Study.....	1
1.2 Statement of Research Problem .....	2
1.3 Purpose of Study .....	3
1.4 Conceptual Framework.....	3
1.5 Research Questions .....	5
1.6 Objectives of the Study .....	5
1.6.1 General Objective .....	5
1.6.2 Specific Objectives .....	5
1.7 Significance of the Study .....	5
1.8 Scope of the Study.....	5
1.9 Limitations of the Study .....	6
1.10 Assumptions .....	6
CHAPTER TWO: LITERATURE REVIEW .....	7
2.1 Introduction .....	7
2.2 Factors Affecting the Performance of Quality Health Services.....	7
2.3 Availability of Healthcare Resources.....	8
2.3.1 Medical Equipment.....	8
2.3.2 Infrastructure .....	8
2.4. Human Resources.....	9
2.4.1 Staffing Levels and Workload .....	10
2.4.2 Training and Education .....	10
2.4.3 Work Satisfaction and Motivation.....	11
2.5 Availability of Funds for Healthcare.....	11
2.5.1 Funds Allocation for Health .....	11
2.5.2 Adequacy of Funds .....	11

2.5.3 Other Financial Sources.....	12
2.6 Theoretical Framework .....	12
2.7 Summary of Identified Gap in Literature Review .....	13
CHAPTER 3: RESEARCH METHODOLOGY .....	14
3.0 Introduction .....	14
3.1 Research Design.....	14
3.2 Study Area.....	14
3.3 Target Population .....	14
3.4 Sampling Techniques .....	14
1.5 Sample Size.....	15
3.6 Measurements of Variables.....	16
3.7 Research instruments.....	17
3.8 Validity of measurements.....	17
3.9 Reliability of measurement .....	17
3.10 Data collection techniques .....	17
3.11 Data analysis .....	18
3.12 Logistical and Ethical considerations.....	18
CHAPTER FOUR: FINDINGS AND DISCUSSIONS .....	19
4.1 Introduction .....	19
4.2 Response rate.....	19
4.3 Findings and Discussions .....	20
4.3.1 Healthcare Resources .....	20
4.3.2 Human Resources .....	24
4.3.3 Availability for funds for healthcare. ....	24
CHAPTER FIVE: SUMMARY, CONCLUSION AND, RECOMMENDATION.....	27
5.1 Introduction .....	27
5.2 Summary of the findings. ....	27
5.2.1 Healthcare Resources .....	27
5.2.2 Human resources .....	27
5.2.3 Availability of funds for healthcare.....	27
5.3 Conclusions .....	28
5.4 Recommendations .....	28
5.4.1 Recommendations for Policy or Practice .....	28
5.4.2 Recommendations for Further Research .....	29
REFERENCES .....	30

APPENDICES .....	32
Appendix I.....	32
Questionnaire.....	32
Appendix II .....	36
Work plan .....	36
Appendix III .....	37
Budget plan.....	37

## LIST OF TABLES

Table 1: Measurement of Variables .....	16
Table 2: Response Rate.....	19
Table 3: Number of Healthcare Resources .....	21
Table 4: Infrastructure.....	22
Table 5: Human Resources .....	24
Table 6: Source of Funds .....	25
Table 7: Funds Allocation.....	26
Table 8: Work plan .....	36
Table 9: Budget plan.....	37

## LIST OF FIGURES

Figure 1: Conceptual framework .....	3
Figure 2: Pie Chart to represent gender .....	20
Figure 3: Graph of Healthcare Resources .....	22
Figure 4: Graph on Infrastructure .....	23
Figure 5: Allocation of Funds .....	25

## **ABBREVIATION AND ACRONYMS**

SDG - Sustainable Development Goals

LMIC - Low and Middle Income Countries

KMPDU - The Kenya Medical Pharmacist and Dentist Union

WHO - World Health Organization

GOK - Government of Kenya

NGO - Non- governmental Organization

MRI - Magnetic Resonance Imaging

CT - Computed Tomography

APA - American Psychological Association



## **OPERATIONAL DEFINITION OF TERMS**

Health - refers to a state of being free from illness or injury.

Quality healthcare - refers to providing evidence -based healthcare services to those who need them.

Mortality - is a state of being subject to death

Morbidity - refers to the condition of suffering from disease

Staffing level - refers to number of workers needed to complete a certain work

Telemedicine - refers to the remote diagnosis and treatment of patients by means of telecommunication

MRI machines - it is a Non-invasive imaging technology that produces three dimensional detailed anatomical images

## **ABSTRACT**

The worldwide health sector is affected by various factors that can hinder or promote the performance of health services being delivered. Imenti North sub-county was used for the research. The objectives of the study were; To assess whether availability of healthcare resources affect performance of quality health services to the community in Imenti North, sub-county To evaluate if human resources affects performance of quality health services to the community in Imenti North, sub-county To determine whether availability of funds for healthcare affecting the performance of quality health services to the community in Imenti North sub-county. Target population was 2050 people within Imenti North sub-county and samples size of the study will be 245 people; 230 patients and 15 healthcare professionals. The study used descriptive research design and simple random sampling will be used to sample 12 hospitals. Healthcare professionals were sampled using purposive sampling and patients were selected using simple random sampling from the sampled hospitals. The study used questionnaires guide and interview schedule to collect data. The collected data was analyzed using descriptive statistics. The researcher found out that healthcare resources in the established facilities were well distributed but the healthcare facilities were not evenly distributed in the sub-county. The researcher also established that the workload was too much for the existing healthcare professionals. Funding and motivation of healthcare professionals were not even due to corruption and embezzlement. The researcher, therefore, recommended that; Balance the number of healthcare facilities in the sub-county, give the same amount of motivation to all healthcare professionals, corrupt leaders are sued and found guilty all their accounts should freeze and money should be used to improve health services, the county government should also improve infrastructure and implement policies to ensure accountability and transparency when handling public funds.

## **CHAPTER ONE: INTRODUCTION**

### **1.0 Introduction**

This chapter gives a brief background of the research study, showing what it entails, the issues dwelled in the research and how the problem has been of concern from the past. It also consists statement of the problem, conceptual framework, objectives of study, research questions, scope, significance and limitations of study.

### **1.1 Background of Study**

Health refers to a state of being free from illness or injury. Provision of quality healthcare is one of sustainable development goals (SDG) which were adopted by United Nations on September 2015. Mosadeghrad(2013) defined quality healthcare as consistently delighting the patient by providing efficient and effective health services according to the latest clinical guidelines and standards

Worldwide health sector is affected by various factors which can hinder or promote the performance of health services being delivered. Developed countries have more efficient and effective health services compared to low and, middle income countries (LMIC). World Health organization (2010) health services performance is closely linked to financial constraints. Finances is one of the crucial resources that impact the availability of essential medical supplies, equipment and infrastructure. Inadequate funding has been a major barrier to the delivery of quality health services in most of developing countries.

Kenya as one of developing countries has been experiencing financial constraints. Health workers are always on strike because of one reason or the other. For example, the latest strike was held on February 27 2024. The Kenya medical pharmacist and dentist union (KMPDU) held strike claiming that there was a delay in posting medical interns and payment of fees for postgraduate.

However, countries that don't have financial constraints continue to lead on the field of health. India is one of country that is recognized in offering the best quality healthcare services worldwide. Some of the reasons why is considered to be the best country to offer quality healthcare services are; government investment, skilled healthcare professionals, pharmaceutical industry, medical tourist and technological advancement. Government has invested in building modern hospital clinics and well-equipped facilities. It has also has a large pool of skilled healthcare professionals.

World Bank (2013) poor infrastructure can hinder the provision of quality healthcare which lead to delay in treatment and reduced patient outcomes. People from developing countries are

mostly affected because health facilities lack facilities like water and electricity. This what bring the difference between the services being offered in Kenya and that of India. India has adopted new technology as a way of improving their infrastructure and provision of quality healthcare services within their country and across the world. For example, they have adopted telemedicine and electronic health records which have helped to keep the records of the patients Human resource is another key factor that influences the performance of health services. well trained and motivated workforce is essential for delivering high quality healthcare services to the patients. (Dieleman et Al.,2016) Research shown that shortage of healthcare workers can significantly impact quality of care provided leading to morbidity and mortality rate. WHO (2007). LMIC face challenges n recruiting and retaining skilled healthcare professionals due to challenges like poor working conditions, low salaries and limited advancement opportunities. Doctors are drawn to urban areas or places where they can earn higher salaries and modern conveniences. They wouldn't be in a Position to get quality healthcare services. Brain drain is also a challenge to developing countries. People are trained in their country but they go to work to other countries where they are paid well. Kenya health workers have been striking claiming that the government has not release their salaries in the last few months or demanding for salary increments.

Imenti North sub-county is characterized by various factors that influence the performance of health services delivery and utilization. Lack of good teaching bring ideas about preventive exercise and illness. For example, during COVID-19 pandemic so many people refuse to go for vaccination.

Geographical factors affect the performance of health services in Imenti North sub-county. The distance from their settlement to the hospital is a bit long and also infrastructure like roads are very poor. People have been complaining that pregnant women have been delivering on their way to hospitals because roads are very poor more so during rainy season. There is a wide ratio difference between health workers and patient. sometimes health workers may feel tired hence they can't deliver quality services

The solution has to be holistic which integrate community outreach infrastructure, creation of healthcare workforce, capacity building and policy upgrade focused on the provision of access to quality healthcare services for all.

## **1.2 Statement of Research Problem**

Health is one of the Vision 2030 under social pillar where the government aim at providing quality and affordable health care to all citizens with a priority of being given to preventive

care at the community and household level using a decentralized national healthcare systems strategy (Government of Kenya {GOK}2007)

However, the performance of health sector has been affected by various factors like resource, facilities, infrastructure, governance and leadership. A study by Kruk et al (2018) the researcher found that inadequate resources were the major barrier to providing high quality care.

Sub-county hospitals in Meru County lack equipment and drugs hence force health workers to rely on conventional diagnosis further putting patient in danger of misdiagnosis (Makheti,2017)

Dieleman et al, (2016) Research shows that shortage of healthcare workers can significantly impact the quality of care provided leading to morbidity and mortality rates. Newspaper of Monday June 26 2023, quoted the words of Mr Balyenia one of health workers of Meru County "There are 67 facilities with only one nurse and not more than 30 health centers have clinical officer, this has left many of them overworked because they are alone in station. Some of the nurses are considering securing job elsewhere where their services are considered"

According to ministry of health Meru County statistics November (2022) shows that in Meru County there is 601 health facilities spread across the 10 sub-counties. In Imenti North sub-county there is 170 health facilities. This makes 28 % of health facilities in Meru and 1.19% of total number in the country. Imenti North sub-county also has the highest number of NGO health facilities that is 5 out of 7 facilities are in Imenti North sub\_ county

Despite Imenti North sub-county having all those facilities there still challenges hindering residents from accessing quality health care services This study did more research to explore factors affecting the performance of health services in Imenti North sub-county. Having an in-depth information on factors affecting the performance health services in this community will be of importance for developing target, strategies and policy measures that will take care of identified factors to improve access to quality and equity of healthcare for every resident of Imenti North sub-county.

### **1.3 Purpose of Study**

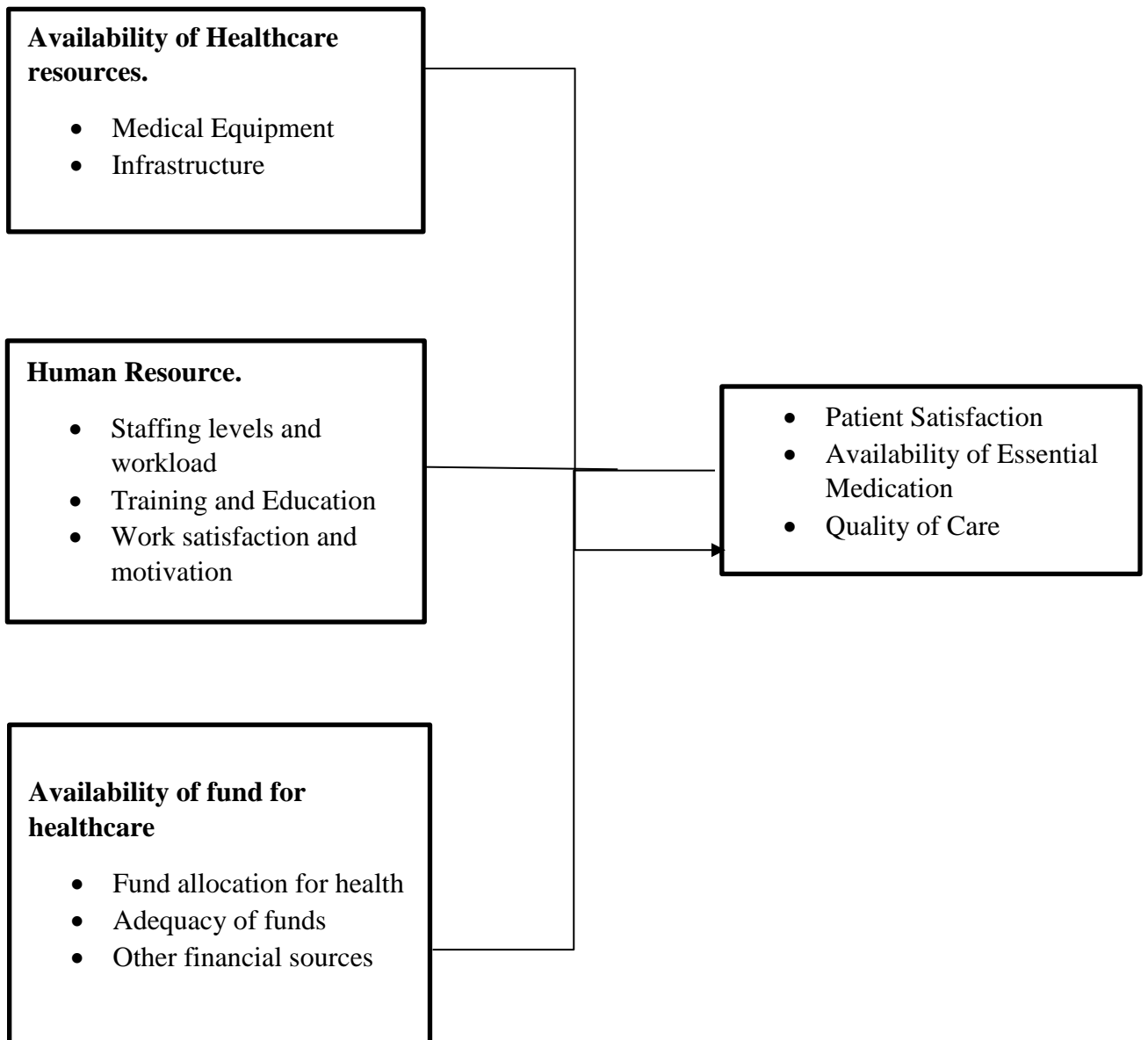
The main aim of the study was to assess factors that influenced the performance of quality health services in Imenti North, Meru County.

### **1.4 Conceptual Framework.**

**Figure 1:Conceptual framework**

**Independent Variables**

**Dependent Variable**



## **1.5 Research Questions**

1. Did the availability of healthcare resources affect the performance of quality health services to the community in Imenti North, sub-county?
2. Did human resources affect the performance of quality health services in Imenti North sub-county?
3. Did availability of funds for healthcare affect the performance of quality health services in Imenti North sub-county?

## **1.6 Objectives of the Study**

### **1.6.1 General Objective**

To assess factors that affected the performance of health services to the community.

### **1.6.2 Specific Objectives**

1. To assess whether availability of healthcare resources affect performance of quality health services to the community in Imenti North, sub-county
2. To evaluate if human resources affects performance of quality health services to the community in Imenti North, sub-county
3. To determine whether availability of funds for healthcare affecting the performance of quality health services to the community in Imenti North sub-county.

## **1.7 Significance of the Study**

The importance of this study is that it will provide good evidence of designing appropriate interventions and reforming policies that will help in overcoming the challenges in the healthcare system of Imenti North, Meru County. With an objective to identify the main factors that lead to better health service performance, this study contributes to the efforts aiming at better healthcare access, quality, and equity for all residents. The data generated can be a useful tool for the policy makers, medical administrators as well as the community stake holders when looking for ways to better the health outcomes in this given region.

## **1.8 Scope of the Study**

The research was limited to public hospitals that are within Imenti North sub-county and the respondents were healthcare professionals and patients. These respondents were selected

because they have the knowledge about the services they offer to the patients and patients know the quality of services they receive.

### **1.9 Limitations of the Study**

Limited access to certain data due to confidentiality concerns may have restricted the depth of analysis.

Resource constraints may have hindered extensive fieldwork or procurement of specialized equipment for data collection.

Time limitations may have restricted the scope of the study, potentially omitting some relevant factors influencing health service performance.

Reliance on self-reported data from surveys and interviews may have introduced response biases or inaccuracies, affecting the validity of findings.

### **1.10 Assumptions**

My assumptions included:

- I.** Participants provided accurate and truthful responses when filling in questionnaires and during interviews.
- II.** The findings from the study in Imenti North, were compared to other similar rural areas in Kenya with comparable healthcare contexts.
- III.** The responses received were a real reflection on the factors affecting the performance of quality health services in Imenti North sub-county.



## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter tries to explore literature review on factors affecting the performance of quality health services. The study focused on the following factors; availability of healthcare resources, human resources and funds allocation. It also contains a theoretical framework and summary of the identified gap.

### **2.2 Factors Affecting the Performance of Quality Health Services.**

This section presents a comprehensive review of the literature relevant to the main concept of the study, which is factors affecting the performance of health services to the community in Imenti North, sub-county. It includes discussions on factors such as health resource availability, motivation, health-related projects, leadership and governance, Socio-economic factors, geographical factors and cultural factors. The review synthesizes existing research to provide context for the study and identify gaps that the current research aims to address.

WHO (2019) Emphasize the need of strategic workforce to address the shortage of health workers professionals. Studies have shown that poverty, education level, gender disparities, and cultural beliefs impact health-seeking behaviors and healthcare utilization patterns (Marmot et al., 2012).

Effective governance and policy frameworks are essential for guiding health system performance and ensuring accountability and transparency. Studies have highlighted the importance of strong leadership, evidence-based policymaking, and regulatory mechanisms in improving health service delivery (World Health Organization, 2017). Kenya faces a shortage of healthcare workers, especially in rural areas, which impacts the quality and accessibility of healthcare services (Ayieko et al., 2019). Insufficient infrastructure and outdated medical equipment hinder the delivery of quality healthcare services, particularly in rural areas (Mutisya et al., 2020)

Imenti North sub – county is one of rural are in Meru County which faced by challenges when it comes to access to health services. It mostly affected by socio/economic factors, geographical factors and also political factors. In Meru county there is ideological difference between the governor and members of county assembly this will impact in health sector because the governor is not given peaceful time to do her work.

Delay of salaries for health workers is also a problem in Imenti North sub-county, standard nation,14, November 2022 Meru health workers issue a 7 days strike notice claiming that they

have not been paid for the last few months and they claim that there was harassment and intimidation of health workers.

### **2.3 Availability of Healthcare Resources**

Resources that available will determine the quality of care that will be offered to the patients. The following are some of healthcare resources that can affect the performance of health services in our communities.

#### **2.3.1 Medical Equipment**

Pereira et al. (2021) noted that placing medical equipment in underserved areas improve access to required health services, reduce health disparities and improve population health. In study conducted by Kumar et al (2020) state that automatic medical streamline processes reduce human error and enhance general efficiency in healthcare additionally Pereira (2021) note that advanced medical equipment such as MRI machines, CT scanners and robotic surgery system improve diagnostic accuracy and treatment outcomes leading to patients satisfaction.

Equipment like ventilators and surgical tools impact effectiveness of treatment provided to patients, according to WHO (2019) modern equipment ensures patients receive the best possible care. Services offered in hospitals with modern equipment are always effective compared to hospitals in countryside hospital which lack these equipment.

Properly maintained medical equipment reduces the risk of errors and complications during procedures hence enhancing patient's safety (pageler NM et al.,20219). If equipment are well maintained there will be few cases of errors during surgery procedure and it will also raise the confidence of patients during surgery process. If there is so many cases of errors during surgery procedure many patients will refuse to undergo through surgery procedure because they feel that the same error might occur to them.

Medical equipment integrated with data analytics capabilities enables healthcare providers to make informed decisions, track patients progress and optimize treatment plans based on real-time information. Health workers are able to retrieve patient's information because they kept as softcopy not hand written as it was in the past.

#### **2.3.2 Infrastructure**

According to the World Bank (2020), inadequate infrastructure poses a significant obstacle to delivering quality healthcare, resulting in treatment delays and diminished patient outcomes. This issue mostly affects individuals in developing countries, where health facilities often lack

essential amenities such as reliable access to water and electricity. Rural area is usually characterized by poor infrastructure and this always hinder people from rural area to access health services.

Most will choose to use traditional medicine when they compare the distance from their home to hospital and transport cost needed before they reach to the hospital. Some of women also give birth at their home because there is no car or motorcycle can take them from where they are living because of poor roads.

Clean water supply, sanitation and housing play an important role in promoting community health. Poor infrastructure in these areas can lead to spread of infectious disease and negatively impact population health (Ayele D.G., Zewotir, T. & Mwambie H.G. 2019)

Well-equipped hospitals, ambulance services and communication systems can enhance the healthcare systems ability to respond to public health emergencies, natural disasters and pandemics (Gebbie, K.M., & Qureshi, K. 2019). Health facilities play a vital role in healthcare by impacting accessibility, care quality, patient satisfaction, efficiency, and equity. Studies show that well-equipped facilities with trained staff improve outcomes (Anselmi et al., 2019), while quality infrastructure enhances service delivery (Leslie et al., 2017). Patient satisfaction and efficiency are influenced by facility environments (Kruk et al., 2017). Strengthening facilities is crucial for better performance and addressing health disparities (WHO, 2018).

Study by Brown et al. (2022) note the importance of modern infrastructure and technology in health facilities for delivering efficient and effective services. Up-to-date equipment, electronic health records systems, and telemedicine capabilities contribute to better diagnosis, treatment, and communication among healthcare

availability and distribution of health facilities significantly impact healthcare access, particularly in underserved or rural areas. Proximity to healthcare facilities correlates with improved health outcomes and reduced disparities in access to care. (Zhang et al., 2021).

#### **2.4. Human Resources**

Human resources play a significance role in the performance of health services in both rural and urban areas. The following are some of human resources that affect the performance of health services.

### **2.4.1 Staffing Levels and Workload**

Staffing levels means the number of workers needed to complete a certain work. A study by Aiken et al., (2021) noted that higher nurse staffing level is related to fewer cases of patient's death. Adequate healthcare professionals will lead to provision of efficient and effective care to the patients because they are not overloaded with work or forced to work for extra hours. Heavy workload was a clear predictor of burnout among healthcare professionals (Bakker et al.,2020)

When workers are loaded with too much work load they get tired and later they might decide to resign from work hence increase turnover rates among the employees Commonwealth fund (2021) stated the impact of nurse staffing on hospital operational efficiency and resource utilization. Hospitals with needed number of workers is likely to provide high quality care to the patients and use the resources very well as compared to hospital with few healthcare professionals.

Adequate staffing levels are essential for healthcare facilities to comply with regulatory requirements, accreditation standards, and best practices, thus ensuring the delivery of safe and effective care. (Accreditation Canada 2021).

### **2.4.2 Training and Education**

According to Smith (2020) Ongoing training ensures that healthcare professionals possess the necessary clinical skills and knowledge to provide high-quality care. Continuous education programs help them stay on a level of advancements in medical science and technology, enabling them to deliver evidence-based and efficient care.

According to surveys conducted by Garcia et al. (2020) and Patel et al. (2022), patients report higher satisfaction levels when attended to by well-trained healthcare staff. Effective communication and empathy, fostered through education and training, contribute to this outcome.

Training and education enable healthcare professionals to stay updated with the latest advancement and also adopt to changing healthcare practices. A study by Jones et al, (2023) states the role of learning in fostering innovation and quality improvement within health services. Training and education programs improve staff morale, job satisfaction, and retention rates hence contributes to the stability and effectiveness of healthcare services. (Adams et al.,2022).

### **2.4.3 Work Satisfaction and Motivation**

Motivated healthcare workers demonstrate positive attitudes, high engagement, proactive initiative, continuous learning, effective teamwork, empathy, and job satisfaction. Research by Jones et al., (2020) and Smith & Johnson (2021) highlights these key indicators of motivation among healthcare professionals. Arian (2019) noted that staff who are dissatisfied and unhappy are not able to provide efficient and effective services to the customer

Lee, D.S, (2019) noted that motivated health workers professionals are like to provide high quality care, improve patient satisfaction, increase productivity and also reduce burnout and turnover ratio.

Generally, motivation is a significant factor in determining the performance of health services being delivered because it influences the attitude, behavior and actions of healthcare motivated health workers are likely to communicate effectively show empathy to the patients and provide personalized care. Studies have shown that poverty, education level, gender disparities, and cultural beliefs impact health-seeking behaviors and healthcare utilization patterns (Marmot et al., 2012).

### **2.5 Availability of Funds for Healthcare**

The availability of funds for healthcare significantly impacts the performance of quality health services.

#### **2.5.1 Funds Allocation for Health**

National and county budget allocation to healthcare significantly influences the performance of health services. A higher allocation enables investment in infrastructure, staffing, and medical supplies, enhancing service accessibility and quality. However, inadequate funding can lead to resource shortages, staff burnout, and limited services availability, impacting patient outcomes and satisfaction negatively. Studies consistently shown a direct correlation between budget allocation and healthcare performance (Smith et al., 2021; Jones & Patel, 2020). Therefore, ensuring sufficient budgetary support is crucial for maintaining effective health services delivery at the county level. Budgets allocated by the county will determine how resources will be allocated.

#### **2.5.2 Adequacy of Funds**

Financial resources help in developing and maintaining infrastructure, purchasing medical equipment, recruiting and retaining skilled healthcare professionals. Commonwealth Find (2019) Noted the role of finding in reducing disparities and improving health outcomes.

McHugh et al (2020) stated the important of maintaining staffing levels and enhancing patient's safety. All workers need to be paid after every month so if they don't receive their salaries they will go on strike or resign from the work. Required Staffing levels will reduce the high workload to the health workers. Also funding support research and innovation in healthcare leading to development of new treatment technologies and care delivery models. The study by Doroshov et al (2022) discussed the important of financial resources in driving biomedical innovation and catalyzing the translation of scientific discoveries

### **2.5.3 Other Financial Sources**

Financial sources beyond government allocations, such as private investments, donations, and insurance premiums, also influence the quality of health services. Research indicates that diversified funding streams can sustain healthcare infrastructure, facilitate innovation, and improve patient access to care (Deber et al., 2019). Additionally, philanthropic contributions and corporate sponsorships can support the implementation of specialized programs and technology upgrades, enhancing healthcare delivery (Sinaiko et al., 2020). Thus, influencing multiple financial sources contributes to the sustainability and effectiveness of quality health services.

### **2.6 Theoretical Framework**

This part consists theories that address variables of this study, that is; availability of healthcare resources, human resources and county funds allocation as independent variables. The study will employ two theories which includes Resources Based theory and human-capital theory.

#### **Resource-Based Theory**

This theory was proposed by (Penrose 2009), This theory suggest that the performance of health services depend on the availability and allocation of resources such as funds, equipment and staff. Resources which are allocated will determine the quality of healthcare that will be provided to the patients. Countries, counties or communities which have enough and qualified healthcare professionals will provide high quality care. Equipment and funds are very crucial in determining the performance of healthcare services. This theory will help in testing the validity of the finding.

#### **Human-Capital Theory.**

This theory suggests that investments in education, training, and skill development of healthcare professionals (human resources) contribute to improved performance. Adequate

staffing levels, ongoing professional development, and effective workforce management are essential for maintaining the quality and efficiency of healthcare services.

### **2.7 Summary of Identified Gap in Literature Review**

This research will focus on availability of healthcare resources, human resources and funds allocation as factors affecting the performance of health services however health service can be affected by other factors like leadership, governance and types of technology used.

The above literature review elaborates on how independent variables from conceptual framework affect the performance of health services however none of them has indicated how these factors affect healthcare professionals and people of Imenti North, sub-county.

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.0 Introduction**

This chapter shows the population that the research was conducted in the field study. It also contains data analysis, methods of collecting data and ethical issues that were be put into consideration during this study. It has sample size and samples techniques that were used to measure the validity and reliability of research instrument as well as data collected. It also contains logistical and ethical considerations.

### **3.1 Research Design.**

The research adopted descriptive design because the research aims to address social phenomenon which is to determine factors affecting the performance of quality health services in Imenti North sub-county. This design made the researcher to use quantitative methods on factors affecting the performance of health that can be used to collect information for this study and recommendations. Also, this design gave a clear picture of how availability of healthcare resources, human resources and availability of funds for healthcare have affected the performance of health services in Imenti North sub-county.

### **3.2 Study Area.**

This study was carried in Meru County specifically in Imenti North sub-county. This is because this area has high number of health facilities but the performance of health services are still poor within this community and Meru county as a whole. I was able to collect relevant data for analyzing from this region.

### **3.3 Target Population**

According to ministry of health, Meru County there is 21 public health facilities. The study targeted Healthcare professionals because they are the one who knew the challenges they faced during the delivery of their services to the patients The study also targeted patients because they also have information about the challenges they face when it comes to access to quality health. Target population was 2050 people; that is 1900 patients and 150 healthcare professionals

### **3.4 Sampling Techniques**

According to Ngechu (2003) defined sample size as a smaller group that represent a given percentage group selected from population while sampling refers to the procedure of choosing item population so as to represent the population (Orotho 2021). This research employed simple random sampling this will help to come up with sample of public hospitals in Imenti



North sub-county. Healthcare professionals were selected using purposive sampling while patients were selected randomly in-order to enhance the representation of variables of this study. The researcher targeted the head in various levels of hospital in order to come up with a sample size of 15 healthcare professionals.

### 1.5 Sample Size

To estimate the sample size for this study the researcher used Yamane's formula:

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

Where:

- n= required sample size
- N = population size (2,050 in this case)
- e = margin of error (e.g., 0.06 for 6%)

$$n = \frac{2050}{1+2050(0.06^2)}$$

$$n = \frac{2050}{1+2050(0.0036)}$$

$$n = \frac{2050}{8.38}$$

n= 245

Out of 245 people, 230

Were patients and 15 were healthcare professionals.

### 3.6 Measurements of Variables

**Table 1: Measurement of Variables**

Question	Variables	Indicators	Measurement
1	Availability of healthcare Resources	Availability of medical facilities Availability of medical equipment Accessibility to healthcare services	Nominal scale Ratio scale Ordinal Scale
2	Heman Resources	Staff turn over Categories of healthcare Professionals Professional qualification	Ratio Scale Nominal Scale Ordinal scale
3	Availability of funds for healthcare	Funds allocation for health Funding for preventive healthcare measures verses curative treatment Other financial sources	Ratio Scale Nominal scale

### **3.7 Research instruments**

This Study used primary instruments to collect data from the field. These include questionnaires and interview schedule. Interviews were semi-structured which aimed to provide an in-depth qualitative insight. The interview guide was constructed with open-ended questions to encourage discussion and exploration of theme. I conducted purposive interviews to healthcare professionals in-order to get relevant information. The questionnaire was constructed using closed-ended questions for easy analysis. This helped to assess factors affecting the performance of health services on this community.

### **3.8 Validity of measurements**

Validity is a crucial criterion and it indicates the degree to which an instrument measures what it is supposed to measure (Kathori 2006). To ensure validity the researcher clearly selected key variables that aimed to measure and then selected research tools that were needed to address research questions.

### **3.9 Reliability of measurement**

Reliability is defined as a measure of degree to which research instrument yields consistent results or data after a repeated twice or thrice (Mugenda and Mugenda 2012). To ensure reliability of information the researcher consulted the supervisor before using research instruments in the field. The supervisor made corrections where necessary to avoid errors in those research instruments. The study used test-retest techniques to check the accuracy of the research instrument.

### **3.10 Data collection techniques**

Data collection is very crucial when it comes to answering of research questions. This study employed primary method as a data technique. The primary data was collected using questionnaires and interviews. Questionnaires were distributed to patients while interviews were conducted to healthcare professionals. Questionnaires contained closed-ended questions . closed-ended questionnaires limited the respondents for easy analysis of data. The questionnaires also contained rated questions. The researcher dropped and picked questionnaires after the respondents had finished to fill in. The healthcare professionals were interviewed using purposive interviews in-order to gather more and relevant information.

### **3.11 Data analysis**

The researcher deployed data collection techniques such as interview and questionnaires. The researcher used closed- ended questions to get relevant information from the respondents and also applied purposive interview to gather information.

Data was analyzed using thematic analysis and coding using qualitative software like NVivo

The researcher utilized tables, graphs and pie chart to present numerical data on resource availability, human resources and funds availability and health service performance and thematic analysis results were presented through textual summaries.

### **3.12 Logistical and Ethical considerations**

The researcher observed all the legal requirements and will address all ethical aspects in a logical manner. All information obtained from other author was presented in American Psychological Association (APA) referencing style and also the guideline from Greta university research department was followed. The researcher also sought consent from the relevant authority and respondents. The researcher guaranteed the respondents that the information they gave will not be exposed and when it comes to answering questionnaires they were not supposed to write their names. Also, the respondents were informed about the objectives of the study before data collection process in-order to prepare them psychologically on the kind of information they gave.

## CHAPTER FOUR: FINDINGS AND DISCUSSIONS

### 4.1 Introduction

In this chapter, findings of data collected in the assessment of healthcare services in Imenti. The analysis of this data and its discussions will be made in this chapter and will be categorized according to the research questions. The research targeted a total of 245 respondents.

### 4.2 Response rate

The research used two data collection techniques to collect data from the respondents; questionnaires and interview schedules. A total of fifteen interview schedules were organized and only 12 were successful since some of the medical supritendants were not available during the specified times. These values amounted to 80% of total scheduled interviews. A total of 230 questionnaires were supplied to respondents who were 230 patients to assess the credibility of healthcare services in Imenti North sub-county Meru County. Out of the 230 questionnaires supplied to patients only 173 questionnaires which amounted to 75% of the questionnaires served to patients were deemed useful.

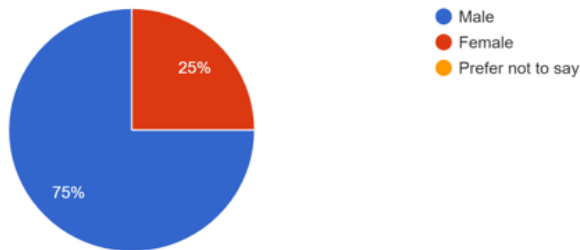
**Table 2: Response Rate**

Research instrument	Successful	%	Unsuccessful	%
Interview Schedule	12	80	3	20
Questionnaires	173	75	57	25

## Gender

The pie chart below shows gender representation.

**Figure 2: Pie Chart to represent gender**



## 4.3 Findings and Discussions

### 4.3.1 Healthcare Resources

The research aimed to investigate the availability of resources in hospitals within Imenti North sub-county. The health resources were divided into two categories; medical equipment and infrastructure so as to explore the variable extensively.

#### 4.3.1.1 Medical Equipment

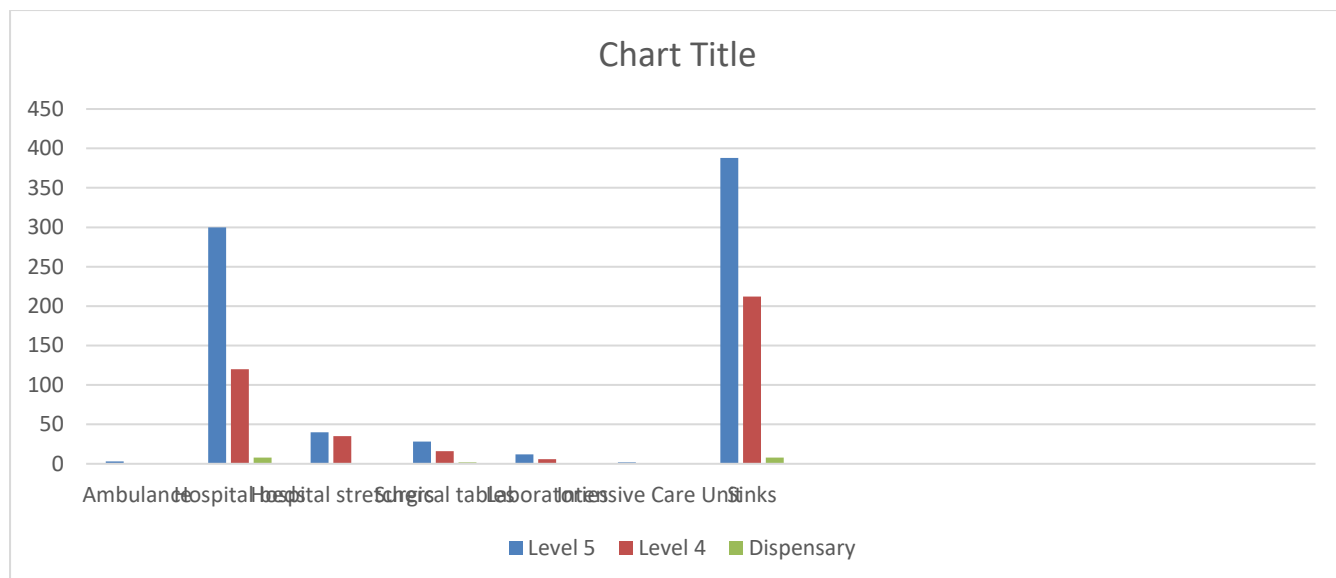
The findings of basic medical equipment are shown in the table below. The table shows an average number of equipment in different levels of hospitals.

**Table 3: Number of Healthcare Resources**

Equipment	Level 5	Level 4	Dispensary
Stethoscope	35	20	6
Thermometer	16	12	4
Blood Pressure Monitor	16	12	4
Scales	16	12	4
Patient monitors	20	8	0
X-Ray Machines	3	1	0
Wheelchairs	40	8	2
Walkers	67	18	2
Life Support Machines	6	2	0
Resuscitators	24	10	1
Crutches	60	35	6
Anesthesia machines	22	14	0

According to the data above on the basic service delivery optimization equipment there was at least an equipment in the level 5 departments. The data provided on level 4 and dispensaries is an average number of the equipment within the centers. Some of the level 4 hospitals had more equipment than others affecting the settlement. Most residents lived near health centers with more equipment because it meant that no waiting so much for an equipment. Some dispensaries had no basic equipment such as walkers and resuscitators making it difficult to deal with patients in times of emergencies making the professionals to either turn them back or refer them to level 4 and 5 hospitals.

**Figure 3: Graph of Healthcare Resources**



According to the graph above level 5 healthcare had the highest number of equipment. The research also found out that some basic equipment was missing in some departments within the level 5 hospital which was also a referral hospital. Some of the important basic equipment were totally missing in dispensaries.

#### 4.3.1.2 Infrastructure

Health infrastructure entails all physical infrastructure, inpatient beds, transport and technology required for effective delivery of services. This section of the research shows data findings of important infrastructure that ensures comprehensive health services for residents in Imenti North Sub-County.

**Table 4: Infrastructure**

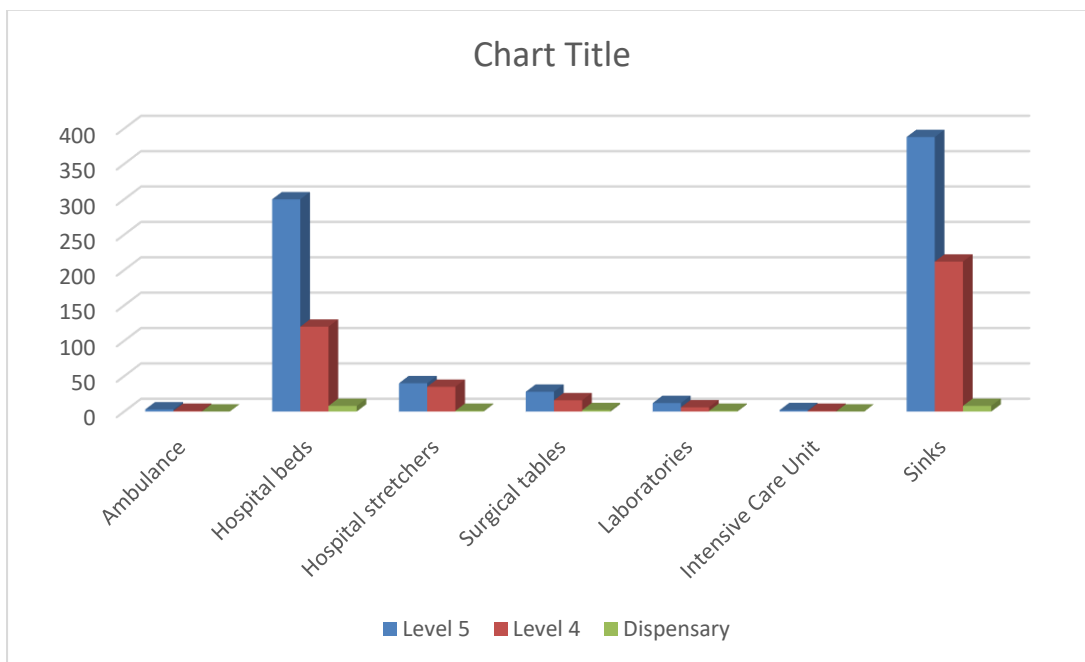
Infrastructure	Level 5	Level 4	Dispensary
Ambulance	3	1	0
Hospital beds	300	120	8
Hospital stretchers	40	35	1



Surgical tables	28	16	2
Laboratories	12	6	1
Intensive Care Unit	2	1	0
Sinks	388	212	8

The findings above indicate that healthcare facilities have been well equipped with the infrastructure. The sub county has 6 ambulances which shows that the response to emergencies is better and with more than 800 beds. At least each facility is equipped with a laboratory showing that at least a patient can be tested to ascertain the illness. Hygiene was at a high level within the centers with constant supply of water and electricity.

**Figure 4: Graph on Infrastructure**



### 4.3.2 Human Resources

The research sought to find out how human resources affected the delivery of good services in the healthcare sector in Imenti North Sub-County. The findings are tabulated below.

**Table 5: Human Resources**

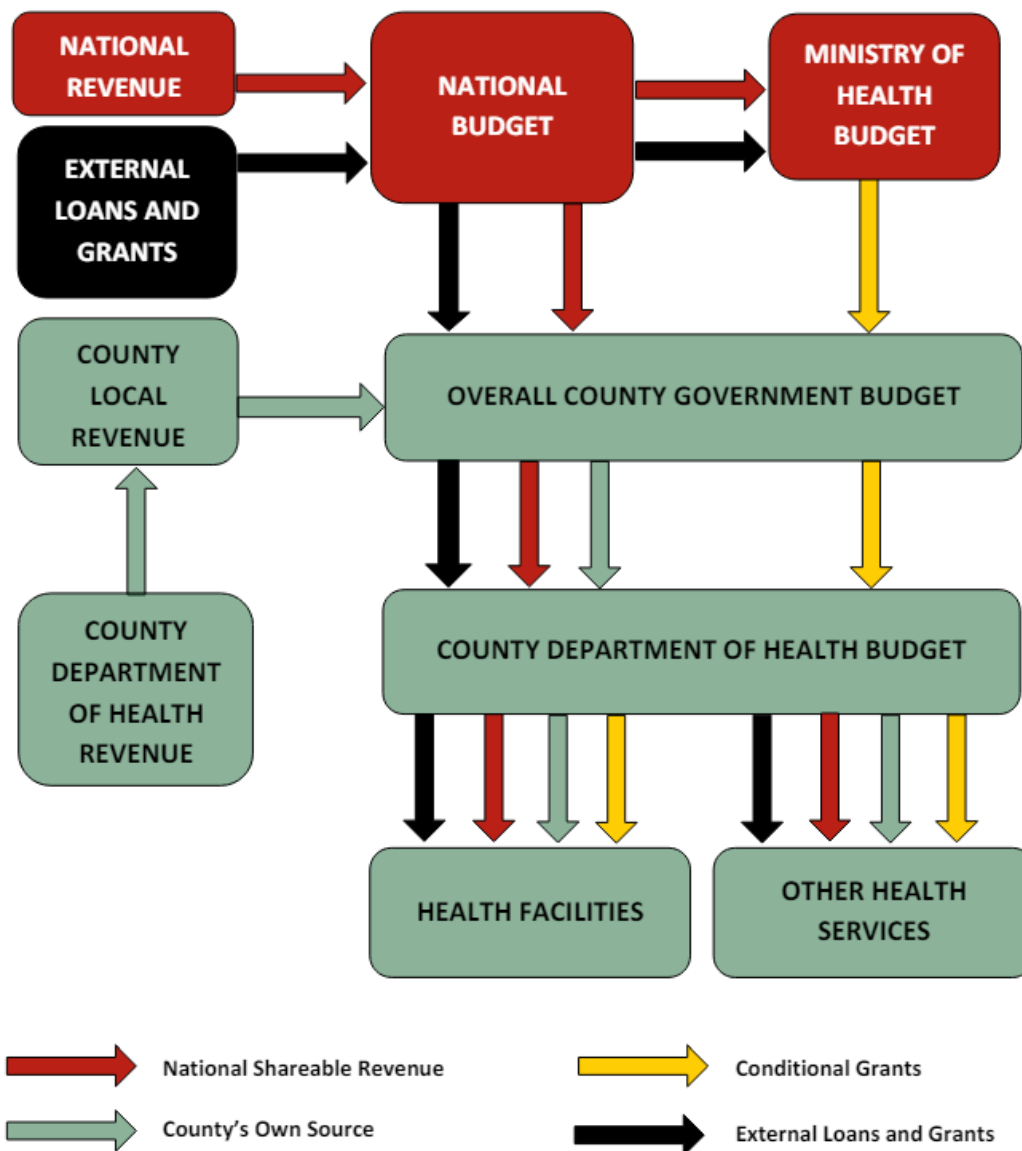
Staffing level	Number within each level		
	Level 5	Level 4	Dispensary
Doctors	54	18	2
Clinical officers	44	30	2
Nurses	102	75	6
Pharmacists	33	14	2
Dentists	16	7	0
Laboratory Technicians	18	6	2
Other support staff	222	107	20

The numbers for the staffing level in level 4 and dispensary is an average since there were several of them. The average was a convenient value since most of them were revolving around it. All the healthcare facilities met the threshold of the number of works required to run them.

### 4.3.3 Availability for funds for healthcare.

Funds are essential for the delivery of healthcare services. The researcher sought to determine the amount of funds allocated to ensure the seamless delivery of these healthcare services.

**Figure 5: Allocation of Funds**



Source Meru budgets

According to the Meru County government, the health sector was given a whopping 3,260,280,000.

**Table 6: Source of Funds**

HEALTH SERVICES	3,154.72	379.98	3,534.69	3,107.29	152.99	3,260.28
-----------------	----------	--------	----------	----------	--------	----------

Source Meru County budget review and outlook paper.

The table below shows an estimate of how the funds were distributed within the county.

**Table 7: Funds Allocation**

<b>Service</b>	<b>Amount</b>	<b>Percentage</b>
Salary	1 141098000	35
Education and Training	391 233 600	12
Infrastructure	847672800	26
Motivation	228219600	7
Others	652056000	20

Imenti North sub-county takes 29.2 of these health funds having a total of 952 001760 and distributes it according to the model in the table above. These findings show that the health sector is given the largest portion of revenue.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND, RECOMMENDATION.**

### **5.1 Introduction**

This chapter gives a summary of the findings, conclusions and recommendations drawn from the findings in connection with the factors affecting performance of health services in Imenti North sub-county, Meru County. It gives a detailed summary of each variable and its effect.

### **5.2 Summary of the findings.**

The research sought to investigate the effect of healthcare resources, human resources and, the availability of funds in delivery of health services in Imenti North sub-county, Meru County.

#### **5.2.1 Healthcare Resources**

The findings of the research showed that the level five hospital in Imenti North was well equipped with these resources making it a referral hospital within the sub-county. Some of the hands-on resources like the resuscitators within some level four hospitals were in shortage some having only four functional. Most patients who were brought to dispensaries and needed the use of a resuscitator in first aid would pass out on tables since there was either one or others had none. Low level healthcare centers/dispensaries lacked essential machinery for service optimization. Equipment used for triage were even throughout all levels of hospitals improving the services delivered. Infrastructure within the facilities was satisfactory. However, the sub-county had no balance of the healthcare facilities. This was shown with some wards lacking even a dispensary to respond to the healthcare needs of the residents. It was also noted that some roads in the rural areas were impassable by the ambulances during the rainy season in an occurrence of an emergency.

#### **5.2.2 Human resources**

The findings from this research show that the taskforce in the health sector in Imenti North sub-county met the threshold for the qualification of facilities. Patients did not lack a service in the entire sub-county. There were also specialists in both level 4 and 5 making service delivery easier due to the collaborative efforts. Meeting the threshold meant that services were offered 24 hours a day. A point to note was that most of the trainings to the healthcare professionals were done in areas with high number of facilities causing imbalance in the sensitization of these professionals.

#### **5.2.3 Availability of funds for healthcare**

The research established that Imenti North sub-county got 29.2% of the funds allocated to the healthcare sector in Meru County consuming the largest share. However, these funds are not

enough since there are some wards in the sub county which do not have a healthcare facility. This is a concern to this research since it has been established that though the subcounty is allocated funds they are only enough to run the facilities around leaving out some areas with little or no funds for the same. It was also noted that professionals within urban centers in the subcounty receive more motivation funds than those in the rural areas. Also, there is embezzlement and misappropriation of funds by people who are in leadership. This is the reason why some hospitals lack essential pieces of equipment and also some areas lack even a single hospital.

### **5.3 Conclusions**

The research conducted in Imenti North sub-county reveals significant disparities in healthcare resources, infrastructure, and human resources across different levels of healthcare facilities. The following is what was concluded from the research;

- Level 5 hospitals are relatively well-equipped with essential medical equipment and infrastructure. However lower-level facilities, particularly dispensaries, face critical shortages in both equipment and infrastructure.
- Human resources are also unevenly distributed, with Level 5 hospitals having a higher number of doctors, nurses, and other healthcare professionals compared to Level 4 hospitals and dispensaries.
- Infrastructure-wise, Level 5 hospitals are better equipped while dispensaries struggle with minimal infrastructure, impacting their ability to handle emergencies and provide continuous care.

### **5.4 Recommendations**

#### **5.4.1 Recommendations for Policy or Practice**

- i. County government should balance the number of healthcare facilities in the sub-county and not concentrate them in one area.
- ii. They should give the same amount of motivation to all healthcare professionals.
- iii. If corrupt leaders are sued and found guilty by the Ethics and Anti-corruption Commission( EACC) all their accounts should be freezed and that money should be used to improve health services.
- iv. The county government should also improve infrastructure like roads for easy transportation of people

- v. National government should formulate policies while county government should implement those policies to ensure accountability and transparency when handling public funds.
- vi. County government should conduct community health education programs to inform residents about the available healthcare services and the importance of utilizing local health facilities. This can help in reducing the burden on higher-level hospitals and ensure that patients receive timely care.

#### **5.4.2 Recommendations for Further Research**

- i. Investigate factors that affect healthcare specialists in the delivery of healthcare services.

## REFERENCES

- Aiken,L.H.,Clarke ,S.P., Sloane D.M.,Sochalski,J.,& Silber J.H.(2002). Hospital nurses staffing and patients mortality,nurse burnout and job dissatisfaction.JAMA 288(18). 1987-1993.
- Aiken,L.H.,et al.(2019). Nurse staffing , education and hospital mortality in nine European countries.
- Davari,M.,Abolhasan,F.,& Maleki,M.R.(2020).The role of of medical equipments in healthcare delivered.
- Deber, R. et al. (2019). Implementing Universal Health Coverage in Canada: What is the Role of Public Financing? *Health Policy*, 123(3), 235-240.
- Dieleman, J. L., et al. (2016). Factors associated with subnational variation in effective coverage of maternal and child health interventions in Kenya: Implications for health policy and financing. *BMC Pregnancy and Childbirth*, 16, 185.
- Jones,B.,& Johnson,C.(2020). Staffing levels and patients satisfaction.A retrospective analysis *Journal of health services Research*,15(2) 78\_92.
- Kanyuithia, J. K. (2020). Socio-economic and cultural factors influencing uptake of COVID-19 vaccination in Kenya: A qualitative study. *BMC Public Health*, 21, 1716.
- Kothari, C. R. (2006). *Research Methodology: Methods and Techniques*. New Age International.
- Kumar,A.,Kainthola,p. & Singh,H.(2020). Impacts of advanced medical equipments on healthcare delivery in developing countries.
- Mosadeghrad, A. M. (2013). Factors influencing healthcare service quality. *International Journal of Health Policy and Management*, 1(3), 215–222.
- Mugenda, O. M., & Mugenda, A. G. (2012). *Research Methods: Quantitative and Qualitative Approaches*. Acts Press.
- Ngechu, M. (2003). *Research Methodology: A Step-by-Step Guide for Beginners*. Nairobi Publishers.
- Oliveira, M. L. C. et al. (2021). Effects of Health Investments on Health Outcomes: A Global Analysis. *The Lancet*, 397(10272), 1383-1392.



- Orotho, A. (2021). *Introduction to Research Methods*. McGraw Hill Education.
- Pageler, M.N. (2019). Impacts of electronic health record technology on the work and workflow of physicians in the intensive care unit.
- Papanicolas, I. et al. (2019). Health Care Spending in the United States and Other High-Income Countries. *JAMA*, 319(10), 1024-1039.
- Penrose, E. T. (2009). *The Theory of the Growth of the Firm*. Oxford University Press.
- Rosenthal, M.B. & Dudley, R.A. (2007) Pay-for performance; Will the latest payment trend improve care?. *JAMA*, 297(7), 740-744.
- Sinaiko, A. D. et al. (2020). The Role of Philanthropy in Health Care: An Analysis of Charitable Health Care Contributions, 2018 Update. *JAMA Network Open*, 3(6), e207863.
- Smith, A., et al. (2012). The impact of staffing levels on patients outcomes in healthcare.
- World Bank. (2013). *Infrastructure and health services*. World Bank Group.
- . World Health Organization. (2007). *The world health report 2006: Working together for health*. World Health Organization.
- World Health Organization. (2010). *The world health report: Health systems financing: The path to universal coverage*. World Health Organization.

## APPENDICES

### Appendix I

#### Questionnaire

I am a student at Gretsia university Thika pursuing bachelor of arts in community development and am conducting research about factors affecting the performance of quality health services in public hospitals within Imenti North sub-county. This hospital has been selected kindly am asking for your cooperation in filling in these questionnaires so that I can be able to achieve the objective of this study. I will treat your responses with confidentiality to ensure privacy. Kindly do not write your names and please answer all the questions.

#### Respondent's profile

Kindly provide the information about yourself and tick where applicable

Age: 18-24 years (  ) 25-35 years (  ) 36 years and above (  )

Gender: Male (  ) Female (  ) Others (  )

Highest level of education

PHD (  )

Masters (  )

Undergraduate (  )

Diploma (  )

Certificate (  )

Secondary level (  )

Primary level (  )

Illiterate (  )

Position.....

Years of work experience (  )

#### Patients related questions

How far do you live from the nearest health facility?

0.5-1 km ( ) 2-4 km ( ) 5 km and above ( )

Have you ever faced difficulties in accessing healthcare services due to distance or transportation?

Yes ( ) No ( )

Explain your experience.....

Do you find health services affordable?

Yes ( ) No ( )

If no what could be the reason.....

Have you ever been asked to go and purchase medicine elsewhere?

Yes ( ). No ( )

How active is the community in promoting health awareness and prevention measure?

.....

How would you rate the level of health literacy in your community on a scale of 1-10 ?

Are there any government initiatives in place to improve healthcare services in your area?

Yes ( ) No ( )

If no what kind of initiatives will you recommend ?.....

Are you satisfied with services being offered here ?

Yes ( ) No ( )

If no why?.....

How far do you agree that the following factors are affecting the performance of health services.

SA=strongly agree

A=Agree

N=Neutral

SD=strongly disagree

D=disagree

	SA	A	N	SD	D
Availability of health resources					
Human resources					
Fund allocation					

### Healthcare workers related questions

How would you describe the overall work environment at your healthcare facility?.....

What are challenges you face in your work environment?

Do you have access to necessary medical equipment and supplies to perform your duties effectively?

Yes ( . ). No ( . )

If no why?.....

Have you ever experienced shortage of essential resources at your facility? Clarify which resource.....

Yes ( . ) No ( . )

Have you ever receive any training for your role in the healthcare facility?.....

Yes ( . ). No ( . )

Do you feel that your skills are being utilized effectively in your current role?.....

Yes ( . )

Have you ever experienced burnout or high level of stress due to your workload?.....

Yes ( . )

Are there sufficient staffing levels to manage patients need effectively? .....

Yes ( . )

How could rate your workload on a daily basis?.....

How do government policies and regulations impact your work as a healthcare professional?.....

What changes would like to see in government Policies related to healthcare?.....

Do you think funds allocated by county government for health services are enough? .....

Yes ( . ). No ( . )

Have you encountered any challenge in meeting patients need? .....

Yes ( . ). No ( . )

If yes what was the cause?.....

What recommendations would you give in-order to improve the performance of health services from the perspective of healthcare workers? .....

How far do you agree that the following factors affect the performance of health services.

SA=strongly agree

A=agree

N=neutral

SD=strongly disagree

D=disagree

	SA	A	N	SD	D
--	----	---	---	----	---

Availability of healthcare resources					
Human resources					
Availability of funds for healthcare					

## Appendix II

### Work plan

ACTIVITY	JANUARY	FEBRUARY	MARCH	APRIL
Topic				
Statement of the problem				
Objectives				
Conceptual Framework				
Literature review				
Research methodology				
Submission				

*Table 8: Work plan*

### Appendix III

#### Budget plan

Activity	Cost
Printing	1500
Typing and photocopying	500
Internet access	700
Lunch	1000
Transport	2400
Total.	6100

*Table 9: Budget plan*