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Assessing quality of primary healthcare services for the elderly in Kiambu County, Kenya.

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ASSESSING QUALITY OF PRIMARY HEALTHCARE SERVICES FOR THE ELDERLY IN KIAMBU COUNTY, KENYA

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

Name: Josephine Wangari Mbiyu

Signature: 

Approval

The dissertation of Josephine Mbiyu was approved by the following:

Name of Supervisor: Prof. Gilbert Kokwaro

Signature:  **Date: May 31st, 2023**

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DEDICATION

I dedicate this thesis to my dear mother Sarah, who has been my constant source of strength and encouragement.

ACKNOWLEDGEMENT

Throughout the entirety of the study, I want to express my gratitude to the All-Mighty God for the grace, strength, guidance, good health, and sustenance that He has provided. Throughout the course of my research work, I was fortunate enough to have Prof. Gilbert Kokwaro as my supervisor, who provided me with excellent intellectual insights, direction, and close supervision, I am very grateful.

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LIST OF ACRONYMS

ICOPE	Integrated Care for the Older People
NACOSTI	National Commission for Science and Innovation
PHC	Primary Health Care
SDGs	Sustainable Development Goals
SSA	Sub-Saharan Africa
UHC	Universal Health Coverage
USA	United States of America
WHO	World Health Organization
HWC	Health Care Workers

DEFINITION OF OPERATIONAL TERMS

TERM	DEFINITION
Access	The ability of an individual or a defined population to obtain or receive appropriate healthcare. This involves the availability of programs, services, facilities, and records. Access can be influenced by such factors as finances (insufficient monetary resources); geography (distance to providers); education (lack of knowledge of services available); appropriateness and acceptability of service to individuals and the population; and sociological factors (discrimination, language, or cultural barriers).
Aging	Aging is a process of becoming older that is characterized by progressive change / decline in biological functions in living organisms. In humans, these progressive biological functions decline eventually leads to death.
Barrier	Anything that prevents progress or makes it difficult for someone to achieve something.
Care	The application of knowledge to the benefit of a community or individual
Chronic condition / disease	A disease that has one or more of the following characteristics: is permanent; leaves residual disability; is caused by non-reversible pathological alternation; requires special training of the patient for rehabilitation; or may be expected to require a long period of supervision, observation, or care.

Cost of healthcare	The actual costs of providing services related to the delivery of healthcare, including the costs of procedures, therapies, and medications.
Essential medicines	They are those therapeutic substances that are indispensable for the rational care of the vast majority of diseases in a given population.
Elderly person	Kenya National Policy on older Persons and Aging (Sessional Paper No.2 of 2009), defines elderly persons as those over the age of 60 years. This study will refer to this definition. WHO and the UN too have agreed that 60 years and above refers to older population.
Health resources	All the means are available for health system operation, including manpower, buildings, equipment, supplies, funds, knowledge, and technology.
Health sector	The sector includes government ministries and departments, social security and health insurance schemes, voluntary organizations, and private individuals and groups, providing health services.
Health system	The complex of interrelated elements that contribute to health in homes, educational institutions, workplaces, public places, and communities, as well as in the physical and psychosocial environment and the health and related sectors. A heath system is usually organized at various levels, starting at the most peripheral level, also known as the community level or the primary level of healthcare, and proceeding through the intermediate (district, regional or provincial) to the central level.

Preventive Health	These are measures taken to stop the occurrence of disease or reduce the impact of disease in the body if it occurs. Preventive health can be at various levels: primary, secondary, or tertiary. Preventive health is especially important with the rising prevalence of non-communicable diseases whose occurrence or severity can be averted by various methods of prevention.
Promotive Health	This is a process of influencing individuals and organizations to accept, take responsibility and be active in matters that affect their mental and physical health. Promotive health seeks to develop individual and community measures that develop and maintain a state of well-being. WHO defines health promotion as a process of enabling people to increase control over their health and its determinants, thus improving their health.
Rehabilitative health	This is a set of interventions designed to optimize or improve physical and mental functioning of an individual in their daily activities by supporting them to overcome difficulties in thinking, seeing, hearing, communicating, eating, or moving around. Rehabilitative health may include modification of home environment to improve safety, training and education on healthy living, use of prescribed medication or psychological support.
Quality of healthcare	The extent to which healthcare services provided to individuals and patient populations improve desired health outcomes.
Primary Health Care (PHC)	Primary health care describes the first contact of a person with the health care system, seeking medical care, health advice or treatment. Primary health care is provided at community level at a cost that is affordable or with no pay.
Disease burden	This is the effect of a disease on an individual or on a society and the possible impact on daily life. Disease burden is associated with hardships because of losses due to disease, disability, and

	death. Disease burden is measured using various indicators: financial cost, mortality, morbidity, and disability-adjusted life years (DALYS) that quantify the years lost due to disease.
Treatment	A process designed to achieve the desired health status for a patient or client.
Universal health coverage (UHC)	UHC means that all individuals and communities receive the health services they need without suffering financial hardship. It includes the full spectrum of essential, quality health services, from health promotion to prevention, treatment, rehabilitation, and palliative care across the life course. Access to quality cancer care should be based on the three WHO principles of universal health coverage, which are (1) reduce direct costs, (2) improve population coverage, and (3) promote service coverage.

ABSTRACT

Old age increases the risk of non-communicable diseases and other degenerative diseases. This trend is evident in many parts of the world including sub-Saharan African (SSA) countries such as Kenya. To adequately prepare and respond to the healthcare needs of the elderly in SSA, there is need for more research to generate information on health system challenges regarding provision of quality healthcare to the elderly in SSA. The objective of the study was to assess the quality of primary healthcare services for the elderly in Kiambu County, Kenya. The County has the highest number of elderly persons (5% of the population) out of the 47 Counties in Kenya (KNBS 2019). The study population was the elderly people (defined as anyone aged 60 years and above) visiting the selected health facilities in Kiambu County. The study used a qualitative cross-sectional design, with purposeful sampling in which a semi-structured interview guide was used to capture information from the participants regarding the following aspects of quality of care: structure, process, and outcome. A total of seventy-two participants (24 males and 48 females, age range 60 – 86 years) were recruited from14 primary healthcare centres between the month of February and March 2023. Data analysis involved transcribing the data from the interviews held, followed by statistical analysis using the NVIVO. Results showed that lack of medication, referral for laboratory services, waiting time and shortage of healthcare workers (HCWs) were some of the challenges affecting the quality of healthcare for the elderly in Kiambu County. Additionally, interpersonal relationships with the healthcare providers which are all linked to quality of healthcare services for the elderly were found to be important for a positive experience for the elderly during the treatment process. The study also demonstrated that the access to care by the elderly depends on their satisfaction with the services provided by the healthcare facility and the health care provider. Key recommendations include: Kiambu County to address the issues of lack of drugs in the health facilities and especially those that relate to care for the elderly e.g. the non-communicable diseases medication, HCW training on social inclusion and re-designing of the health facilities to be disability friendly, HCW worker shortage to be addressed, In conclusion, the results of this study can be used to improve quality of healthcare for the elderly in other settings, depending on the context under which such services are being provided.

CHAPTER ONE: INTRODUCTION TO THE STUDY

This chapter introduces the study, providing the background information, problem statement, objectives and research questions, the scope of the study, and significance of the study.

1.1 Background of the study

1.1.1 Global situation

According to World Health Organization (WHO) 2018 fact sheet on Aging and Health worldwide, people are living longer going beyond the sixties. WHO definition of old age as agreed with United Nations is 65+ years. WHO acknowledges that the developed and developing world definition of old age differs in that in the developing world, old age is defined by new roles, loss of previous roles and inability to actively contribute to the community thus the slightly lower age of 55 years. According to World Health Organization (WHO) report on the elderly (WHO Age friendly PHC, 2015), between 2015 and 2050, the proportion of the world's older adults is estimated to almost double. In absolute numbers, this is an expected increase from nine hundred million to two billion people over the age of 60 years. Old age increases the risk of non-communicable diseases and other degenerative diseases making need for healthcare critical for the elderly (WHO, 2015

1.1.2 Aging in Low- and Medium-Income Countries (LMICs)

Increase in an aging population is a positive sign of improving public health systems, social and economic development (World Population Aging, 2019). In a recent report by WHO, Tracking Universal Health Coverage in the WHO African Region (2022), life expectancy in Africans living in the high- and middle-income countries in the continent has increased by almost 10 years from 46 to 56 years. This rise is greater than any other region of the world during when the assessment was conducted for the period up to 2019. It is expected Between 2015 and 2050, the proportion of the world's population over 60 years will nearly double from 12% to 22%. In 2050, 80% of older people will be living in low- and middle-income countries (WHO, Aging and Health 2018). All countries face major challenges to ensure that their health and social systems are ready to make the most of this

demographic shift (WHO, Aging and Health 2018). For low and middle-income countries (LMICS), addressing the economic and social shifts associated with aging population is critical to the achievement of the Sustainable Development Goals (SGDs) 1 (poverty eradication) SGD 2 (ensuring healthy lives and well-being at all ages) SGD 4 (full and productive employment and decent work for all and the Universal Health Coverage (UHC) goals (WHO Age Friendly PHC 2008).

1.1.3 Kenya Situation

The gradual increase in older population in Kenya is an area that needs attention from the service delivery perspective. The country has made some progress towards older populations access to health service through the free National Health Insurance Fund (NHIF) card and the Kesh. 2000 monthly allowance for the elderly. There is need to look inwards into the service delivery system and the experience of the elderly when seeking healthcare services to be able establish the gaps. The steadily growing proportion of Kenya's senior citizens is one of the country's demographic trends that, from the point of view of service provision, warrants special consideration. The Kenya Primary Health Care Strategic Framework 2019 – 2024 does not pay enough attention to the country's ageing population, instead placing a greater emphasis on the health of young people, mothers, and children.

In Kenya 1.87 million (3.9%) of the population is over 65 years of age according to Kenya National census report (KNBS, 2019), Research has shown that Primary Health Care (PHC) services contribute in promoting healthy living, reducing morbidity and mortalities and therefore well placed to provide care for the elderly (Starfield et al., 2005). PHC is the entry point to health systems and good foundation for addressing health systems strengthening to ensure responsiveness to public health crisis like pandemics and arising health issues especially the non-communicable diseases that are common among the elderly (WHO 2021).

1.1.4 The Situation of Aging Population in Kiambu County.

Following the enactment of a new constitution in Kenya in 2010, devolved units (Counties) were created to streamline administration and bring services (including health services) closer to people. Kenya has forty-seven counties, and provision of healthcare to its people is one of a county government's primary responsibilities according to Kenya's new constitution. Kiambu County is one of the forty-seven counties in Kenya, with a population of 2,417,735, out of which 97,389 people are over the age of 65 (Kenya Population and Housing Census report, 2019). This accounts for close to 5% of the population in Kiambu, the highest number of elderly people per county in Kenya (Kenya Population and Housing Census report, 2019).

Provision of health services in Kiambu County is organized as follows): one Tier 5 (referral) facility that serves Kiambu County and several neighboring counties; thirteen Tier 4 (sub-County) hospitals, one for each of the sub-counties in Kiambu County; twenty-four Tier 3 facilities (health centres), and seventy Tier 2 facilities (dispensaries) (Kiambu County HSSIP 2018-2022). This demonstrates that most of the services are delivered at the primary health facilities (Tiers 1-3). As a result, the study focused on these primary health facilities which are the backbone of any plan to roll out an effective UHC programme.

Most primary healthcare facilities are in rural areas, which is also where the elderly population is concentrated; as a result, this study focused on the quality of services provided at these levels. The elderly population has a higher prevalence of non-communicable diseases (United Nations, 2011). Although sub-Saharan Africa is currently facing an increase in the number of older people as well as an increase in the prevalence of non-communicable diseases, research on public health issues pertaining to older people has been neglected (Audain et al., 2017). According to the findings of Kenya's first survey on non-communicable diseases, non-communicable diseases are responsible for 27% of fatalities in the country and account for 50% of hospitalizations (Kenya Step-wise survey, 2015). The situation is particularly bad in Kiambu County where non-communicable diseases are responsible for 46–55% of deaths (Kenya Step-wise survey, 2015).

The county government of Kiambu is dedicated to providing its residents with comprehensive and high-quality medical care (Kiambu County Health Sector Strategic and Investment Plan, 2018-2022). However, the plan makes no special provision for health services for the elderly, hence, the findings of this study will be extremely important in helping Kiambu County to make provisions to include in the next Health Sector Strategic Plan for the next implementation period.

1.1.5 Healthcare for the aging population

University Health Coverage (UHC) is defined by WHO as ensuring that all people and communities receive the quality services that they need and are protected from health threats, without financial hardship that includes the curative, rehabilitative, and palliative care across the life continuum (WHO, 2021). The increasing number of aging populations presents a new challenge to achieving UHC and especially in the developing countries that are still struggling with communicable diseases and rise of non-communicable diseases (World Population Aging 2019). The Sustainable Development goal (SGD) 3: *Establish Good Health and Well-Being for all*, cannot be achieved without considering the health and social care for the aging population (WHO 2017).

In a study conducted to document whether the Aging population is being left behind on the UHC coverage, it was documented that older adults rarely receive focus as part of Sustainable Development Goals (SGD) monitoring and evaluation (Macinko et al., 2020). Quality of care for the elderly at the primary healthcare level continues to one of the major challenges in the healthcare system today (Vestjens et al., 2018). Various models like Chronic Care Model (CCM) having promising results in improving quality of care for the elderly (Vestjens et al., 2018). There are certain health conditions that are common among the elderly and they include: hearing loss, cataracts, and refractive errors, back and neck pain and osteoarthritis, chronic cardiovascular diseases, depression, and dementia (WHO, 2016).

In a study that was carried out in the United Kingdom (UK) using the Camberwell assessment of need for the elderly people in primary care tool, it was discovered that the age

group of between 70 and 79 years old shows the highest levels of utilization of primary health care services because of increasing mortality rates and the percentage of chronically ill patients (Walters, 2000a). Another study conducted in Germany on utilization of out-patient and inpatient services, it was observed that in almost all services, utilization increased with age (Rattay et al., 2013) and, therefore, the need to address the quality of primary health care services for the elderly.

1.1.6 Quality of care for the elderly

The quality of care received by the elderly at the health facility is a great determinant of their morbidity and mortality and their perception of the same determines the psychological satisfaction of the service (Beattie et al., 2014) . One of the key desired outcomes of health service delivery is client satisfaction and has a direct correlation with service utilization, however there is minimal information on user's perception of services provided (Assefa et al., 2011). Where patient satisfaction has been assessed, few studies have focused on older population despite the fact that the elderly have diverse healthcare needs and account for significant share of health service use and expenditure (Lee & Kasper, 1998). The satisfaction of patients with services is a critical indicator to quality of services (Beattie et al., 2014). According to (Cronin et al., 2000) , there is a clear association between satisfaction and the quality of services, to the point where quality is described in other consumer-oriented industries as level of satisfaction. However, according to (Tam, 2007),, customer happiness is the result of a process in which actual service is measured against ideal service. Patients' level of satisfaction with care and services provided is significantly influenced by their initial expectations.

1.2 Problem statement

The ageing population is becoming a major concern for public health in Africa, however the continent's health care infrastructure is not yet prepared to deal with this new threat because of long-standing issues like the prevalence of communicable diseases and inadequate funding for health care (WHO 2011). The response to planning for the healthcare needs of the elderly in Sub-Saharan Africa has been slowed by a lack of data or research

evidence (Audain et al., 2017). It is of the utmost importance to address the health concerns of the elderly population today considering the increasing elderly population, with 80% of this population expected to be living in developing countries by 2050 (World Health Organization, 2011).

The delivery of excellent services to elderly people is a difficult task that calls for an approach that is both strategic and multidisciplinary (Shrivastava et al., 2013). Quality of care for the elderly at the primary healthcare level continues to one of the major challenges in the healthcare system today (Vestjens et al., 2018). The complexity of the health conditions of the older persons calls for increased efforts to better coordinate care for the elderly at all levels of health service delivery (Khatib et al., 2017). In study conducted to document whether the Aging population is being left behind on the UHC coverage, it was documented that older adults are rarely receive focus as part of Sustainable Development Goals (SGD) monitoring and evaluation (Macinko et al., 2020). In another study conducted in Cape town South Africa on older people's experiences of primary healthcare (Kelly et al., 2019a) it was observed that care is mainly focused on processes and the individual needs or concerns of the client are not given attention resulting in non-compliance to treatment thus poor health outcomes especially on the long-term non-communicable diseases.

Customer satisfaction is one of the most important intended results of the delivery of healthcare, and it has a strong correlation with the amount of services utilized. Despite this, there is very little documentation on how users perceive the services that are being offered (Assefa et al., 2011) . In situations where, patient satisfaction has been evaluated, only a small number of studies have concentrated on older populations. This is despite the reality that older populations have a wide range of healthcare requirements and constitute an important portion of both health service use and expenditure (Lee & Kasper, 1998).
The health of the elderly should be a priority, however the healthcare systems have not been specific on elderly patient needs leading to low quality of healthcare (Khatib et al., 2017). Several studies on healthcare for the elderly have focused on utilization rather than quality improvement (Khatib et al., 2017).This study will examine the perspective of the

older persons on the quality of care at the primary healthcare facilities to contribute to quality improvement.

1.3. Research Objectives

The main objective of the study was to assess the quality of primary healthcare services for the elderly. The specific objectives are as below:

1. To assess how the physical structure and organization of care at primary healthcare facilities affect quality of services for the elderly;
2. To document the experience of the elderly regarding quality of services at primary health facilities

1.4. Research Questions

1. Are the current physical structures and organization of services in the primary healthcare facility likely to affect quality of services for the elderly population?
2. What are the experiences of the elderly regarding the quality of services they have received at primary health facilities

1.5 Scope of the study

The study focused on elderly people staying at home and seeking health services at primary health facilities. It excluded those referred to secondary and tertiary health facilities, and those staying in institutions (homes) for the elderly. In terms of socio-economic context, Kiambu County is comparatively better served with health facilities compared to other counties in parts of Kenya. Therefore, while some results from this study represent generic challenges faced by the elderly in other parts of Kenya, other results (e.g., distance to a health facility) may be context-specific.

1.6 Significance of the study

Access to quality healthcare services is a right to all as per the Kenya 2010 constitution as well as the Universal Health Coverage (UHC) initiative that was launched in Kenya in 2019. The increasing number of the older population poses a challenge in achieving the above aspirations (WHO 2017). The health systems strengthening initiatives, including

the introduction of Universal Health Coverage (UHC) need to give special attention to the healthcare of the older persons to ensure that the elderly realize their right to health (Kowal et al., 2010). Research has shown that Primary Health Care (PHC) services contribute in promoting healthy living, reducing morbidity and mortalities and therefore well placed to provide care for the elderly (Starfield et al., 2005). Sub-Saharan Africa is now experiencing an increase in the number of older persons and an emergence of non-communicable diseases, research on public health issues for the older person has been overlooked (Audain et al., 2017) .

Provision of quality service for the elderly is a challenge and requires a strategic and multidisciplinary approach (Shrivastava et al., 2013) . The findings will also help the national and county governments in Kenya to identify the policy gaps and possible interventions, both short-term and long-term, to improve on quality of primary healthcare services for the elderly. For example, the quality assurance assessment document for health facilities – Kenya Quality Model of Health (KQMH) currently does not have a section on review of quality of services for the elderly. The findings will also add to the body of knowledge on healthcare for the elderly both locally and internationally.

1.8 Dissemination of the study results

The information from this study will be disseminated to various stakeholders that will include: County, National and International levels. These will be done through seminars and conferences.

CHAPTER TWO: LITERATURE REVIEW

This chapter reviews literature on the theoretical concepts on healthcare for the elderly, followed by empirical review of literature on healthcare for the elderly, with examples both from developed and low- and middle-income countries (LMICS), highlighting the theories considered for this inquiry, and their role in understanding health systems factors affecting quality of primary healthcare by the elderly. The chapter concludes with discussion of the conceptual framework and its application in the quality of care for the elderly.

2.1 Theoretical Foundation of the study

The functionalist theory looks at society as having various parts that work together to keep the society running smoothly and the elderly contributing to these important parts (Crosnoe et al., 2002). According to Crosnoe et.al. (2002), the older persons are an important part of the society and that those with better resources / support stay active in their roles and adjust better to old age. The health of the elderly should be a priority, however the healthcare systems are have not been specific on elderly patient needs leading to low quality of healthcare (Khatib et al., 2017).

Quality theories have their origin in production / manufacturing sectors and have been over years applied in other industries like healthcare. Total Quality Management (TQM) in one of the theories that emphasizes on continuous improvement of quality of performance of processes, products and services (Brown, 1992). Through the foundation from the manufacturing industry on quality management, adaptation has been made to develop various quality management models for healthcare service delivery (Maritz et al., 2019). The complex nature of healthcare service delivery and the many players involved makes measurement of quality in the healthcare difficult (Mosadeghrad, 2012). One of the approaches proposed for quality assessment is the Donabedian Quality of Care model that focuses on examining the structure, process and outcome for health services and can be both from the demand or supply side (Donabedian, 1980). Donabedian defined quality at the application of the medical science and technology in a manner that maximizes its benefit to health without a corresponding risk. The study will be based on

the Donabedian Model of quality of care and will focus on the demand side (elderly clients) to better understand their experience and perspective of access to quality care at the primary healthcare facilities.

2.1.1 Aging population and disease burden

According to the findings of a study that was carried out in Italy to examine the trends in age-related disease burden and healthcare utilization, 86% of Italian adults older than 65 years had at least one chronic condition, and 56.7% had two or more chronic conditions, resulting in increased healthcare utilization (Atella et al., 2019).The rising costs of health care that have been observed in Italy and many other developed countries call for the implementation of preventive health measures and measures to slow the progression of disease in areas where it has already taken hold (Atella et al., 2019). In another study that was carried out in Western Europe, North America (the United States of America and Canada), and Japan, it was reported that people are living longer with less disability and functional limitations despite the rise in the prevalence of cardiovascular diseases among the elderly. This was attributed to the level of education as well as the awareness of healthy living (activities geared towards health promotion), in addition to the social security measures that have been put into place (Christensen et al., 2009).

The growing prevalence of non-communicable diseases as a result of an ageing population has also contributed to the strain placed on the workforce in the health care industry. Another study carried out in the United States in 2013 projected an increase in demand for health care services at all levels, with a reduction in access to care for those who are the most vulnerable, such as the elderly (Dall et al., 2013). Because of the region's relatively low life expectancy, sub-Saharan Africa (SSA) is often referred to as the youngest continent (Audain et al., 2017). Nevertheless, from the year 2000, there has been a remarkable increase in life expectancy, and the population of people aged 65 and older is projected to grow by 3.3% per year between 2015 and 2050. (Kowal et al., 2010).

According to the Global Burden of Diseases (GBD) report from 2015, non-communicable diseases are responsible for 41 million deaths annually, with 77% of all NCD deaths taking

place in low- and middle-income countries (Audain et al., 2017).Vulnerable people include people of all ages, including children and adults. The new danger, which can be traced back to a shift in dietary habits brought on by so-called "modernization" in the last few decades (WHO, 2015). According to the findings of a study that looked into the health of older people in SSA, the most significant health problems that older people face include obesity, which is closely related to noncommunicable diseases (NCDs), poor nutrition status as a result of poverty in the majority of the countries, common NCDs including hypertension and diabetes, and dementia (Audain et al., 2017). Overall, there is a lack of data on the health status of older people in SSA as a result, there is a pressing need for additional research in this field (Audain et al., 2017)..

2.1.2 Primary Health Care for the aging population

Sub-Saharan Africa (SSA) is often referred to as the youngest continent due to the region's relatively low life expectancy (Audain et al., 2017). However, starting in the year 2000, there has been a remarkable increase in life expectancy, and it is anticipated that the population of people aged 65 and older will grow by 3.3% per year between 2015 and 2050 (Kowal et al., 2010). According to the World Health Organization's (WHO) report on ageing and health (2015), there is a need for the healthcare system to support healthy ageing for all individuals by optimizing people's intrinsic capacity and functional abilities. This is necessary even though ageing gradually reduces capacity.

A study that was carried out in Italy between the years 2005 and 2014 looked at the trends in age-related disease burden and healthcare utilization. It was found that in 2014, 86% of Italian adults older than 65 years had at least one chronic condition, and 56.7% had two or more. This resulted in increased healthcare costs thus demanding for preventive health and slowing down deterioration where disease has already occurred (Atella et al., 2019). According to a WHO report (2004), primary health care is an engagement that an individual maintains throughout their entire life. This engagement promotes the individual's physical, mental, and social well-being, as well as provides a platform for continuum of care, making it an important approach for the growing ageing population. WHO went ahead and developed the "Age-Friendly Primary Health Care Centres Toolkit" (WHO,

2008) to operationalize its report that was published in 2004 titled "Towards age-friendly primary health care." The purpose of the tool kit is to improve the knowledge, skills, and practices of those working in the health care industry in relation to the provision of primary health care services for elderly patients. From the "Age-friendly Primary Health Care Centres toolkit," which focuses more on the functionality of the health system, including information and communication, management systems, and physical environment, WHO emphasizes the importance of personalized care for elderly patients. This concept inspired the development and publishing in 2017 of *'Integrated care for older people (ICOPE): guidelines on community level interventions to manage decline in intrinsic capacity*.' The guideline provided recommendations for health care workers to help develop and carry out person-centred integrated care for the older people at the community level (WHO 2019).

2.1.3 Quality of Care at the Primary Health facilities

The experience of the elderly in treatment process at the healthcare facility determines their continuity of care or not, hence health care personnel need to have the right attitude and understanding (Pfabigan, 2007a) . In a study conducted on association of quality of care to survival of vulnerable older patients, it was concluded that better performance on process quality measures is strongly associated with better survival among community-dwelling vulnerable older adults (Higashi et al., 2005). In a study conducted to review the improvement of Health Sector in Kenya, key recommendations stated that there is need to focus on availability of Human Resources for Health (HRH) as well as patient satisfaction to improve quality of care (Kumar Mohajan, 2014).

Assessment of quality in a healthcare organization is classified as either a structure, process or outcome measure, also referred to as the Donabedian model of quality assessment (Donabedian, 2005). Quality healthcare services are further described within six domains as proposed by the Institute of Medicine (IOM) (*Crossing the Quality Chasm*, 2001): Effectiveness, safety, patient-centred, timely, efficient and equitable that can be address through the Donabedian model. The six domains are explained by IOM (2001) as follows:
Safety: Avoiding harm to patients from the care that is intended to help them.

Effectiveness: Providing services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit (avoiding underuse and misuse, respectively). **Patient-centeredness**: Providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions. **Timeliness**: Reducing waits and sometimes harmful delays for both those who receive and those who give care. **Efficiency**: Avoiding waste, including waste of equipment, supplies, ideas, and energy. **Equity**: Providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status.

2.1.4 The Health Systems performance in the context of quality

There are several international goals, e.g., UHC, that are geared towards supporting improvement of performance of the health system. Measurement of the health systems performance can be organized into three categories: effectiveness, equity, and efficiency (Kruk & Freedman, 2008). The efficiency encompass quality of care, efficiency and patient satisfaction, equity – access to care by vulnerable groups, protection for financial risks, accountability, efficiency – funding for healthcare, enabling policy and administration (Kruk & Freedman, 2008). These components mirror closely to Avedis Donabedian's original concept of Structure (efficiency), Process (equity) and Outcome (effectiveness), (Donabedian, 1990), (Donabedian, 2005), and (Gardner et al., 2014).

These concepts are discussed in the section that follows below.

2.1.4.1 The Health Systems Performance Model; by Kruk and Freedman, 2008

Focus on the low and medium income countries on health and continued assistance from developing countries on health creates a need to assess the performance of the health systems(Kruk & Freedman, 2008). Kruk and Freedman proposed a health systems performance framework that is organized into three categories: effectiveness, equity, and efficiency. This model links closely with the Donabedian quality care of care model.

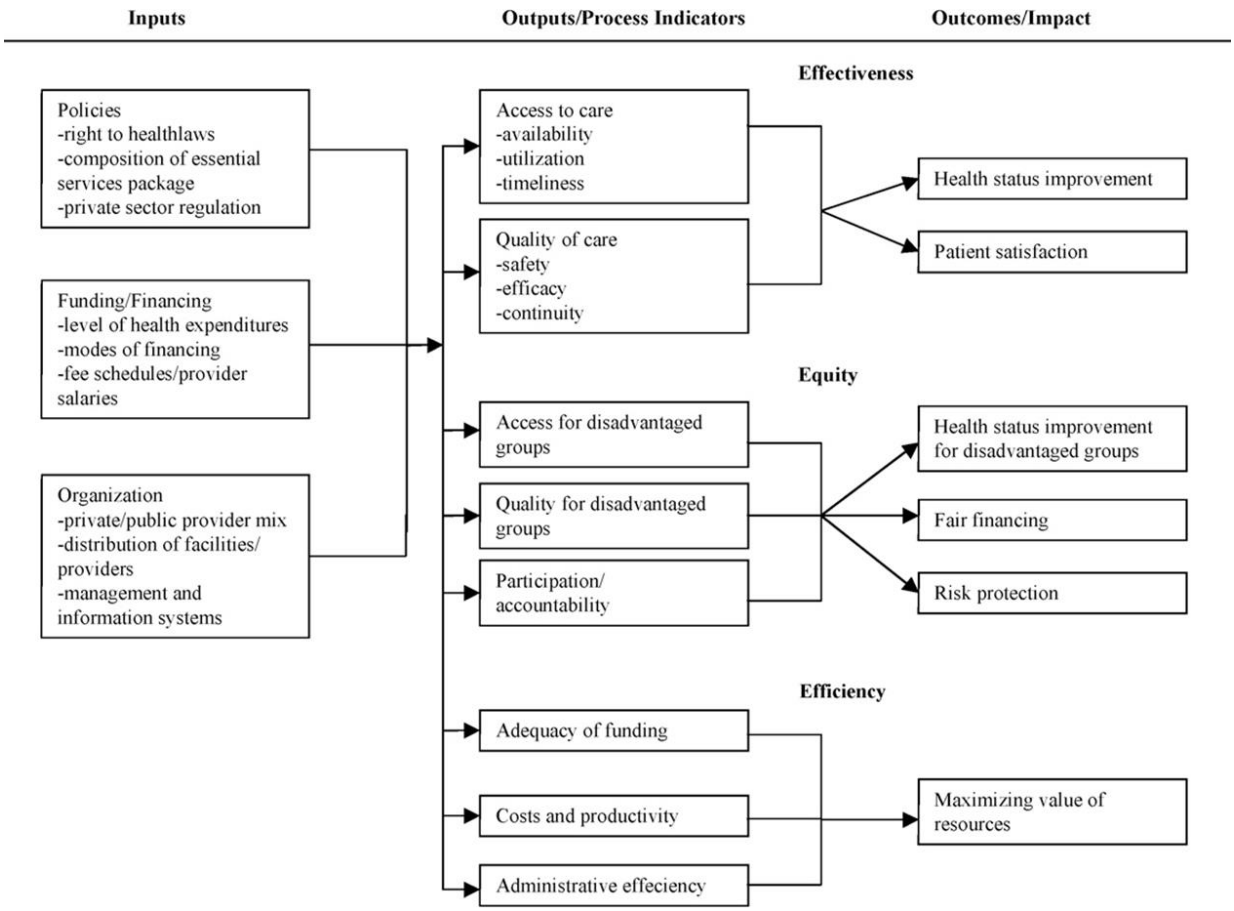

Figure 2. 1: Health Systems Performance Measurement Framework (Kruk & Freedman, 2008)

2.1.4.2 PHC performance measurement and monitoring of quality of health services

World Health Organization (WHO) emphasizes that there is need to look beyond service coverage and financial protection and focus too on the improvements of quality of services (World Health Organization, 2018). WHO emphasizes that quality services should be effective, safe, people-centered, timely, equitable, integrated, and efficient. Quality improvement approaches that involve analysis of processes and outcomes and systematic efforts to improve performance (World Health Organization, 2018). WHO has further guided that to address quality under the Universal Health Coverage (UHC) goal, quality needs to be measured from a primary health care perspective (WHO and UNICEF, 2022). As result WHO and UNICEP propose a Primary Health Care (PHC) measurement framework and indicators for measuring and monitoring quality of health

services from a PHC lens. This conceptual framework also links closely with the Donabedian quality care model focusing on processes and the intended outcome.

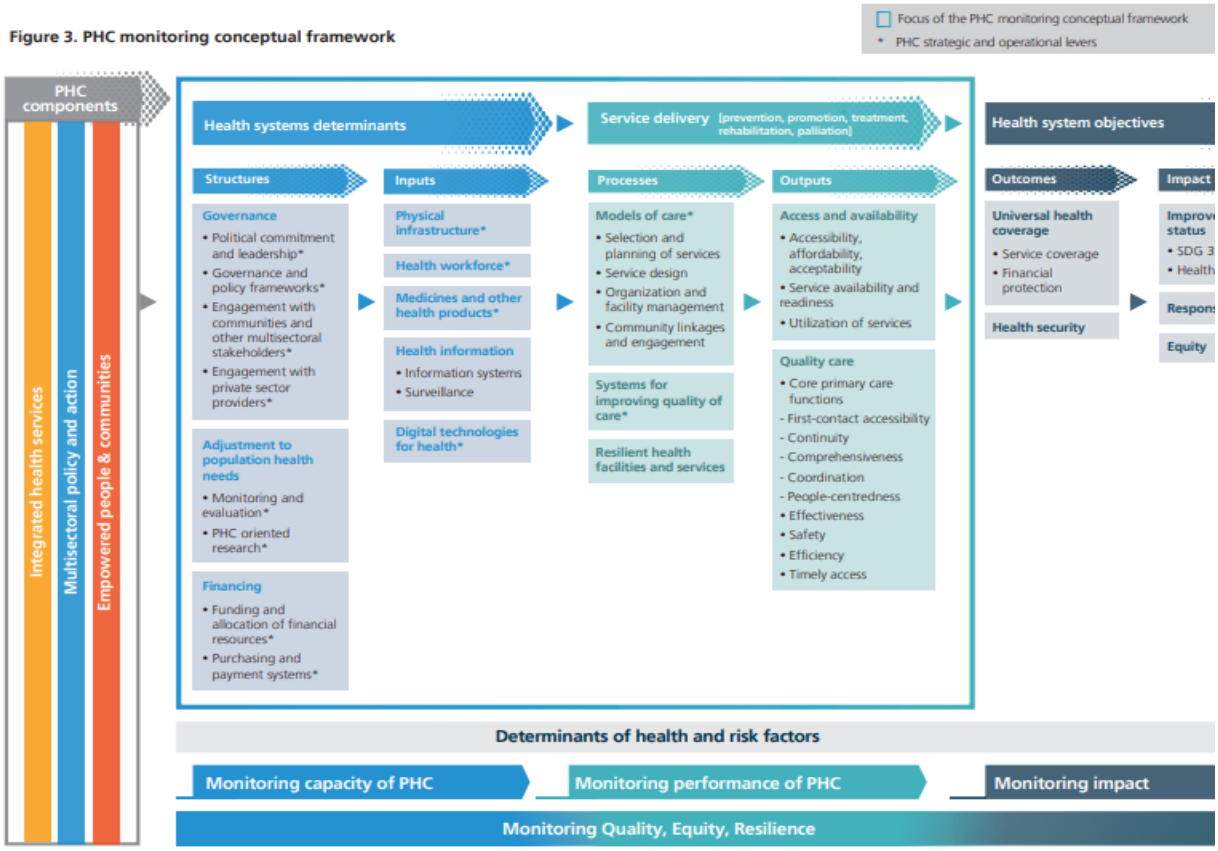

Figure 2.2 PHC Monitoring and Quality Measurement Framework (WHO and UNICEF 2022)

2.1.4.3 The Donabedian Quality of Care Model

Quality of care is defined as 'The degree to which healthcare services for individuals and populations increase the likelihood of the desired outcomes are consistent with the current professional knowledge(*Crossing the Quality Chasm*, 2001). According to WHO, 5.7 – 8.4 million people die annually due to poor quality care in LMICS, 15% of overall deaths and the cost of morbidities due to poor quality services is estimated to be $ 1.4 to 1.6 Trillion per year. Delivery of healthcare has distinct characteristics that include intangibility and simultaneity where the healthcare service is created and at the same time consumed. In a study conducted reviewing the health service measurement models, five

models were identified used in measuring quality of health services: Donabedian, SERV-QUAL, HEALTHQUAL, PubHosQual and HospitalQual models (Endeshaw, 2020) Donabedian quality of care model was the first model to be proposed to study quality of care (Donabedian, 2005). Donabedian stated that quality of care improvement was dependent on the technical and interpersonal quality of healthcare services that included the environment where healthcare being delivery and the individual perception on the care received. Donabedian proposed the three connected items : Structure, process and outcomes to measure quality of healthcare (Donabedian, 2005). Donabedian also proposed seven pillars of quality within which the model should be implemented: Efficacy, effectiveness, efficiency, optimality, acceptability, legitimacy and equity (Donabedian, 1990). The Donabedian quality of care model has been used to identify gaps in health care system performance and forms a basis for quality improvement activities (Crow et al., 2002).

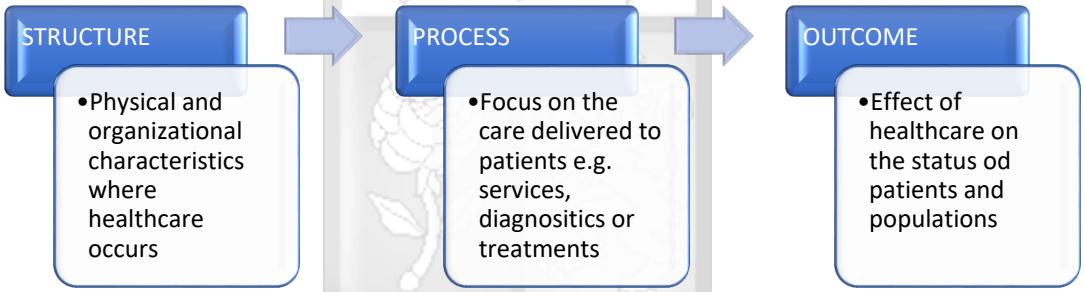

Figure 2.3: Donabedian quality care model (Donabedian, 2005)

2.1.4.4 Convergence of the quality measurement models.

Operationalization the elements of quality needs to be considered within the broader framework of the health systems and the context of health systems performance monitoring and measurement. This study has considered the Health systems performance measurement framework that was proposed specifically for the LMICs given the amount of foreign assistance in health (Kruk & Freedman, 2008). This framework provides a health systems approach to measuring performance with one of the key outputs focused on quality of care, closely linking to the Donabedian quality of care model. The PHC performance monitoring framework goes further to specifically address PHC where majority of the people requiring healthcare services including the elderly interact

with the healthcare system. (WHO and UNICEF, 2022. These three approaches in measurement of quality have informed the study conceptual framework.

2.2 Empirical Reviews

2.2.1 Review based on research objectives.

The degree to which a patient is happy with the care they receive is an essential indicator of the quality of those services (Beattie et al., 2014). One of the desired outcomes in the provision of health services is for customers to be happy, and this satisfaction has a strong correlation with patients' actual use of those services (Assefa et al., 2011). To evaluate the Structure, Process, and Outcome of healthcare services geared towards the elderly population, the research project used the Donabedian model of quality care. In his article "Evaluating the Quality of Medical Care," Donabedian first described the three components of quality care, which are Structure, Process, and Outcome (Donabedian, 2005). Over the course of many years, the model has remained in widespread use. The structure describes the environment or context in which care is being provided, the process refers to the transaction that takes place between patients and healthcare workers, and the outcome refers to the effect that the health service has on the individual as well as the degree to which they are satisfied with the manner in which the service was provided (Donabedian, 2005). Donabedian went further to define the attributes healthcare used to define quality that support the Structure-Process-Outcome known as the 'Seven pillars of quality (Donabedian, 1990).' The seven pillars of quality include a) Efficacy – The ability of care to improve health;, b)Effectiveness – the degree to highest attainable health improvement is realized; c) Efficiency – Ability to obtain the greatest health improvement at the lowest possible cost, Optimality – Balancing between costs and benefits (highest achievable quality with the available resources); d) Acceptability – refers to patient accessibility and comfort, a good doctor-patient relationship, how care affects quality of life, and the costs of care to the patient, adequate or satisfactory to the client, conforms to the patient expectation/preference - patient centred care; e) Legitimacy – conformity to social preferences, validity, describes the social impact of care; f) Equity – Fairness in distribution of care and its effects on health. Whether care is distributed fairly. The publication by Institute of Medicine (IOM), (*Crossing the Quality Chasm*, 2001) articulated six main aims of healthcare that were considered as domains of quality: safe, timely, effective, efficient,

equitable and patient-centred. WHO (2020) also provided the characteristics of quality health services to be: Effective, safe, people centred, timely, equitable, integrated, and efficient.

According to (Luxon, 2015), infrastructure is one of the most important pillars in the process of providing health services. It contributes to the delivery of high-quality medical care by facilitating coordinated movement within the medical facility. Furthermore, organizing staff structures with a focus on multidisciplinary teams in order to maximize the quality of patient care ensures effective utilization of resources and efficiency (Luxon, 2015). In this study, the perspectives of senior citizens regarding the infrastructure, organization, and availability of healthcare providers at various stages of care were investigated. The cost of care, proximity to healthcare delivery points, and a perception of the services as being unfriendly due to interaction with healthcare workers are some of the barriers that older people face when trying to gain access to medical care (Motsohi et al., 2020). These were also investigated in this study. Every customer or patient deserves dignity that is appropriate to their care and treatment, and this includes senior citizens, as a result, staff members need to have the appropriate frame of mind and an understanding of the issues involved (Pfabigan, 2007a) .

Client satisfaction is one of the most important desired outcomes of health service delivery, and it has a direct correlation with the amount of services utilized. Despite this, there is very little information on how older users perceive the services that are being provided (Assefa et al., 2011) . Where patient satisfaction has been measured, only a small number of studies have concentrated on older populations. This is despite the fact that older people have a wide range of healthcare requirements and account for a significant proportion of both health service use and expenditure (Lee & Kasper, 1998) . In this study, attention was paid to the perceptions of care held by elderly clients, and an assessment of client satisfaction (Outcome) with healthcare services.

The Functionalist theory of sociology (Crosnoe et al., 2002) asserts that older people are an essential component of society, and that those who have greater access to resources

and support are more likely to continue being productive in their roles and to adapt more successfully to old age. It is expected of those providing services in the health sector to respect and preserve the dignity of those people who are seeking health care (Pfabigan, 2007a). One of the objectives of the study was to investigate the experience of elderly patients regarding the respect and dignity with which they were treated while seeking healthcare at the primary health facilities.

2.2.2 Similar studies addressing quality of healthcare services for the elderly.

The provision of quality services to elderly people is a difficult task that calls for an approach that is both strategic and multidisciplinary (Shrivastava et al., 2013). According to the findings of a study that was conducted in the United States, , the most common impediments to receiving medical treatment were a lack of responsiveness on the part of the healthcare provider to the concerns of the patient (Fitzpatrick et al., 2004). In a different study on older people's experiences with primary healthcare in Cape Town, South Africa, found that care is primarily focused on processes, and the individual needs or concerns of the client are not given attention (Kelly et al., 2019b). This results in non-compliance with treatment, which in turn results in poor health outcomes, particularly regarding long-term non-communicable diseases. This situation was largely attributable to the severe lack of healthcare workers in the public sector, in addition to the negative attitudes held by healthcare workers towards providing care for elderly patients (Kelly et al., 2019a). It was recommended that communication centred on the needs of the patient would aid in the process of establishing trust between the healthcare worker and the elderly patients, which ultimately leads to comprehension and cooperation. (Kelly et al., 2019b).

Readiness of the health system to provide services to the elderly is also important in determining quality of services. According to the findings of a study that was carried out in Uganda, the public health system in Uganda is not prepared to provide services that are appropriate for elderly patients for a number of reasons, including the following: leadership and governance, financing, human resource, data and information, equipment and commodities (Ssensamba et al., 2019). Regarding access to healthcare by elderly people, two studies carried out in Uganda (Maharaj, 2020) and Ghana (Atakro et al., 2021), concluded that older people continue to experience challenges in the utilization of health and

healthcare services. Distance from healthcare service delivery points, long waiting hours, the cost of services, and interpersonal relationships with healthcare providers are some of the key challenges that have been cited, all of which are linked to the quality of healthcare services for the elderly. According to a study in by (Fitzpatrick et al., 2004), the most significant problem in the majority of developed nations is a lack of attention and relationship from the healthcare provider (Fitzpatrick et al., 2004).

2.3 Research gaps

The delivery of quality health services to elderly people is a challenging endeavor that necessitates a method that is concurrently strategic and multidisciplinary (Shrivastava et al., 2013). The level of service utilization is directly proportional to the level of client satisfaction, which is one of the most essential outcomes that should be aimed for in the provision of health care. In spite of this, there are limited data regarding how customers evaluate the services that are currently being offered (Assefa et al., 2011). When it comes to situations in which patient satisfaction has been evaluated, only a limited number of studies have focused on populations of older people. This is the case despite the fact that older populations have a diverse array of healthcare needs and account for a significant portion of both the use of health services and the expenditures related to those services (Lee & Kasper, 1998). The research gaps that informed this study are summarized below.

PRACTICE	**EVIDENCE/ SOURCE**	**THEORY/PRACTICE GAP**	**POTENTIAL OUTCOMES**
Organization and infrastructure of healthcare services not aligned to healthcare needs of the elderly	(Luxon, 2015). (Ssensamba et al., 2019)	Many healthcare systems in sub-Saharan African have not re-orientated health care systems to respond to healthcare services for the elderly affecting the quality of services provided	Poor continuity recommended healthcare service increasing morbidity and mortality of the elderly

Reported poor interpersonal relations between the elderly and the healthcare workers	(Kelly et al., 2019b) (Atakro et al., 2021) (Maharaj, 2020)	Health-care workers need re-orientation on how to deal and respond to the health care needs of the elderly	The elderly does not receive the required attention and their need are not fully addressed
Lack of client satisfaction and healthcare service utilization studies	(Higashi et al., 2005) (Assefa et al., 2011)	Need for more studies to be carried out to ensure that the health systems understand the needs of the elderly and make the appropriate adjustments	The elderly ends up looking for alternative healthcare services that may not be effectives or self-medication / across the counter medicine prescriptions

Table 2.1: Practice Gap (Source, Author 2023)

2.4 Research Conceptual framework

Healthcare quality is a core indicator of health systems performance. Achievement of quality of care means that the health services provided are effective and are achieving the desirable outcomes(Busse et al., 2019). It is therefore imperative to review quality of care in the context of health systems performance. This study adopted the Donabedian quality of care model in the context of health systems performance measurement framework(Kruk & Freedman, 2008) and also referenced the PHC performance measurement and monitoring framework (World Health Organization, 2018), linking to the six domains of the quality of care (*Crossing the Quality Chasm*, 2001).

The following conceptual framework demonstrates these linkages and was adopted for the study.

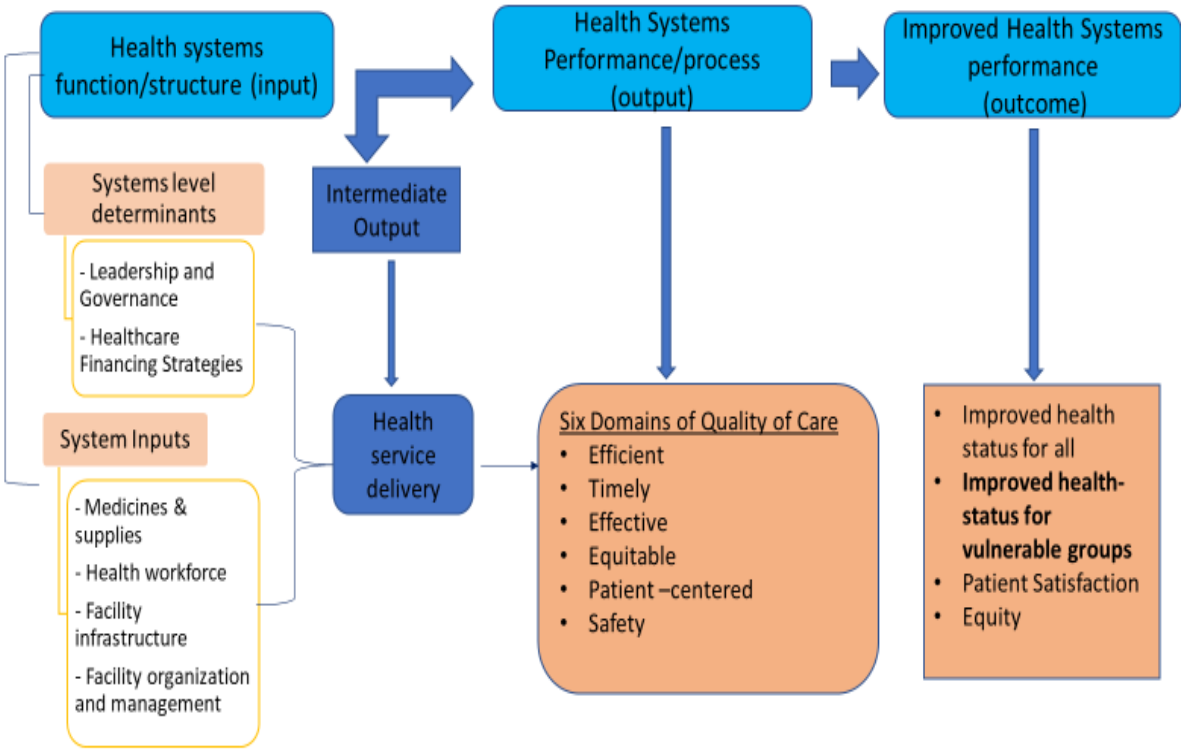

Figure 2.4 Study Conceptual Framework (Source Author, 2023)

In this study the health systems function/structure (inputs) were the independent variables that enable health service delivery to happen. The facility infrastructure and the facility organization were evaluated to address research question one (1) on how facility infrastructure affects quality of care. Availability of medicines, facility infrastructure and facility management all form the right environment for healthcare workers to deliver quality services (output), which, in turn contributes to the overall improvement of the health systems performance. The health systems performance (output) linked to the six domains of quality of care were adopted as the dependent variables. Evaluation of these variables helped in addressing research question two (2) on participants' experience with services at the facilities.

CHAPTER THREE: RESEARCH METHODOLOGY

This chapter presents the methodology, covering the research design, population and sampling, data collection and analysis methods, and validity and reliability of the tools used in this study. The chapter also addresses ethical issues in the research.

3.1 Research Design

The study used a qualitative cross-sectional study design. The study focused on the interpretive descriptive personal reports of the population, i.e., the older persons under observation at the specific time when the study was be carried out. A semi-structured interview guide was used. Semi-Structured interviews involved preparation of interview guide questions in advance mostly open-ended (Appendix 5). This approach allowed a conversational process that supported the free expression of opinion and provides good platform for probing on key matters of interest (Cooper & Schindler, 2014).

3.2 Study site, Population and sampling

3.2.1 Study site

The study was conducted in Kiambu County, at 14 selected primary health care facilities. Data from DHIS was used to check the facilities per subcounty that had the highest number of persons 60 years and older accessing healthcare services. Table 3.1 shows the sub counties and facilities selected. The number of questionnaire administration were then equally distributed.

County	Subcounty	Ward	Facility
Kiambu County	Gatundu South Sub County	Kiganjo Ward	Gitare Health Centre (Gatundu)
Kiambu County	Gatundu South Sub County	Ndarugu Ward	Karatu health centre
Kiambu County	Githunguri Sub County	Githiga Ward	Githiga Health Centre
Kiambu County	Githunguri Sub County	Githunguri Ward	Githunguri Health Centre

Kiambu County	Juja Sub County	Kalimoni Ward	Juja Farm Health Centre
Kiambu County	Juja Sub County	Witeithie Ward	Margaret Njoki Memorial Health Centre Ltd
Kiambu County	Kabete Sub County	Kabete Ward	St Angela Melici Health Centre
Kiambu County	Kabete Sub County	Uthiru Ward	Uthiru Health Centre
Kiambu County	Lari Sub County	Nyanduma Ward	Kagwe Health Centre
Kiambu County	Lari Sub County	Nyanduma Ward	Karatina Model Health Centre
Kiambu County	Ruiru Sub County	Biashara Ward	Githunguri Health Centre (Ruiru)
Kiambu County	Ruiru Sub County	Kiuu Ward	Lang'ata Health Centre (Ruiru)
Kiambu County	Thika Town Sub County	Township Ward	Kiandutu Health Centre
Kiambu County	Thika Town Sub County	Gatuanyaga Ward	Munyu Health Centre

Table 3.1: List of facilities where the study was conducted (Source, Author 2023)

3.2.2 Study population

The study population were elderly clients receiving or seeking treatment at the primary health care facilities in Kiambu County. An elderly person will be defined according to the Kenya National Policy on Older Persons and Aging (Sessional Paper No 2, 2009), i.e., any person who is 60 years or older. Procedures for obtaining institutional ethical approval (Appendix 1), National Commission for Research, Technology, and Innovation (NA-COSTI) permit (Appendix 2), approval letters from the facilities (Appendix 3), and participant's informed consent (Appendix 4) are described in detail in section 3.6.

3.2.3 Study Population Sampling

The study adopted the purposeful sampling technique. Purposeful sampling is a non-random technique that sets a criterion for selection of the target population (Cooper & Schindler, 2014). In this study the two main inclusion criteria for selection of the target population (the elderly) were that one should be 60 years and above and at that time they were utilizing outpatient services the primary health care facility, and willing to participate in the study.

3.2.4 Study Population Exclusion Criteria

Exclusion criteria included the elderly persons who presented or were clinically judged to have dementia, or any other conditions deemed to make them unfit to participate, or those who refused to participate. Their exclusion did not in any way affect their access to services at the facility.

3.2.5 Sample size determination.

The sample size refers to the participants in this study. In this study Slovin's Formula was used to determine the sample size. It has been used for determining sample size in studies using purposive sampling.

Formula: $n = N/ (1+ Ne^2)$

Where n = sample size

N is the population size (in this case, the population of elderly people).

"e" is the margin of error in selecting a small representative of the population.

In this study we considered a 95% confidence internal giving us a 0.05 margin of error (e)

Let 'e' to be 0.05.

Kiambu County is one of the forty-seven counties in the Republic of Kenya with a population of 2,417,735, with an elderly population of 97,389 (Kenya Population and Housing Census report, 2019). **Therefore N = 97,389**.

Sample Size calculation:

$$n = N / (1+ Ne^2)$$

$$n = 97,389 / 1+ 97,389*0.05^2$$

$$n= 398$$

A number of 398 participants drawn from 14 sub-counties, translates to approximately 28 participants interviewed per sub-county. However, given the resources and time available, we settled for a smaller figure of five (5) participants in twelve facilities and six (6) participants in two facilities, giving us a total of seventy-two participants.

3.3 Data Collection Methods

Primary data was collected using a pre-tested data collection tool (Appendix 5). This consisted of a semi-structured interview guide that was administered by the research assistant to elderly persons seeking healthcare services in the primary health care facility. A semi-structured guide was the most appropriate for collecting quantitative data due to the exploratory nature of the study that allowed for probing by the researcher as well free expression of opinion (Cooper & Schindler, 2014). The semi- structured questionnaire had four sections. The first section covered explanation of the study and consent the second section -demographic information from the participants. The third section covered the four components of evaluation access to primary health: Geographical coverage, availability, affordability, and acceptability. The last section allowed for the research subjects to provide any additional information that may have been left out. The session was audio-taped and transcribed as part of preparation for analysis. The participants were identified with the help of the healthcare worker in the facility in terms of age (60 years and above) and willingness to participate. They were then asked whether they would like to participate in the study after receiving the services from the facility. The researcher requested the healthcare worker to guide on an area where the discussions with the participant would be conducted, either within the building or outside in the facility compound. This varied from one facility to another depending on the availability of space. Once the participant was ready and then settled for the guided discussion, the search officer made an introduction of self by name, then explained the purpose of the study and the objectives. It was also

made clear that there were no material or financial direct benefits to the participant. The participant was assured that the information collected is confidential and that the recording of the data will not carry any information that can identify them as an individual. The discussion was carried out in Kiswahili. The participant was then asked to sign the consent form or write an initial of the name. The consent form was in hard copy, but the semi-structured questionnaire had been uploaded on KOBO Toolbox, an open source data collection application. KOBO allows the user to develop digital data collection forms that can work on the mobile devices and web browsers. The completed forms are downloaded onto mobile devices, ready for data collection. The KOBO App allows for offline data collection, and stores the data until an internet connection is available to download the data. KOBO also aggregates the data collected from different devices. The conversations were recorded using the same mobile phone. The administration of the questionnaire took between thirty and forty-five minutes. Data collection was supported by research trained assistants and certified on ethical issues of data collection. The duration of data collection was one week.

3.4 Data Analysis

Data downloaded from KOBO was verified by transcription of the data from the interviews conducted. The data was downloaded into excel format. The NVIVO software (qualitative data analysis (QDA) computer software package was used for analysis for qualitative data. This software had been installed earlier on a laptop. The content was analyzed based on themes generated from the data. Themes were used to generate report narratives that informed the conclusion and recommendations. The demographic data was analyzed to identify the age ranges as well as the gender of the participants.

3.5 Research Quality – Validity, reliability, and objectivity of the research

The evidence of validity and reliability are prerequisites to assure the integrity and quality of a measurement instrument (Kimberlin & Winterstein, 2008). The criteria of validity, reliability, and generalizability apply in principle to assess quality for both qualitative and quantitative research (Leung, 2015a).

3.5.1 Validity

Validity determines whether the individual scores from an instrument make sense, are meaningful, cover the actual area of investigation, the choice of methodology is appropriate for answering the research questions, and enable the researcher to draw good conclusions from the sample in the study population (Creswell, 2012). Validity in qualitative research means "appropriateness" and "trustworthiness" of the tools, processes, and data. While validity in quantitative research is a measure of how accurately the study answers the questions and hypotheses. Every step of the research logistics (from theory formation, design of the study, sampling, data acquisition, and analysis to results and conclusions) must be validated if it is transparent or systematic enough. In this manner, the integrity and quality of a measurement instrument, the research process, and results can be assured of high rigor and robustness (Heale & Twycross, 2015) . In this study, the validity of semi-structured questionnaires was pretested for appropriateness and to see how correctly the study answers the research questions. The research assistants conducted pre-testing at the Kiambu County, Juja Sub-county at Gachororo health centre that was not part of the selected facilities for the study.

3.5.2 Reliability

In qualitative research with diverse paradigms, the essence of its reliability lies with consistency (Leung, 2015), while in quantitative research, reliability refers to exact replicability of the processes and results. It indicates the probability of achieving the same results if the measurement was repeated using the same methodology. Silverman proposed five approaches in enhancing the reliability of process and results: reputational analysis, constant data comparison, comprehensive data use, inclusive of the deviant case and use of tables (Leung, 2015b). The reliability of this study was ensured by using the online KOBO tool for data collection and comparing the information with the transcribed recorded discussions.

3.6 Ethical consideration

The Strathmore University Institutional Ethics Review Committee (Appendix 2) approved the research proposal. A research permit was also obtained from the National Commission

for Science and Innovation (NASOSTI- Appendix 3). There was a formal written communication and informed consent sought from participants (Appendix 2), before their involvement in this study (Appendix 4). Participation in the study was voluntary and participants had the right to withdraw at any time during the study. Confidentiality of collected information was maintained using protected storage facilities or use of password-protected files. No identifiable data or information was released to anyone. The participants were not exposed to any risks during the interview since no invasive procedure was carried out and the interviews were conducted in the open spaces within the facilities.

CHAPTER FOUR: RESULTS

This section has focused on the characteristics and responses to the semi-structured interview guide. The respondents were the elderly patients who volunteered to take part in the survey. The results are presented based on the Donabedian Quality of care model: Structure, Process and Outcome.

4.1 Demographics of Participants

Distribution of the Study respondents by Age, and Gender

A total of seventy-two participants were recruited into the study.

VARIABLE	PARTICIPANT RESPONSE	FREQUENCY (n)	PERCENTAGE (%)
Age of Participants	60-69 years	48	66.6
	70-75 years	13	18.1
	76-79 years	3	4.2
	80 and Above	8	11.1
	TOTAL	**72**	**100**
Education Level	No School Education	16	22.2
	Primary School Education	39	54.4
	Secondary Education	13	18.1
	Tertiary/College	4	5.6
	TOTAL	**72**	**100**
Gender	Female	48	66.7
	Male	24	33.3
	TOTAL	**72**	**100**

Table 4.1: Demographics of Participants (Source, Author 2023)

4.2 Participants' responses based on the three domains of quality of care.

4.2.1 Structure - Physical organization of the health facility

The physical organization of the health facility should be able to support efficiency in maximizing use of the physical resources to provide quality service.

Reason for coming to the health facility.

Participants' responses regarding the reason (s) for visiting the health facility are summarized in Table 4.2. The majority went to the health facility for a scheduled appointment.

Reason for coming to the health facility	No. of respondents	%
Came for a medical check up	4	5.5
Today is my clinic day	48	66.7
I was feeling unwell today	20	27.8
Total	**72**	**100**

Table 4.2: Reason for coming to the facility (Source, Author 2023)

Accessibility and location of healthcare facilities

In terms of distance from to healthcare facility, 90.2% of the elderly persons could access healthcare services within 5-kilometer radius.

Layout and organization of the health facility in relation to healthcare for the elderly

Facility layout in relation to healthcare services for the elderly	No. of respondents	%
The Hospital is well planned. Good signage	48	66.7
The hospital is not well planned. You walk a lot in the facility from one section to another section	24	33.3
Total	**72**	**100**

Table 4.3: Layout and organization of the facility (Source, Author 2023)

The participants 'responses regarding organization of the health facilities are summarized in Table 4.3. Most participants reported that the health facilities were well planned.

Some of the participants explained this as follows:

"*The hospital is not well planned. You walk a lot in the facility from one section to another section."* (Respondent 71, 84 years)

"The hospital is big therefore you walk long distance between receiving services" (Respondent 55, 81 years)

The location of the rest rooms was a major concern to the elderly, and they felt that that increased the time they were spending at the hospital. A respondent described the situations as below:

"*There is no way the elderly can remain seated for all the time. It's imperative that they use the restrooms at times. Since their name has already been called by the doctor while they were in the toilets, they will have to wait again in the que. I noticed that they keep the old patients' folder to the side. As a result, the elderly will have to wait patiently till they hear their names called once more. Neither do they inquire as to your whereabouts or request your assistance*' (Respondent 63, 79 years)

Availability of health equipment for service delivery in the facility for the elderly

The majority (75%) of the respondents reported that the facilities had health equipment available and 25% reported that the facilities have only basic equipment and therefore constant referrals.

Some of the sentiments expressed by the respondents regarding equipment were as follows:

"The hospital has just basic health equipment therefore you are referred to other healthcare facilities" (Respondent 16, 61 years).

4.2.2 Process of care

Experience and communication with the healthcare worker at the facility during service delivery

The majority (97.2%) of the respondents reported positive experience with healthcare worker during service delivery. They felt that the healthcare workers listened and understood their health problem. Most of the respondents reported that the communication with the service provider was good and well understood and was done in Kiswahili. They also reported that most of the healthcare workers were able to speak the local language (Kikuyu), a language most of them were comfortable with. The majority were satisfied with the management of their health conditions. Samples statements from the respondents are as below:

> *"The healthcare workers are very supportive, and they listen to you well"* (Respondent 7, 65 years)

> ***"****The health care workers provide and explain to you information on how to take your drugs well"* (Respondent 62, 70years).

Availability of prescribed medicines

The participants' responses on availability of prescribed medicines are summarized in Table 4.4

Availability of the medication prescribed	**No. of respondents**	**%**
No. There were no drugs available drugs	24	33.3
Yes, but not all the drugs	28	38.9
Yes, I carried all the drugs home	20	27.8
Total	**72**	**100**

Table 4.4: Availability of medication (Source, Author 2023)

In most cases, the prescribed medicines were either not available, or only some were available. Selected participants comment on availability of prescribed medicines are given below.:

> ***"****I was asked to buy drugs from the pharmacist. No medication given to take home"* (Respondent 1, 62 years)
>
> *"Yes, I received some medication but not all the drugs"* (Respondent 11, 75 years)
>
> *"No. There were no drugs available"* (Respondent 12, 76 years)

Timeliness of healthcare services

Most (65%) of the respondents, reported that they took 2-3 hours in the facilities for services and the other 35% reported to have taken more than four hours and still they did not receive all the services they needed. Some were referred to the sub-county hospitals for further diagnostic care and others did not receive all the medication they needed. One of the respondents reported as below:

"As the day ended at four o'clock, we finally concluded our checkup with the doctors due to a shortage of medical personnel. The staff requested that we pick up our prescriptions the next day. Nonetheless, due to the constant stream of patients, this hospital might at times feel like a circus" (Respondent 40, 80years).

Alternatives to primary healthcare facilities if the services expected were not received.

The majority (75%) of the respondents sought healthcare services in varied facilities (local clinic, another big facility or just another facility) after failing to receive services in the primary healthcare facilities. The rest (25%) did not clarify where they accessed alternative services.

Readiness of the facility to take care of the elderly.

The participants 'responses on the readiness of the healthcare facilities to take care of the health needs of the elderly are summarized in Table 4.5. The majority reported that the facilities were ready to provide care for the elderly.

Response on readiness of facility to take care of the elderly	Frequency	Percent
Need to improve service in taking care of the elderly	10	13.9
Ready to take care of the elderly	62	86.1
TOTAL	**72**	**100.0**

Table 4.5: Readiness of the facility (Source, Author 2023

Recommendations on what needs to put in place to improve the experience of the elderly at the primary healthcare facility.

Participants recommendations on ways to improve health facilities to meet the needs of the elderly are summarized in Table 4.6. The majority recommended that availability of medicines was the most important action to improve health services at primary health facilities. Below are selected comments from participants:

> *"Availability of drugs Employ many doctors/nurses"* (Respondent 1, 62 years)

> *"Priority to serve the elderly people first Ensuring they integrate service to be seen once"* (Respondent 18, 82 years)

> *"Availability of drugs Building good infrastructure"* (Respondent 35, 62years)

Responses on ways to improve health services at the Primary Health Facilities	Number of respondents	Percent
	1	1.4
Availability of drugs	48	66.7
Availability of drugs Building good infrastructure	3	4.2
Availability of drugs Employ many doctors/nurses	3	4.2
Availability of drugs, ensuring they integrate service to be seen once	1	1.4
Employ many doctors/nurses	3	4.2
Priority to serve the elderly people first	2	2.8
Priority to serve the elderly people first, Availability of drugs	6	8.3
Priority to serve the elderly people first, Availability of drugs, Building good infrastructure	1	1.4
Priority to serve the elderly people first, Availability of drugs, Employ many doctors/nurses	1	1.4
Priority to serve the elderly people first, Availability of drugs, ensuring they integrate service to be seen once	1	1.4
Priority to serve the elderly people first, ensuring they integrate service to be seen once	2	2.8
Total	**72**	**100.0**

Table 4.6: Proposals for facility improvement (Source, Author 2023)

4.2.3 Outcome of care – related to satisfaction of services.

Responses to question on whether all the services that the elderly required for the day were received

Majority (73.6%) of respondents said that they received all the services they required for the day.

Responses to question on whether the elderly felt understood in terms of healthcare needs that they were looking for.

The majority (97.3%) of respondents reported that they felt understood by the healthcare provider.

Responses to question on things that hindered ability of the elderly to receive services.

Hindrance to receive all needed services	*No. of respondents*	*%*
Cost is expensive	4	5.6
Health care worker not being there	1	1.4
Long waiting hours	9	12.5
No drugs	52	72.2
No Laboratory officers. No test Done	6	8.3
Grand Total	**72**	**100**

Table 4.7: Factors reported to hinder access to services (Source, Author 2023)

Majority of the respondents, 72.2% reported that lack of drugs in the facilities was the main hinderance to them receiving all the services they need in the facilities (Table 4.7).

Responses to question on presence of elderly persons' disability-friendly facility infrastructure

Out of the seventy-two respondents, 4 (5.6%) of them reported some form of disability. Out of the four who reported some form of disability 2 (50%) reported that the facility was not disability friendly.

Two out of four disabled respondents found the facilities to be accessible and easy to use. The following were the responses for the four disabled respondents.

"*Yes, the healthcare worker was sensitive to my disability"*

(Respondent 14, 85 years and Respondent 50, 86 years)

"The healthcare worker did not didn't notice my disability" (Respondent 2, 65 years)

Responses to question on whether participants would return to for medical services at the facility or recommend to other elderly persons.

The majority (94.4%) of the respondents indicated that they would refer other elderly people for services in the respective PHC facilities they had visited for healthcare services.

Additional information provided by participants on ways to improve healthcare services for the elderly.

A summary of additional information provided to improve services for the elderly is shown in Table 4.8. Availability of drugs, improved facility infrastructure and availability of healthcare workers together were ranked highest by majority (77.8%) of respondents as key requirements for improved healthcare services for the elderly.

Additional Information provided	**No. of respondents**	**%**
Availability of drugs, improved building/infrastructure, more Healthcare workers	56	77.8
Availability of drugs Ensuring they integrate service to be seen / served once	5	6.9
Priority to serve the elderly people first	11	15.3
Total	**72**	100

Table 4.8: Additional information for facility improvement (Source, Author 2023)

CHAPTER FIVE: DISCUSSION, CONCLUSION AND REOMMENDATIONS

5.1 DISCUSSION

Introduction

Access to quality healthcare services is a right to all as per the Kenya 2010 constitution as well as the Universal Health Coverage (UHC) initiative that was launched in Kenya in 2019. The increasing number of the older population poses a challenge in achieving the above aspirations (WHO 2017). Provision of quality service for the elderly is a challenge and requires a strategic and multidisciplinary approach (Shrivastava et al., 2013) .

In this study the health systems function/structure (inputs) represented the factors that need to be in place to enable health service delivery to happen. The Donabedian quality of care model was used to inform the research questions and the questionnaires (structure, Process and Outcome)(Donabedian, 1980). The facility infrastructure and the facility organization were evaluated in relation to acceptability among the elderly and how this impact on their perception of quality of care. Availability of medicines, facility infrastructure and facility management all form the right environment for healthcare workers to deliver quality services (output), which, in turn contributes to the overall improvement of the health systems performance. The health systems performance (output) linked to the six domains of quality of care were adopted to help document participants experience with services at the facilities.

Discussion Based on the Research Objectives

The discussion will be based on the research objectives and refers to the Donabedian model of quality of care as well as the conceptual framework that informed the research questions.

Research Objectives

1. To assess how the physical structure and organization of care at primary healthcare facilities affect quality of services for the elderly.
2. To document the experience of the elderly regarding quality of services at primary health facilities

Most of the respondents were regular clients of the facilities on scheduled appointments to the clinics. This reflects the fact that most were seeking medical services for chronic conditions. The Study showed that most of the elderly in Kiambu county were confident that the PHC facilities were ready to take care of the elderly thus building trust in the services available. The female respondents were two-thirds of the total number, which is in line with the WHO life expectancy report for Kenya where the life expectancy for the females in 68.9 years and that one of the males is 64.4 years. Most of the respondents had some form of education which made it easy to use Kiswahili in the guided discussion.

Accessibility, location, and quality of PHC services for the elderly

According to the Donabedian Quality of Care model, the structure of the health facility which includes the physical organization and accessibility of the services contribute to the efficiency of services in terms of maximization of resources and available equipment. In this study physical accessibility to the facilities was not an issue since the study area is well served with good road networks, and most respondents were within the 5 km radius of accessing a health facility. On facility layout and organization, the majority of respondent were satisfied with facility layout and signages. Majority of the respondents said that the facilities had the required basic equipment to provide services. The current study found that elderly people had access to healthcare services which is in line with the study by (Luxon, 2015) which found that in order to achieve the overall goal of enhancing the quality of care provided to each patient while also providing them with a positive encounter with the healthcare system, infrastructure is an essential component that must be considered. It is essential to incorporate healthcare facilities, such as hospitals, into the surrounding community whenever it is practical to do so to increase convenience, "buy-in" from the elderly and overall well-being. To guarantee that old patients can traverse all hospital infrastructures with ease, the hospital and its grounds should have simple access, ample parking and mobility options, and visible signage.

Experience of the elderly during the process of treatment at the PHC facilities

In reference to the Donabedian Quality of Care Model, the treatment process is critical to the experience of the client on the safety of services, patient centered and timely care

which is also part of the six domains of quality health service by WHO. The interaction with the HCW and availability of all the needed services i.e., diagnosis and treatment form the basis for the experiences. In this study most of the respondents, reported positive experience with HCW, they felt that they were listened to and that their health problem was understood. This can be attributed to the fact that the majority elderly were repeat clients and came for routine check-up on existing conditions meaning there was familiarity with HCWs. The increasing number of aging populations presents a new challenge to achieving UHC and especially in the developing countries and rise of non-communicable diseases (World Population Aging 2019). The respondents felt that the HCW were supportive and provided all the needed including instructions on how to take their medication. Most of the respondents felt that the PHC facilities were ready to take care of the elderly. The elderly did not seem too concerned with the waiting time though the least recorded waiting time was two hours, with only a minority reporting long waiting time as a hinderance to receiving quality services. In study conducted in Malaysia by (Ahmad et al., 2017), assessing the waiting time in a primary healthcare clinic, the total time recorded that included the waiting time was recorded as 41 minutes and yet some clients found this long. Compared to the response of the elderly in Kiambu county that were comfortable with 2 hours of waiting and reported satisfaction of service, the study can conclude that waiting time is more of perception as opposed to actual experience of waiting. It could also be urged that the elderly may not have a lot of commitments and therefore not too keen with the time.

Satisfaction / Acceptability of the elderly with the PHC services

From the Donabedian Quality of Care Model, appropriate physical organization of services and acceptability delivery of care to client should translate into effective health care services to the client and upholding equity in service delivery. Effective health care services and equity is part of the six domains of quality of care (*Crossing the Quality Chasm*, 2001). Therefore, the documentation of experience and acceptability of health services by the clients/patient is critical. Overall, the respondents reported feeling satisfied with the services provided at the PHC and all the clients would refer other elderly people to services to the facility. According to (Beattie et al., 2014), patient satisfaction of services in

a critical indicator of quality of services, and in this study, the elderly reported high level of satisfaction with service and were also clear on the recommendations to improve. This is similar to study conducted in Nambia, where the elderly reported that the nurses treated them fairly and respect (Van Rooy et al., 2015). This is contrary to what was observed in a study conducted in South Africa (Kelly et al., 2019b) where the elderly interviewed felt that the HCW did not care about them and gave very little attention to their health complains which resulted in non-compliance to treatment and thus dissatisfaction and poor health outcomes. According to (Pfabigan, 2007b), the experience of the elderly in the treatment process at the health facility determines continuity of care and therefore the need for the HCW to have the right attitude and understanding of the clients. In Kiambu county the study has documented majority of the respondents returning to the health facility for their regular clinic checks and reporting feeling supported and listen to by the HCW, reporting a positive experience, among many positive comments, two of the respondents said "***they treat me in a really courteous and respectful manner" and "The healthcare workers are very supportive and they listen to you well."***

The greatest concern raised by the elderly was on the availability of the prescribed medication, with a minority reporting to have carried home all the needed medication. They reported having been asked to buy some or all the prescribed medication. The elderly reported that they sort services in other facilities if they did not get all the care / treatment they needed at the PHC level, this can result in congestion on the referral facilities.

On social inclusion for persons with disability, out of the seventy-two respondents, four reported some form of disability. The people with disability reported that the facilities they visited were not disability friendly and that the HCW did not seem to notice their disability. In a study conducted in Nepal on HCW attitude towards disability, it was found that overall the attitude of the HCW towards persons with disability was negative with poor knowledge and skills about providing services to PWDs (Devkota et al., 2017).

The respondents were asked to provide additional information that would help to further improve the services at the PHC, and majority reported that availability of drugs, improvement on infrastructure to further support the elderly and availability of more HCW. They also felt that the elderly should be prioritized for service delivery to reduce the waiting time. According to study conducted in in the US on health care for the elderly, it was

documented that with a growing number of the elderly population, there is need to focus on training of HCWs in specialized care for the elderly which includes dealing with disabilities that come with age (Dall et al., 2013).

5.2 CONCLUSION

This study sort to the assess the quality of primary healthcare services for the elderly in Kiambu County guided by the two research objectives that focused on physical structure and organization of care at primary healthcare facilities that affect quality of services for the elderly and documentation of the experience of the elderly regarding quality of services at primary health facilities. The study has made the following conclusions based on the study objectives:

Objective 1: **To assess how the physical structure and organization of care at primary healthcare facilities affect quality of services for the elderly.**

The distances to the PHC facilities were reasonable, within five-kilometer radius. The complaints on the layout and organization of the services were specific to isolated facilities that can be checked by going back to the specific data sets. This can be important information for targeted interventions by the county government. Though the number of persons with disability recorded with minimal, there is need for the county to ensure that the physical structure of the primary healthcare facilities is disability friendly. Essential components of the facility like rest rooms/ toilets also need to be adjusted in terms of position/distance from the main service delivery point to ease the movement of the elderly.

Objective 2: To document the experience of the elderly regarding quality of services at primary health facilities.

The key issues that hindered access to quality services for the elderly in Kiambu County were lack of medication, referral for laboratory services, waiting time and shortage of HCWs. On care for persons with disability, HCWs did not demonstrate a positive attitude towards persons with disability which is an indication of lack of knowledge and competence on how to handle this vulnerable group. There is need for the county government to address this skills gaps through training / mentorship. A small number of the elderly reported that they felt that healthcare was expensive, but the majority did not report concerns

on cost of healthcare, NHIF registration can be explored for those that had challenges with the cost of healthcare.

Although the Kiambu County Health Strategic plan did not have a specific focus on improving health care services for the elderly, this study can conclude that the overall improvement of healthcare services benefits the whole population including the vulnerable. However, there is merit in considering specific attention to the vulnerable groups including the elderly at the strategy and policy level.

Kiambu county elderly population, overall reported satisfaction with services with a few recommendations on improvements to be made. However, it would be difficult to use this study to generalize quality of healthcare for the elderly in Kenya despite Kiambu county hosting the largest number of the elderly among the forty-seven counties due to various advantages that Kiambu county may have over the other counties. The advantages include most of Kiambu county being peri-urban, high literacy level, higher economic status, availability of health facilities at close proximity. The literacy levels are high which makes it easy to have quality interaction with the HCW and the distances for access of services are within the recommended parameters.

5.3 RECOMMENDATIONS

- Kiambu County to address the issues of lack of drugs in the health facilities and especially those that relate to care for the elderly e.g., the non-communicable diseases medication.
- There are areas of improvement on social inclusion that include HCW training on social inclusion and re-designing of the health facilities to be disability friendly.
- HCW worker shortage to be addressed, which would help to address the waiting time issue.

  Conduct the study in other counties that have different characters e.g., pastoralist communities and lake region have distance challenges, low literacy levels and economic status.

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APPENDICES

Appendix 1: Ethical Clearance Letter

Strathmore UNIVERSITY

18th January 2023

Ms Mbiyu Josephine,
josephine.mbiyu@strathmore.edu

Dear Ms Mbiyu,

RE: Assessing Quality of Primary Healthcare Services for The Elderly in Kiambu County, Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU- master's** research proposal. Your application reference number is **SU-ISERC1494/22.** The approval period is from **18th January 2023 to 17th January 2024.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, and MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
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 SU-ISERC within 48 hours of notification
iv. Any changes, anticipated or otherwise, that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 48 hours
v. Clearance for the 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 the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

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

Yours sincerely,

for: **Dr Ben Ngoye,**
Secretary; SU-ISERC

Cc: Prof Fred Were,
Chairperson; SU-ISERC

STRATHMORE UNIVERSITY INSTITUTIONAL SCIENTIFIC AND ETHICAL REVIEW COMMITTEE
(SU-ISERC)
18-Jan-2023
Email:ethicsreview@strathmore.edu
P.O BOX 59857-00200
NAIROBI-KENYA

Appendix 2: NACOSTI Approval

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **699069**

Date of Issue: **14/February/2023**

RESEARCH LICENSE

This is to Certify that Ms.. Josephine Wangari Mbiyu of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kiambu on the topic: ASSESSING QUALITY OF PRIMARY HEALTHCARE SERVICES FOR THE ELDERLY IN KIAMBU COUNTY, KENYA for the period ending : 14/February/2024.

License No: **NACOSTI/P/23/23281**

699069

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix 3: Approval Letters

COUNTY GOVERNMENT OF KIAMBU
DEPARTMENT OF HEALTH SERVICES

All correspondence should be addressed to HEAD
HRDU – HEALTH DEPARTMENT
Email address: mndiritu@gmail.com
mkwasa@live.com
Tel. Nos: 0721641516
0721974633

HEALTH RESEARCH AND DEVELOPMENT
UNIT
P. O. BOX 2344 – 00900
KIAMBU

Ref. No.: KIAMBU/HRDU/23/02/21/RA_OBOBE Date: 21st Feb 2023

TO WHOM IT MAY CONCERN

RE: CLEARANCE TO CONDUCT RESEARCH IN KIAMBU COUNTY

Kindly note that we have received a request from Ms. Josephine Wangaru Mbiyu of Strathmore University to carry out her study in Kiambu County, the research topic being on "**Assessing The Quality Of Primary Healthcare Services For The Elderly In Kiambu County, Kenya**"

We have duly inspected her documents and found that she has been cleared by NACOSTI to carry out the research for a period ending **14th February 2024**. She thus does not need any further clearance with another regulatory body in order to conduct research within the county of Kiambu.

However, it is incumbent upon the institution where she is carrying out research to ensure that she receives adequate supervision during the process of conducting the research. This note also accords her the duty to provide a feedback on her research to the county at the conclusion of her research.

DR. MWANCHA KWASA
COUNTY CLINICAL RESEARCH OFFICER
KIAMBU COUNTY

Appendix 4: Participant Information and Consent Form

SECTION 1: Information of the Researcher

Investigator: Josephine Mbiyu

Institutional Affiliation: **Strathmore Business School (SBS) MBA-Health Care Management, Class 2020**

SECTION 2: Information of the Study

2.1: Why is the study being carried out?

There is an overall increase in life expectancy and with the growing number of older persons, there is a need to ensure that they can access quality healthcare services. This study will contribute to the improvement of health care services for older persons in Kiambu County. Kiambu county has been selected because it is the county with the highest number of older persons in Kenya.

2.2: Who is eligible to take part in this study?

Older persons above the age of 60 years that are accessing services in this primary health facility.

2.3: Who is not eligible to participate in the study?

Anyone below the age of 60 years will not participate in the study. They also must be within the primary health care facility.

2.4: Do I have to participate if I am over 60 years of age

No, participating in this study is voluntary and you have a right to decline if you are not comfortable. Also, if you agree to participate, at any point of the discussion if you feel that you do not want to continue, you can terminate the interview and you are not required to give any reason for the decision.

2.5: What does it entail to participate in this study?

Once you agree to participate in the study, the interviewer will request some personal details like age, and education level. Your name or any other information that can be used

to easily identify you as an individual will not be documented. The interview will then ask you a few questions that you will discuss. The discussion will be recorded for future use.

2.6: Are there any risks/dangers of taking part in this study?

There are no risks or dangers in participating in this study. The information you provide will not be linked to you as an individual in the analysis.

2.7: Are there any benefits of participating in this study?

There is no immediate individual benefit to participating in this study, but since the information collected will be used to inform strategies to improve the quality of health care for older persons, there are eventual benefits indirectly.

2.8 How we will deal with the vulnerable groups in the population segment of the elderly.

The elderly persons may present with hearing loss of visual impairment. Those with hearing loss and can read and write will be guided on use of the materials and asked to respond to the questions in writing. Those that cannot read or write and have hearing loss will be excluded from the study at this point because most of them also do not understand the sign language. The elderly persons that present with visual impairment, the person accompanying them will be asked to sign the consent on their behalf once they agree to participate in the study. Those that might be unaccompanied, we request the health care worker in the facility to consent on their behalf if they agree to participate in the study. The elderly may also be illiterate and may not be able consent in writing, the research assistance will request the HCW at the facility to sign consent on their behalf if they agree to participate in the study.

2.9: Data security

All the data collected will be stored securely, and the information will be transcribed into a database, but it will be password protected with limited access to only those concerned with the study.

2.10: If I have any further questions or concerns whom can I contact?

You can contact the Principal investigator or the research supervisor as below:

- Principal Investigator: Josephine Mbiyu

  Telephone number: +254 722 113 776

  Email: josmbiyu@gmail.com, Josephine.mbiyu@strathmore.edu

- Research Supervisor: Prof. Gilbert Kokwaro at Strathmore Business School, Nairobi

  Telephone number: +254 722 323 651

  Email: gkokwaro@strathmore.edu

3.0: Agreement to participate in the study

I……., have understood all that has been explained to me about the study/research and my questions have been answered satisfactorily. I understand my participation is voluntary and I can terminate the interview/discussion at any stage.

☐ I AGREE to take part in this research.

☐ I DO NOT AGREE to take part in this research.

I…… (Name of the investigator) certify that I have explained the study/research to the participant and they understand the nature and purpose of the study.

Signature of the investigator:

Name of the investigator:

Date: ……..…. /……../……

Appendix 5: Research Instruments

Questionnaire

Study Title:

Assessing quality of primary healthcare services for the elderly in Kiambu county, Kenya

1. **Demographic Information:**
   a) Gender – Male ……Female…….
   b) Do you know which year when you were born?
   c) What is your current age?
   d) Were able to access education? If yes go to (e), If No skip (e).
   e) What is your education level?
2. **The three domains of quality of care**

a) Structure and organization of healthcare services/ Physical access
   i) Why have you come to this facility today?
   ii) About how many kilometers do you have to travel to come to this facility
   iii) How would you describe the layout of this health facility in relation to healthcare services for the elderly? Probe on signage and flow of service points
   iv) How would you describe the availability of health equipment for service delivery in this facility?
   v) What is your assessment of the availability of all the equipment that is needed for your health care services for the elderly?

b) Process
   i) Can you describe your experience with the healthcare worker today or previously when you have come for services in the primary healthcare facility?
   ii) Do you think the healthcare worker understood your health complaints?
   iii) How was your communication with the healthcare worker? Probe, was

there a language barrier?

iv) What would you recommend to further improve communication between the healthcare workers and yourself?

v) Did you take home the medication that was prescribed to you?

vi) How long did it take for you to receive all the healthcare services that you wanted today? *Probe the reasonability of the time*

vii) What is your alternative to primary health care facilities if you do not get the services you expected?

viii) How would you describe the readiness of this facility to take care of the elderly?

ix) What should be put in place to improve your experience at the primary health care facilities?

c) Outcome

i) Did you receive all the healthcare services that you came for today?

ii) Do you feel understood in terms of the healthcare needs that you were looking for?

iii) How would you describe your satisfaction with the services provided in this facility?

iv) Is there something that hindered your ability to receive all the services you needed today? *Probe for affordability and method used for payments if any*.

v) Do you have any disability? Hearing loss, vision, physical, etc.
If yes, go to (vi and vii), if no Skip (vi and vii).

vi) Was the healthcare worker sensitive about your disability in your interaction to make you comfortable?

vii) Did you find this facility disability friendly?

viii) Do you plan to come here again if you need services or recommend them to another elderly person?

d) Would you like to share any additional information that would help to improve healthcare services for the elderly?

Kiswahili Translation of the consent forms and the questionnaires

Kiambatisho cha 2: Taarifa ya Mshiriki na Fomu ya Idhini

SEHEMU 1: Habari juu ya matafiti

Mtafiti: Josephine Mbiyu

Ushirikiano wa kitaasisi: Strathmore Business School (SBS) MBA – Health Care Management, Class 2020

SEHEMU 2: Habari juu ya Utafiti

2.1: Kwa nini utafiti unafanywa?

Kuna ongezeko la jumla la umri wa kuishi na kwa kuongezeka kwa idadi ya wazee, kuna haja ya kuhakikisha kwamba wanaweza kupata huduma bora za afya. Utafiti huu utachangia uboreshaji wa huduma za afya kwa wazee katika Kaunti ya Kiambu. Kaunti ya Kiambu imekuwa iliyochaguliwa kwa sababu ndiyo kaunti yenye idadi kubwa zaidi ya wazee nchini Kenya.

2.2: Ni nani anakubaliwa kushiriki katika utafiti huu?

Wazee walio na umri wa zaidi ya miaka 60 ambao wanapata huduma katika kituo hiki cha afya cha msingi.

2.3: Ni nani asiyekubaliwa kushiriki katika utafiti?

Yeyote aliye chini ya umri wa miaka 60 hatashiriki katika utafiti. Pia lazima wawe ndani ya msingi kituo cha huduma ya afya.

2.4: Je, ni lazima nishiriki ikiwa nina umri wa zaidi ya miaka 60?

Hapana, kushiriki katika utafiti huu ni kwa hiari na una haki ya kukataa ikiwa huna raha. Pia, ikiwa unakubali kushiriki, katika hatua yoyote ya majadiliano ikiwa unahisi kuwa hutaki kuendelea, unaweza kusitisha mahojiano na hutakiwi kutoa sababu yoyote ya uamuzi huo.

2.5: Inahusisha nini kushiriki katika utafiti huu?

Ukishakubali kushiriki katika utafiti, mhojiwa ataomba maelezo ya kibinafsi kama vile umri, kiwango cha elimu. Jina lako au taarifa nyingine yoyote ambayo inaweza

kutumika kukutambulisha kwa urahisi kama mtu binafsi haitaandikwa. Kisha mahojiano yatakuuliza maswali machache ambayo mtajadili. The majadiliano yatarekodiwa kwa matumizi ya baadaye.

2.6: Je, kuna hatari zozote za kushiriki katika utafiti huu?

Hakuna hatari au hatari katika kushiriki katika utafiti huu. Taarifa utakazotoa hazitakuwa iliyounganishwa na wewe kama mtu binafsi katika uchanganuzi.

2.7: Je, kuna manufaa yoyote ya kushiriki katika utafiti huu?

Hakuna manufaa ya mara moja ya mtu binafsi ya kushiriki katika utafiti huu, lakini taarifa iliyokusanywa zitatumika kueleza mikakati ya kuboresha ubora wa huduma za afya kwa wazee, hatimaye washirika hufaidika kwa njia isiyo ya moja kwa moja.

2.8: Usalama wa data

Data zote zitakazokusanywa zitahifadhiwa kwa usalama, taarifa zitanakiliwa kwenye hifadhidata lakini zitahifadhiwa kutumia nenosiri ambalo limelindwa na ufikiaji kwa wale tu wanaohusika na utafiti.

2.9: Ikiwa nina maswali zaidi au wasiwasi ninaweza kuwasiliana na nani?

Unaweza kuwasiliana na Mtafiti Mkuu au msimamizi wa utafiti kama ilivyo hapo chini:

- Mtafiti Mkuu: Josephine Mbiyu

  Nambari ya simu: +254 722 113 776

  Barua pepe: josmbiyu@gmail.com , josephine.mbiyu@strathmore.edu

- Msimamizi wa Utafiti: Prof. Gilbert Kokwaro katika Shule ya Biashara ya Strathmore, Nairobi

  Nambari ya simu: +254 722 323 651

Barua pepe: gkokwaro@strathmore.edu

3.0: Makubaliano ya kushiriki katika utafiti

Mimi ....., nimeelewa yote niliyoelezwa kuhusu utafiti/utafiti na maswali yangu yamejibiwa kwa njia ya kuridhisha. Ninaelewa ushiriki wangu ni kwa hiari na ninaweza kusitisha mahojiano/majadiliano katika hatua yoyote.

☐ NAKUBALI kushiriki katika utafiti huu

☐ SIKUBALI kushiriki katika utafiti huu

Mimi ....., (Jina la mchunguzi) thibitisha kwamba nimeelezea utafiti kwa mshiriki na anaelewa asili na madhumuni ya utafiti.

Saini ya mpelelezi:

Jina la mpelelezi:

Tarehe: ..... /..... / .....

Kiambatisho cha 3: Vyombo vya Utafiti

Hojaji

<u>Kichwa cha Utafiti:</u>

Kutathmini ubora wa huduma za afya ya msingi kwa wazee katika kaunti ya Kiambu, Kenya

1. **Taarifa za idadi ya watu:**

    a) Jinsia - Kiume ..... Kike .....
    b) Je, unajua ulizaliwa mwaka gani?
    c) Umri wa sasa ni nini?
    d) Waliweza kupata elimu? Kama ndiyo nenda kwa (e), Ikiwa Hapana ruka (e)

e) Kiwango chako cha elimu ni kipi?

2. Vikoa vitatu vya ubora wa huduma

a) Muundo na mpangilio wa huduma za afya/ Ufikiaji wa kimwili

i) Kwa nini umekuja kwenye kituo hiki leo?

ii) Takriban kilomita ngapi unasafiri ili kufika kwenye kituo hiki

iii) Je, unaweza kuelezeaje mpangilio wa kituo hiki cha afya kuhusiana na huduma za afya kwa wazee? Chunguza alama na mtiririko wa vituo vya huduma

iv) Je, unaweza kuelezeaje upatikanaji wa vifaa vya kutolea huduma za afya katika kituo hiki?

v) Je, ni upi tathmini yako ya upatikanaji wa vifaa vyote vinavyohitajika kwa ajili ya huduma za afya yako kwa wazee?

b) Mchakato

i) Je, unaweza kuelezea uzoefu wako na mhudumu wa afya leo au hapo awali ulipokuja kwa ajili ya huduma katika kituo cha afya ya msingi?

ii) Je, unafikiri mhudumu wa afya alielewa malalamiko yako ya kiafya?

iii) Je, mawasiliano yako na mhudumu wa afya yalikuwaje? Chunguza, je, kulikuwa na kizuizi cha lugha?

iv) Ungependekeza nini ili kuboresha zaidi mawasiliano kati ya wahudumu wa afya na wewe mwenyewe?

v) Je, ulienda na dawa ulizoagizwa nyumbani?

vi) Ilichukua muda gani kwako kupata huduma zote za afya ulizotaka leo? Chunguza mantiki ya wakati huo

vii) Je, ni nini mbadala wako kwa vituo vya huduma ya afya ya msingi ikiwa hupati huduma ulizotarajia?

viii) Je, unaweza kuelezeaje utayari wa kituo hiki kuwatunza wazee?

ix) Ni nini kinapaswa kuwekwa ili kuboresha uzoefu wako katika vituo vya afya ya msingi?

c) Matokeo

i) Je, ulipokea huduma zote za afya ulizokuja leo?

ii) Je, unahisi kueleweka katika suala la mahitaji ya afya uliyokuwa ukitafuta?

iii) Unaweza kuelezeaje kuridhika kwako na huduma zinazotolewa katika kituo hiki?

iv) Je, kuna kitu ambacho kilikwamisha uwezo wako wa kupata huduma zote ulizohitaji leo? Chunguza uwezo wa kumudu na njia inayotumika kulipa ikiwa ipo.

v) Je, una ulemavu wowote? Kupoteza kusikia, kuona, kimwili, nk. Kama ndiyo, nenda kwa (vi na vii), kama hapana Ruka (vi na vii).

vi) Je, mfanyakazi wa afya alikuwa nyeti kuhusu ulemavu wako katika mwingiliano wako kufanya unastarehe?

vii) Je, umepata huduma hii rafiki kwa walemavu?

viii) Je, unapanga kuja hapa tena ikiwa unahitaji huduma au kupendekeza kwa wazee wengine mtu?

d) Ningependa kushiriki maelezo yoyote ya ziada ambayo yangesaidia kuboresha huduma za afya

kwa wazee?