

**DETERMINANTS OF UPTAKE OF NATIONAL HOSPITAL INSURANCE  
FUND PRIMARY CARE SCHEME AMONGST SERVICE PROVIDERS  
WITHIN THE SCOPE OF NHIF NAKURU TOWN BRANCH**

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## **DEDICATION**

To my children, other family members and the Almighty God for their love, care and understanding during the entire study period.

## **ACKNOWLEDGEMENT**

My Sincere gratitude to God for guiding me through the tedious process as well as giving me good health of mind and body to see it conclusion. Many thanks to my supervisors, Dr. Wanja Tenambergen and Ms. Eunice Muthoni for working with me tirelessly since the inception of this study guiding me through the process and ensuring the objective of the study is achieved, May God bless you. Many thanks to Kenya Methodist University for giving me a good study environment and credible resources that has enabled me to do my work. To you my informants, Mr. Charles Gathii and Ms. Rebecca Okumu you have been so generous to me in your time, knowledge and moral support. Thank you very much.

## ABSTRACT

There is a growing international consensus on the importance of providing social protection through financing and providing access to healthcare services. Kenya has embraced this through the National Hospital Insurance Fund (NHIF). Despite these efforts, the uptake of the NHIF primary care scheme among service providers in the country is still low. This study sought to assess the uptake of NHIF primary care scheme amongst service providers within the scope of NHIF Nakuru Town branch. The study objectives were to: determine the influence of knowledge of service providers, examine the influence of perceived benefits of the NHIF primary care scheme, establish the influence of health facility organization capacity, and determine the influence of barriers associated with NHIF and health facilities on the uptake of NHIF primary care scheme. The study adopted a cross-sectional research design targeting 120 service providers from 60 health facilities as well as getting key information about the scheme from officers in NHIF office managing the scheme as key informants. A random sample of 96 service providers was drawn from 48 health facilities and 2 officers from NHIF Nakuru branch. Data was collected using a structured questionnaire and an in-depth guide. Quantitative data was analyzed using descriptive and inferential statistics with the aid of Statistical Package for Social Sciences version 21.0 while content analysis was used to analyze qualitative data. From the findings of this study, there was a significant, weak, positive correlation between knowledge of NHIF and uptake of NHIF primary care scheme ( $r = .266$ ,  $p < .05$ ). Pearson correlation computed between perceived benefits of NHIF Primary care scheme and uptake of NHIF scheme was significant, moderate and positive ( $r = .297$ ,  $p < .05$ ). The health facilities had adequate; ICT facilities, human resource and physical facilities for effective implementation of NHIF primary care. Pearson correlation coefficient between health facility organization capacity on the uptake of NHIF scheme was not significant ( $r = .109$ ,  $p < .05$ ). Thus, it was concluded that variations in the level of the health facility organization capacity was independent of the uptake of NHIF primary care scheme. All the constraints combined were likely to negatively impact on the uptake of NHIF primary care. Results of Pearson correlation revealed that the relationship between barriers of the health facilities on the uptake of NHIF primary care scheme was moderate, significant and negative ( $r = -.246$ ,  $p < .05$ ). The study therefore concluded that NHIF should develop clear policy details on the various benefits and risks involved for health facilities that are not willing to take up the implementation of the scheme. The study recommends that the management of the NHIF scheme should i) embark on a campaign of knowledge dissemination and education of all potential consumers of their services, ii) develop clear policy details on the various benefits and risks involved for health facilities, and iii) sensitize the management of health facility on the requirements for accreditation for provision of NHIF out patient services.

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## **ABBREVIATIONS AND ACRONYMS**

<b>CDH</b>	:	County's Director of Health
<b>CEOs</b>	:	Chief Executive Officers
<b>CES</b>	:	County Executive Secretary
<b>CT</b>	:	Computed Tomography
<b>G.O.K</b>	:	Government of Kenya
<b>HMIS</b>	:	Health Management Information System
<b>ILO</b>	:	International Labour Organization
<b>KNBS</b>	:	Kenya National Bureau of Statistics
<b>NACOSTI</b>	:	National Commission for Science, Technology and Innovation
<b>NARC</b>	:	National Rainbow Coalition
<b>NHA</b>	:	National Health Accounts
<b>NHIF</b>	:	National Hospital Insurance Fund
<b>NSPP</b>	:	National Social Protection Policy
<b>OOP</b>	:	Out of Pocket
<b>PHC</b>	:	Primary care
<b>PHCS</b>	:	Public Health Care Systems
<b>SDGs</b>	:	Sustainable Development Goals
<b>SHI</b>	:	Social Health Insurance
<b>SP</b>	:	Social Protection
<b>SPSS</b>	:	Statistical Packages for Social Sciences
<b>SRS</b>	:	Simple Random Sampling
<b>SS</b>	:	Social Security
<b>SSA</b>	:	Sub-Saharan African
<b>SSP</b>	:	Social Security Systems
<b>UHC</b>	:	Universal Health Coverage
<b>USA</b>	:	United States of America's
<b>WHO</b>	:	World Health Organization

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background to the Study**

There is a growing global consensus on the importance of providing social protection in health to the whole population to reduce their burden from extreme poverty, inequality, and vulnerability that could derail the attainment of development targets such as the Sustainable Development Goals (SDGs). Social protection in health entails putting in place risk management mechanisms that will compensate for incomplete or missing insurance, until a time that private insurance can engage in a more prominent role in that society. Kawabata alluded that persistence of extreme poverty, inequality, and vulnerability are perceived to be indicators of social injustice and structural inequality (Kawabata, 2002). The burdens of communicable diseases have made the national health expenditure for many countries to rise, leading to intensified demand for quality and affordable health services. Towards realization of universal health care, ensuring quality health services for all at affordable prices that does not create undue pressure financially especially for citizens living in the developing countries whose daily earning is below the dollar has become a reality internationally.

Health insurance concept was first conceptualized in United States of America (USA) and was developed from the existing accident insurance. There was the introduction of sickness coverage that entailed giving services on a prepaid basis from Wellum (2014); Maina and Chuma (2012) observed that the insurance sector developed further in the 20th century culminating into the modern health insurance which encompasses pooling collectively peoples' risk of incurring medical expenses. The cover of the health insurance in terms of type and amount of health care costs to be

paid by the insurance company are specified in advance and bided in the member contract (Ochiel, 2012).

There has been an evolution of healthcare Sub Saharan Africa countries leading to current systems that demonstrate a lot of fragmentation and complexity (McIntyre et al., 2008). Recently, there is the tendency of many developing countries, for instance Ghana and Nigeria, to move towards a new or expanded role for various forms of Social Health Insurance (SHI) as they seek the universal health care, which the WHO champions (World Health Organization [WHO], 2010). The main aim is the reduction of the over dependence of Out of Pocket (OOP) payments through user charges and co-payments which are regressive as they disproportionately affect the poorest in society, and therefore challenge the underlying tenets of equity within healthcare systems (Ezeoke, Onwujekwe & Uzochukwu, 2012).

In Kenya like most African countries health care financing is a major challenge, the government contributes 41% of the total health expenditure, households OOP contributing 30% Ministry of Health, [MOH], (2015). Xu et al. (2007) observed that out of pocket mode of healthcare payment leads households into poverty as 6-10% of the households spend catastrophically on health (Xu et al., 2007). Therefore, families seek alternate sources of financing including health insurance and community financing schemes. Patients experience limitations of choice and quality services with regard to the supply side financing initiatives whose remedy is the provision of contributory mechanisms for instance health insurance. It is worth noting that there has been a rise in the insurance coverage in the last decade accounting to 20% of Kenyans reported to have access to health insurance coverage as compared to about 10% that was covered in 2006.

Since the pre-colonial era, there have been key dynamic trends in the development of health financing policies. User fees in all public healthcare facilities in the colonial government had been imposed as a policy meant to discriminate against the Kenyans they governed. On attainment of independence in 1963, citizens continued to pay for health services exposing them to negative impacts of affordability and utilization of health care services which was a continued burden to the then incapacitated citizens in education and economic empowerment. However, in 1965, user fees in all public health facilities were abolished and the government catered for the services using the tax revenue. This brought relief to the citizens especially the poor who benefited from the equitably provided for services.

In 1980s, there was a global concern on poor economic performance, inadequate financial resources and declining budgets to fund healthcare which led to Kenya yielding to the World Bank and International Monetary Fund pressures to reintroduce user fees among other major health sector reforms (GOK, 2001). This yielded catastrophic results with unmet demand for health care especially by the poor citizens and increased cases of underutilization of essential services like maternal healthcare and immunization. This policy was abolished in 1990 as it experienced numerous challenges among them; poor revenues collection, hurried implementation, and lack of quality improvements (Collins, Quick, Musau, Kraushaar & Hussein, 1996). As documented by Mwabu (1995), the abolishment of user fee was short-lived as they were re-introduced in 1991, through a phased implementation approach starting from hospital level. Some health services were exempted from payment, for instance, children under five, special health services like immunization and health conditions like tuberculosis. Consequently, for a long period (1991-2003) there were drastic

decline of health care accessibility and extremely high OOP (Chuma, Gilson & Molyneux, (2007).

National Rainbow Coalition (NARC) government after their taking over, several amendments were effected and in 2004, user fees were abolished at dispensaries and health centers and instead a registration fees of Kenya shillings 10 and 20 respectively was introduced. Children under five, the poor, special conditions/services like malaria and tuberculosis were exempted from payment. This led to utilization by 70%, a growth that was not sustained (Ministry of Medical services [MMS], 2008). This was so because most of the service providers did not adhere to the policy due to cash shortages. Further amendments were seen in the year 2007 when all fees for deliveries at public health facilities were abolished. However, inconsistent monitoring and evaluation was a challenge making it difficult to depict the levels of compliance of the policy by health care providers. The government went ahead to encourage the development of the private health sector. This led to an upsurge in private health care providers in the country, where about 49% of health care provision is by private and religious based providers. This was as a result of the private provider response to the demand for health care. Since public hospitals charged fees and were perceived to offer low quality care, people opted to pay for private services that were perceived to be of better quality. The private sector has since grown in Kenya, owning 49% of health services and regulating it remains a major challenge (GOK, 2009). There are many instances where many service providers become reluctant to implement the NHIF primary care scheme which is the backdrop against which this study is conducted seeking to establish what are the determinants of up taking by service providers and what are the barriers hindering uptake. Study conducted in Ghana revealed knowledge gap of service providers on their role in social health insurance



this could be one of the factors that the study should focus in. The study in Ghana as documented by Philip and Alexander (2012) revealed that service providers felt that social health insurance impact positively on promoting access especially where the structural resources of health facilities and organization are the foundation upon which quality services are offered. The study will therefore unveil how these factors influence the uptake of the scheme by the service providers.

## **1.2 Statement of the Problem**

The National Hospital Insurance Fund is the primary provider of Health Insurance with a sole mandate of increasing access to Health services. Over the years NHIF has continued to grow and has expanded its scope to position itself towards the attainment of universal Health Coverage as detailed in the Kenya Health Sector Strategic and Investment Plan (MOH, 2014). NHIF has contractual agreement covering both inpatient and outpatient services with a defined scope of benefit. The outpatient comprises two major categories; Enhanced scheme also known as managed scheme which targets civil servants and government parastatals and the second is National Scheme also known as primary care scheme which is a social Fund targeting all Kenyans in both formal and informal sector offering basic minimum services that consist of diagnosis of diseases, treatment services for minor ailments and provision of pharmaceutical services as well as maternal and child health services NHIF, (2016). According the NHIF Nakuru Branch, 109 (69.78%) health facilities out of the 156 accredited of those accredited in Nakuru County do not uptake the NHIF primary care scheme. The government has put a lot of efforts in promoting uptake specially to increase access by taking services closer to the people by reducing the distance to be travelled by Kenyan seeking for health services. This is only possible when the health facilities embrace the scheme in large numbers. However, the uptake of the NHIF

primary care scheme in both public and private health facilities is only 30.22% (NHIF Nakuru Branch). In many instances service providers become reluctant to take up the scheme for implementation which is the backdrop against which this study is conducted seeking to establish what are the constraints and barriers of its uptake among the service providers. The study therefore sought to assess the determinants and barriers associated with NHIF primary care scheme uptake by the health facilities within the scope of NHIF Nakuru Town Branch.

### **1.3 Research Objectives**

The study general objective was to assess the uptake of National Hospital Insurance Fund primary care scheme amongst service providers in Nakuru Town.

#### **Specific Objectives**

- i. To determine the influence of knowledge of the service providers about the scheme on the uptake of NHIF primary care scheme in Nakuru Town.
- ii. To examine the influence of the perceived benefits of the NHIF primary care scheme on the uptake of NHIF primary care scheme by health facilities in Nakuru Town
- iii. To establish the influence of health facility organization capacity on the uptake of NHIF primary care scheme in Nakuru Town.
- iv. To determine the influence of barriers associated with health facilities and NHIF as an institution on the uptake of NHIF primary care scheme in Nakuru Town.

### **1.4 Hypotheses of the Study**

The following hypotheses were tested:

- H01:** There is no significant relationship between knowledge of the service providers and uptake of NHIF primary care scheme in Nakuru Town
- H02:** There is no significant relationship between perceived benefits of NHIF primary care scheme and uptake of NHIF primary care scheme in Nakuru Town
- H03:** There is no significant relationship between organization capacity and uptake of NHIF primary care scheme in Nakuru Town
- H04:** There is no significant relationship between barriers to NHIF and uptake of NHIF primary care scheme in Nakuru Town.

### **1.5 Justification of the study**

The Kenya Government is committed towards the attainment of universal Health Coverage by the year 2022. Towards this end National Hospital Insurance Fund (NHIF) is the primary provider of Social Health Insurance with a sole mandate of increasing access to health services as a driver towards this goal. However, the uptake of primary care scheme by the service providers is still very low. The study assessed the determinants of uptake by service providers as well as the barriers associated with the scheme.

### **1.6 Significance of the Study**

Firstly, the research findings stand to help the government and NHIF board of governors to develop mechanisms that take into considerations the views of service providers in ensuring that they take it up and implement as required. This creates an avenue of ensuring that the intended course for the primary care scheme is pursued. Secondly, the research findings are beneficial to health care providers to correct some of the issues that have been hindering quality service delivery to the many patients

who seek their services. The findings and recommendations highlight information which if well implemented could be the remedy to their challenges.

Thirdly, the findings provide feedback that will help the NHIF repackage the service delivery package or increase the capitation rates to make it more attractive to the service providers. The study reveals gaps and gathers insights on what are the expectations of different players thus creating harmony in the uptake and implementation of NHIF primary care scheme. Fourthly, the study involved a review of the existing healthcare financing policies and shed more light on their amendments as well as the development of new policies that can benefit both the patients and service providers and in the long run be able to reduce death rates where possible. Finally, the scientific study that was conducted gave results and discussions as well as key conclusions and recommendations that contribute in the addition of existing literature on healthcare financing policies with special interest on the service providers. This forms an important piece of literature that is beneficial to scholars and researchers.

### **1.7 Scope of the Study**

The study focused on assessing the opportunities and challenges experienced in the NHIF primary care scheme uptake by the health facilities in Nakuru Town. The targeted respondents for the study comprised of the Hospital administrators, finance officers, county health directorate, ministry of health and most importantly officers in the NHIF Nakuru branch in charge of the primary care scheme. The study was conducted in the months of March and April in the year 2018.

### **1.8 Limitations of the Study**

The findings of this study may only be generalized to other organizations with similar characteristics with caution. This is because the study was restricted only to private and public hospitals within Nakuru Town and key stakeholder in NHIF primary care policy and it's important to note that differences do exist between these hospitals and other organizations. Organizations tend to withhold information about their uptake, ability to and extent of implementation of policies. This might have been a barrier to the genuineness of the responses they will give in the study. Measuring of the extent of uptake is challenging since it is based on people's estimations and perceptions. Over-reliance of the respondents in giving estimates might produce misleading results.

### **1.9 Delimitations of the Study**

The researcher applied rigorous research methodology that yielded a representative sample so as to facilitate generalization of the study findings. The researcher established rapport with the respondents with the aim of creating a conducive environment that encouraged their participation and cooperation during the study. As for the measurability of the study variables, the researcher managed to break down the variables into indicators that the respondents could understand.

### **1.10 Operational Definition of Terms**

The following operational definitions are presented as used within the context of this study:

**Implementation:** This refers to the rendering of the health services that are catered for by NHIF to the beneficiaries who are active members of the scheme.

**Membership Contract:** A document specifically bidding in advance the cover of the health insurance in terms of type and amount of health care costs to be paid by the insurance company are specified in advance.

**National Hospital Insurance Fund (NHIF):** It is a health policy that was established under Cap 255 of the Laws of Kenya in 1966 as a department in the Ministry of Health to provide health insurance exclusively for those in the formal employment Kenya Law, (2016).

**Primary Care Scheme:** A well laid strategy by the government to ensure that they provide health care services that are accessible, person-focused, comprehensive, and universal to all its citizens.

**Service Providers:** These are healthcare personnel working in the institutions from which the citizens receive the health services which is paid for by the National Government through the NHIF scheme.

**Social Injustice:** The denying citizens basic and adequate services that they are entitled to either due to the service provider incapacity or declining to do so equally with discrimination of any form.

**Hospital:** A Health institution which offers both outpatient and inpatient care

**Hospital Administrator:** People mandated to manage health facilities at all levels

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter contains the reviewed literature covering the uptake of NHIF primary care services by the service providers, the capability of the healthcare facilities, the understanding of the service provider on their mandate in service provision to the beneficiaries, perceived benefit of primary healthcare services, barriers to the uptake of NHIF primary care, conceptual framework and lastly a recap of the reviewed literature.

#### **2.2 Empirical review**

##### **2.2.1 Uptake of NHIF Primary Care Health Services by Service Providers**

The Geneva conference of 1978 (the Alma Ata Declaration on Primary Health care (PHC) was consented where the importance of PHC access was emphasized since it is considered to be the first point of contact with a health system (WHO, 2008). In the sub-Saharan African context, PHC is considered to be of great significance due to existence of high burden of infectious, controllable diseases and currently the emergence of non-communicable diseases (NCDs). According to Dambisya and Ichoku (2012), the goal was anchored on the fact that health is a fundamental human right with PHC considered to be of great importance in guiding health policy towards the attainment of universal and equitable access to health care.

PHC is a strategy adopted to improve the overall efficiency and health system performance. Ultimately, with adequate investment to enhance affordability and quality, it can be used as an instrument towards improvements on the population's health status (Biswas et al., 2009). Kruk et al. (2009) observed that Proper

implementation of PHC could be considered to offer basic health care services that are accessible, person-focused, comprehensive, and universal.

The National Hospital Insurance Fund (NHIF) is the primary provider of Health Insurance in Kenya with a sole mandate of increasing access to Health services thereby positioning itself as a key player in the attainment of Universal Health care in the country towards which the benefit package as stated in the Kenya Health Sector Strategic and Investment Plan (KHSSP) 2014-June 2017 is developed (MOH, 2014).

### **2.3 Understanding of Mandate of Service Providers**

Encyclopedia Britannica (2002) reiterated the need Hospitals to ensure adequate physical facilities and equipment that support care of both outpatients and inpatients, the injured persons and acutely sick. It was also reported that a modern general Hospital of any size offers complex services apart from its purely medical functions such as providing shelter, heat, food and other services to its patients and staff.

Porter and Teisberg (2006) observed a clash among several competing forces as manifested in the United States of America's (USA) healthcare system such that despite the health professions operating on the basis of achieving quality healthcare, the sector is faced with unlimited challenges such as culture. The focus of healthcare practitioner being services payments and autonomy while the main target of the health facility is the optimal achievement of maximum range of services at minimal supply costs.

Study conducted in Kenya and Ghana targeting private healthcare providers revealed knowledge gap on private healthcare providers perspective of social Health insurance despite the fact that they serve more than 40% of the population (Sieverding, Onyango & Suchman, 2018). The findings sighted that the opting to take up the



scheme was demand driven though they reported lots of challenges with NHIF processes.

### **2.2.2 Perceived Benefits of NHIF Primary Care Health Services**

The focus of Universal health coverage is equity in access of health care, quality of services and broadening of social protection. This is achieved by introduction and development of prepayment of financial contributions for the healthcare financing methods with a view of sharing risk among the population and avoiding catastrophic health-care expenditure and impoverishment of individuals as a result of seeking care.

Utilization of health services among citizens is improved remarkably after reduction of the financial barriers associated with the cost of health services, and also health care seeking behaviour is greatly influenced (whether, when, from where care is sought for an illness) by preventing delays in seeking services, self-medication and use of alternative forms of care such as herbal medicine (Philip & Alexander, 2012). Study conducted in two districts in Ghana indicated that health care providers felt that it impacts positively on promoting access while mobilizing revenue for health facilities.

Kenya has made advanced plans in UHC as detailed in the Kenya health financing strategy, the constitution and the country's vision 2030. It is highlighted as central to the country's development and commitment to its achievement by 2030 (GOK, 2008). This health financing strategy is built around the principle's solidarity, where of risk cross-subsidization and income will be key; responsibility, ensuring equity, putting people first by ensuring health care providers offer quality services and promote efficient use of resources, geared towards ensuring all Kenyans access basic package of health services according to their needs. Finally, enhance transparency which

involves ensuring that users, providers and purchasers have access to information regarding the operations of the system (GOK, 2010).

### **2.2.3 Service Providers organization Capacity**

The health care structure broadly includes the structural facilities (hospitals health centers, dispensaries and clinics), human resources such as doctors, nurses, clinicians and paramedical staff among others and other resources that create the capacity to provide health services. Structural facilities and their unique characteristics are expected to influence the quality of health care services. One perspective in the accreditation of health facilities is the analysis of how adequate the facility is structurally, staffing levels, including on-call staff, technology facilities, equipment and support services (laboratory, pharmacy, radiology). These structural features as well as resources of the health care facilities and institutions are key foundation upon which quality health care services are provided and which enhance uptake of health services (Anell & Willis, 2000).

Growth of technology can be singled out as most significant of all the factors that drive up healthcare costs though it has many benefits. We have numerous examples of advancement in technologies that have contributed towards improvements in patient care. However, thorough technological assessment should be performed before embracing a new technology to determine its risk benefits as illustrated by randomized controlled trials. Apparently currently the healthcare system rarely emphasizes the need for evidence of benefit before widespread diffusion of new technology (Farnsworth, 2005). Currently we see a rapid proliferation of technologies for both diagnosis and treatment such as increase in imaging precisely; cardiac

imaging has increased by 24 percent per year over the past decade (Medicare Payment Advisory Commission [MedPAC], 2007).

#### **2.2.4 Barriers to the Uptake of NHIF Primary Care Scheme**

**Hospital-based challenges:** The government has a responsibility of providing affordable and adequate health services to its people. However, there are numerous challenges facing this mandate mainly due to accessibility associated with long distances to care, inadequate physical facilities and staffing, inefficient technologies, quality and standards of health services being wanting in some instances. Following the devolution of health function, challenges associated with decentralization of UHC primary care policy, inadequate knowledge of the service providers on their mandate in implementation of the primary care as well as the benefits of the PHC schemes to the institution (Lencer, 2015).

**National challenges:** A study that reviewed the implementation of UHC in several states in Africa (Ghana, South Africa and Tanzania) established numerous barriers such as; rising costs in an environment of dwindling funding of health care, poor integration of private health facilities in the entire health system as well as bad state of the country's health care services with excessive pressure and dependence on government-provided health facilities (McIntyre et al., 2008).

The standards of UHC are below the acceptable international standards due to various challenges such as; domestication of the provisions of international treaties and conventions by the government on the right to social security, as a pre-requisite before such provisions can be invoked in domestic court. As a result, no one can claim or demand for social security as a matter of right and equally, the State and other actors have no enforceable legal duty to provide that right e.g. a person without

access or inadequate access to social security cannot make any claim. As such a persons whose right to social security has been violated may not substantially seek legal redress in a court of law (Mendoza, 1990).

Policy constraints: Carrin and Chris (2005) observed that many countries have been looking for means of providing adequate financial risk protection against the costs of healthcare to all of the population by establishing health financing systems (Carrin & Chris, 2005). Sufficient health care financing must ensure that the population access health care, and use the health services when they need them. Health financing system indicate existence of health. Therefore, the Member States of the WHO in 2005 committed to develop their health financing systems to improve access to services and relieve people from financial hardship arising from paying for them (WHO, 2010). This will ensure progress to the attainment of universal health coverage. All countries both developed and developing are adopting social health insurance (SHI) by modifying their financing systems as a faster way towards universal coverage (Nitayarumphong & Mills, 2005).

In Africa for example Nigeria, Ghana, Rwanda, and Tanzania, as reported by Wellum (2014) established the National Health Insurance Scheme (NHIS) with an aim of removing financial barriers to the access of health care for their citizens, mostly targeting civil servants. Lekashingo (2012) considered NHIS to be a social security that guarantees access to health services to persons who subscribe to a payment token contribution at regular intervals. Rwanda mutual health insurance was established in 1999 aiming at guaranteeing access of healthcare to all Rwandese. Tanzania on the other hand, National Health Insurance Fund (NHIF) was established of 1999 by an act of parliament number 8 (Barnes, O'Hanlon & Decke, 2014). It aimed at instituting a

permanent system for the provision of health services to formal sector employees with expectations of bringing a reliable improvement on access and quality to health care to the contributors and their families covering the civil servants and their children up to four children (Ochiel, 2012).

In Kenya, the National Hospital Insurance Fund (NHIF) was established in the year 1966 by an act of Parliament, Cap 255 with an aim providing a contributory health scheme to Kenyans (Anyim, 2012). At first the scheme targeted the salaried public and private sector employees with a monthly salary of at least Ksh. 1,000 (Barnes et al., 2014). With time, a lot of changes have taken place towards expansion of more benefits, widening target market and initiation of outpatient care (Muiya & Kamau, 2013). 1998 major changes on the laws governing NHIF took place by formulation of NHIF act No. 9 that affected both contributions and payments of benefits out of the fund Ndung'u (2015) especially being changed to an autonomous State Corporation managed by a Board of Management. Wanderi (2012) alludes that the scheme covers the whole family and dependents up to 18 years for children, above which are considered if in school and economically dependent on their parents (Wanderi, 2012).

**NHIF institutional challenges:** Implementation of NHIF is normally faced by delays against the original plan (Alexander, 1991). This is attributed to the following factors; lower-level employees are mostly inadequately trained, poor specifications of key implementation tasks and activities, problems created by uncontrollable external environmental factors, ineffective coordination of activities, inadequate capabilities of the employees and the involved employers attention from the implementation deviation by competing activities, inadequate leadership and direction by the

departmental managers and inadequate monitoring of activities by the information system.

Numerous individual barriers also hinder success in strategy implementation comprising of numerous and conflicting priorities such as; poor vertical communication, insufficient top team functions, inter-functional conflicts, a top down management style and inadequate management development (Beer & Eisenstant, 2000).

These complexities in the implementation of NHIF lead to the longer time frames needed for execution. According to Shaw and Griffin (2007), there are key hinderances such as; poor or inadequate sharing of information, the need for involvement of many people in the execution process, lack of understanding of organizational structure and coordination methods as well as inability to manage change especially cultural change (Shaw & Griffin, 2007). Cummings and Worley (2005) pointed that there is a lot of strategic communication in most of the institutions including healthcare facilities both in written and oral forms and especially from top to down. Nevertheless, much of the information does not imply understanding. Therefore, more efforts are needed when communicating strategies. To ensure information delivery communication should be two way so as to enhance understanding as well as demonstrating response in form of responsibilities execution and staff motivation. It should not be a one-off activity meant to announce the policy, but a continuous activity throughout the implementation process. In most cases, challenges arise in the manner the institutions communicate their strategy implementation. Furthermore, the main challenge in understanding arises when it comes to applying the strategic issues in the day to day decision making (Miller, 2002).

## **2.3 Theoretical Framework**

### **2.3.1 General Service Readiness Theory**

The study was guided by the General Service Readiness (GSR) theory developed by (WHO, 2013). This theory is anchored on the capacity of the health facility to provide general health services. General service readiness is described by an index using the five general service readiness domains measuring the availability of basic equipment for diagnostic testing, supplies of commodities, standard infection prevention, essential medicines and basic amenities. The study focused on the hospital capacity as well as the understanding mandate of the provider, perceived benefits of the scheme to the institution and barriers associated to the uptake of NHIF primary care scheme.

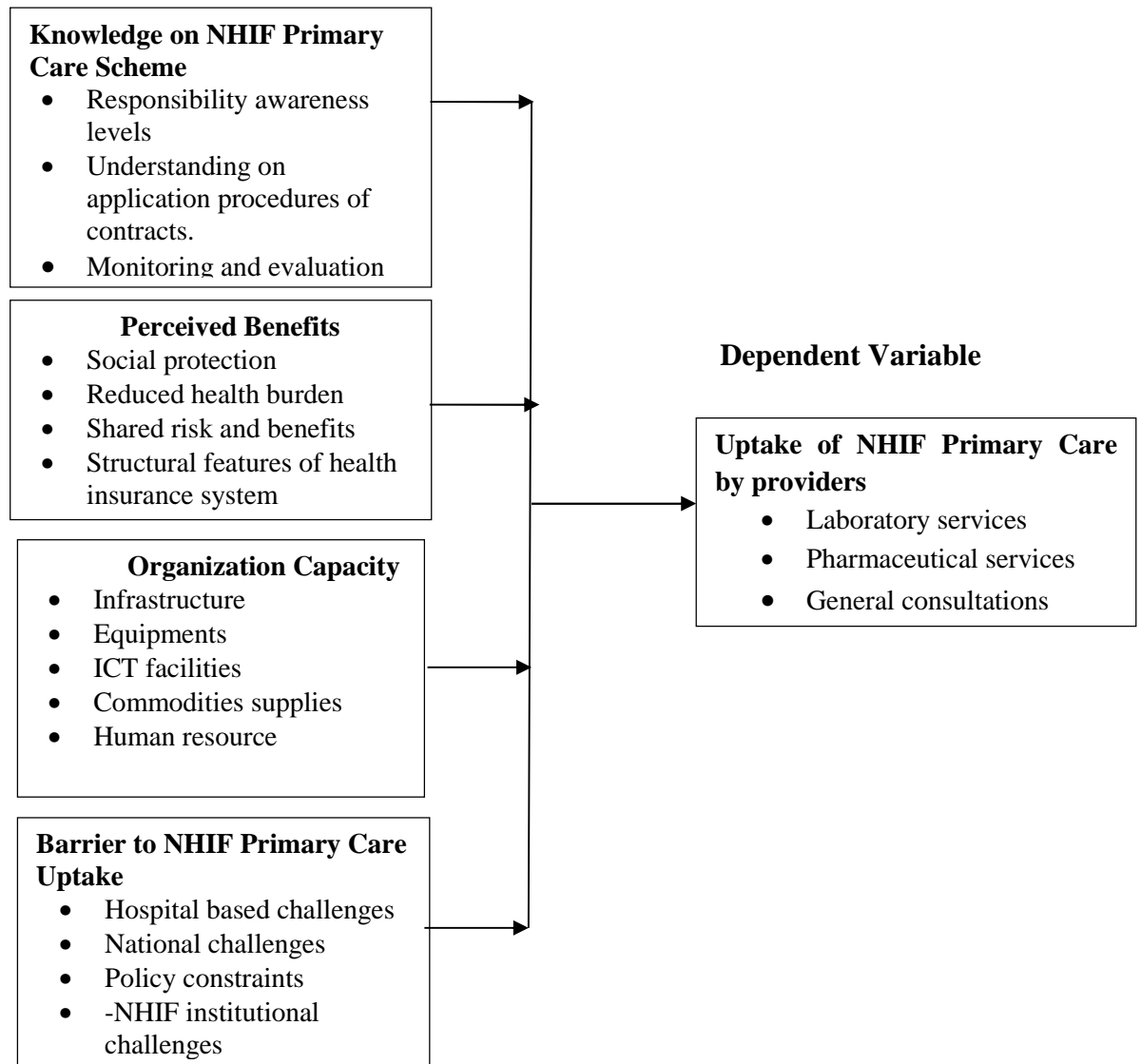
### **2.3.2 Conventional Health Insurance Theory**

The study was guided by the conventional health insurance theory that was developed and reviewed by John Nyman in 2003 (Pauly & Blavin, 2008). He stipulated about how economists viewed moral hazard negatively since the additional health care spending generated by insurance represented a welfare loss to society. It states that with the insurance, it is possible for the health service providers to reduce the price of health care to zero leading to consumers purchasing more health care than they would have at normal price, hence reducing the value of this care to consumers to less than the market price regardless of the additional care is still being costly to the producer. This therefore provides an apparent policy solution to this moral hazard by imposing deductibles, coinsurance payments, and capitations to increase the price of medical care to insured customers hence reducing the inefficient expenditures. The managed health care system we have now is a product of this theory (Besley, 1991). In this study, conventional theory addresses the factors affecting uptake of NHIF primary care scheme by service providers.

## 2.4 Conceptual Framework

The study was guided by the following conceptual framework.

### Independent Variables



**Figure 2.1: Conceptual Framework**

There are two categories of the study variables conceptualized in this the study; independent variables and dependent variables. The independent variables comprise of understanding of the mandate of NHIF primary care scheme implementation by the service providers, perceived benefits of the scheme to the healthcare providers and the beneficiaries as well as organization capacity of the institution. The study sought to establish how these factors influence the uptake of the NHIF primary care scheme by



the service providers in the study area. The respondents and health facilities characteristics were controlled by gathering, analyzing and interpreting data while assumption was put into the consideration that the government policies is homogenous to all the health facilities, therefore their influence to the uptake was negligible.

## **2.5 Summary of Literature**

Establishment of healthcare financing policies has been a global agenda championed by WHO. Both developed and developing countries have been adopting social health insurance (SHI) e.g. National Health Insurance Scheme (NHIS) in Nigeria, Ghana, Rwanda, and Tanzania Wellum (2014); In Kenya, National Hospital Insurance Fund (NHIF) was enacted through an act of parliament number 8 of 1999. WHO formulated Primary care (PHC) which encompasses health financing systems comprising of three inter-related functions geared towards achievement of the Universal Coverage (UC) (Dambisya & Ichoku, (2012); Biswas, et al., (2009); Kruk, et al., (2010); WHO, 2000). The characteristics of the healthcare facilities providing PHC are also considered to be vital in the success of NHIF primary care scheme implementation. These features indicate the service providers capacity such as; Technology which are considered to have many benefits, Physical facilities (hospitals, health centers, dispensaries and clinics), personnel (number of nurses and doctors, clinicians, paramedical staff among others) and other resources that create the capacity to provide health services (MedPAC, 2007).

Literature was reviewed by the researcher to establish the importance of the service providers understanding their mandate and roles in the implementation of NHIF primary care scheme. The health facilities being the primary healthcare service

provider is considered to be a complex institution, which beside rendering purely medical functions, also provides shelter, heat, food and other services to the patients and staff. This complexity of the roles sometimes leads to clash among several competing forces with unlimited challenges, for instance culture, despite the health professions operating on the basis of achieving quality healthcare (Porter & Teisberg, 2006). There are multiple perspectives of examining the process of care: the relationship of health services to a specific patient complaint or diagnosis, the numbers and types of services received over time or for a specific health problem and the sequence of services received over time. Health care providers should interact with patients in a process that is anchored on quality service delivery characterized by timely access to healthcare, patient's safety protection, diagnosis and treatments provision consistently with scientific evidence and finally delivering the services in the best professional practice. According to Sochalski and Aiken (1999), healthcare should be patient centered, efficient provision of services as well as healthcare provided equitably.

The review of the literature sorts the benefits attributed to the implementation of NHIF primary care scheme to the population as well as to the service providers. Avoiding catastrophic health-care expenditure and impoverishment of individuals as a result of seeking care is realized by establishing a mechanism of financing healthcare that entails sharing the risk among the population. This increases accessibility of healthcare services and most importantly manages the cost of health services, influences health care seeking behaviour among population preventing delays, self-treatment and use of alternative forms of care such as herbal medicine (Fiedler, 1993). In Kenya, NHIF primary care scheme is key factor in accelerating the attainment of the country's development blue print, the Vision 2030 by it championing for

solidarity, where income and risk cross-subsidization plays a major role in upholding responsibility, ensuring that the health system puts people first ensuring health care providers offer quality services, promote efficiency and equity, every citizen is guaranteed of access to a basic package of health services (GOK, 2010).

However, there are various challenges affecting implementation of the NHIF primary healthcare scheme uptake. citing Nigeria, Ghana and Tanzania, implementation of healthcare financing policies, that is the UHC, is mullled with a wide range of constraints; dwindling funding, over dependence pressure on government-provided health facilities, among others (McIntyre et al., 2008). There is also a lacuna in the law exposing inability by the people deprived social justice being protected by the law to access justice (Mendoza, 1990). According to Shaw and Griffin (2007), the uptake is also affected by numerous uncontrollable external environmental constraints that culminate into delays or deviations in the implementation.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The methodology puts forward the structural framework that was utilized to collect and analyze data. It covers the research design, the study area, the target population, the sampling size and sampling procedures, research instruments, data collection procedure, data analysis and ethical considerations.

#### **3.2 Research Design**

The study adopted a cross-sectional survey targeting both private and public hospitals in Nakuru Town as well as gathering different type of information from different categories of respondents. A survey is preferred for this study since it is suitable in collecting original data, it is cheap to administer and allows subjective human variables to be measured. A survey also allows the researcher to study very large population within a short time, allowing you to measure problems or issues in realist setting even allowing numerous variables to be measured together. It is applicable in both quantitative and qualitative studies (Check & Schutt, 2012).

#### **3.3 Study Area**

The study was carried out in Nakuru Town targeting both public and private hospitals. Nakuru Town is located at the Mid-Rift valley region and is the headquarters of Nakuru County that is neighbored by eight other counties namely; Kericho and Bomet to the west, Baringo and Laikipia to the North, Nyandarua to the east, Narok to the south-west and Kajiado and Kiambu to the south. Nakuru Town was the provincial headquarter for Rift Valley Province, the Kenya largest province in the former administrative regime. This makes the town an important region where many citizens

from the county itself, neighboring counties and beyond visit in order to access crucial services. Citizens come to this town which is much more developed than the neighboring counties and towns in search for better healthcare services that some of the other relatively underdeveloped regions cannot offer. This makes Nakuru Town a good area for this study whose aim is to assess NHIF primary care uptake among health facilities.

### **3.4 Target Population**

The study targeted health facility administrators and finance officers in the selected facilities. The administrators gave information concerning their facility as an institution offering NHIF primary care scheme services while the finance officers shed more light on the operations of the facility in the financing of the services delivered to patients through the NHIF primary care scheme. The researcher also targeted the NHIF officials as the study's Key Informants (KIs) so as to expound on the mandate of the social security policy in terms of the partnership with health facilities and issues related to financing of primary care scheme to the citizens as well as what the health facilities are expected and mandated to do. Nakuru Town has a total of 60 health facilities that are accredited by NHIF.

**Table 3.1: Target Population**

<b>Targeted Institutions</b>	<b>Number of Institutions</b>
Private health facilities	42
Public health facilities	15
Mission health facilities	3
NHIF Nakuru Branch	1
<b>Total</b>	<b>61</b>

### **3.5 Sample Size and Sampling Procedure**

This section comprises the statistical method that was used to determine the sample size and the techniques that were employed to select the respondents from the target population.

#### **3.5.1 Sample Size Determination**

The researcher targeted the accredited Health facilities within the scope of NHIF Nakuru Branch whose total is 60. Therefore, it was advisable to consider conducting a census of the entire population. The sample also included key informants from NHIF Nakuru branch office. All institutions in the target population were selected. The sample size was 61 institutions.

#### **3.5.2 Sampling Techniques**

The study involved multi-stage sampling techniques for different organizations and category of respondents (Babbie & Mouton, 2001). Hospitals were stratified categorically into three strata namely private, public and mission. Proportionate sampling was used to identify the number of Hospitals to be selected in every stratum. Random sampling was then applied to select the health facility to be sampled. For every selected health facility, the administrator and the finance officers were selected purposively since they are best suited to give responses on NHIF primary care scheme uptake regarding policies, financing and operations. The KIs that included the NHIF officials in charge of the primary care was sampled purposively to shed more light on the scheme as the financiers. The sampling procedures are summarized in the Table 3.2.

**Table 3.2: Distribution of the Sample**

<b>Targeted Institutions</b>	<b>Number of Institutions</b>	<b>Sampled Institutions</b>	<b>Sampled Staff</b>
Private hospitals	42	42	84
Public hospitals	15	15	30
Mission hospitals	3	3	6
NHIF Nakuru Branch	1	1	2
<b>Total</b>	<b>61</b>	<b>61</b>	<b>122</b>

### **3.6 Research Instruments**

The data was collected from the selected health facility administrators and finance officers using questionnaires. The questions were mainly marked on a five-point Likert Scale format. In the Likert Scale, 5 will be the high end while 1 will be the low end. There were a few open ended questions to allow the respondents express themselves on any issues affecting the NHIF primary care uptake that will not be well captured by the closed ended questions. The questionnaires were used because they assure the participants of anonymity hence encouraging them to be more truthful in their response. Further the questionnaire has the advantage of eliminating the researcher's interference which may be more prevalent in interviewing. Besides, they are cheaper to administer and easy to analyze the data (Babbie & Mouton, 2001). Data was gathered from the KI that is the NHIF primary care officials, using interview guide. The face to face interview was an interactive process in which the interviewee was given an opportunity to deeply express themselves orally in response to the researcher's questions (Nair, 2010).

### 3.6.1 Reliability of Research Instruments

Reliability in research refers to the degree to which a research instrument is able to produce consistent results or data after repeated trials (Terre Blanche, Durrheim & Painter, 2006). The researcher tested the validity of the research tools by conducting a pretest study of the tools in four hospitals (two public and two private) in Naivasha Town which is homogenous to Nakuru in terms of population composition since both towns are cosmopolitan and are renowned for healthcare provision. The selected pretest facilities are accredited by NHIF and contracted to offer primary care services (NHIF Nakuru Branch). They are also known to serve a large clientele making them the best suited to participate in the study to ascertain the reliability of the research instruments. To ensure internal consistency, Cronbach's alpha was used in the study to identify items that can be used to measure a particular scale variable and those that should be eliminated. The reliability analysis for each concept is indicated in the respective sections alongside the analyzed results. In all cases, the Cronbach's alpha was above the accepted levels of 0.8. This implies that the questionnaire is reliable (Drost, 2012).

**Table 3.3: Reliability Test Results**

<b>Concept</b>	<b>Number of items</b>	<b>Cronbach Alpha</b>
Uptake of NHIF	7	0.816
Organization capacity	16	0.810
Providers knowledge on NHIF	10	0.910
Perceived benefits	14	0.905
Barriers to NHIF	23	0.932
Overall questionnaire	95	0.825



### **3.6.2 Validity of Research Instruments**

According to Terre Blanche et al (2006), validity is the degree to which a measure does what it is intended to do and is concerned with the accuracy and meaningfulness of the study's findings based on the variables under observation. Validity was enhanced through construct validity, internal validity, external validity, face validity and translation validity (Scotland, 2012). The researcher consulted the supervisors to ensure that the instruments are valid for the study.

### **3.7 Data Collection Procedures**

The researcher sought an introduction letter from Kenya Methodist University and a research permit from the National Commission for Science, Technology and Innovation (NACOSTI). Once authorized, the researcher booked appointments with the selected NHIF officials for face to face interviews and the schedule was made allowing each key informant independent time for interaction with the researcher using the interview guide to ensure a adequate information was gathered concerning the NHIF especially on matters regarding social health insurance mandate and more so the role of primary care scheme. Each key informant was allowed 1 hour of interaction with the researcher. The researcher visited the sampled health facility administrators and finance officers where respondents were given relevant instructions verbally and given the consent of the study after which they were given enough time to fill in the questionnaires, and then the researcher collected the filled in questionnaires after 48 hours.

### **3.8 Data Analysis**

Data cleaning and editing was done to eliminate sampling and non-sampling errors (non-response, coverage errors, measurement errors and processing errors) so as to

avoid bias. The data was analyzed using both descriptive and inferential statistical methods. Descriptive analysis entailed; percentages, frequencies, mean and standard deviation to describe the basic characteristics of the population. Inferential statistics involved the use of correlation coefficient to test non causal relationship and multiple regression to determine the nature of the causal relationship between the variables using SPSS version 21.0 as an aid for analysis. The results will be presented in tables and discussion thereof.

The following regression model was used.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where:

Y represents NHIF Primary Care scheme Uptake

X<sub>1</sub> represents Service Providers' Knowledge

X<sub>2</sub> represents perceived benefits of the scheme to the institutions

X<sub>3</sub> represents Health Facility Organization Capacity

X<sub>4</sub> represents barriers in the health institutions and in NHIF

$\beta_0$  represents regression constant

$\beta_1, \beta_2, \beta_3, \beta_4$  represents beta coefficient for independent variables

$\epsilon$  = represents error term which is normally distributed

### **3.9 Ethical Considerations**

Authority was sought from Kenya Methodist University and research permit granted by National Commission for Science, Technology and Innovation (NACOSTI). The researcher then booked appointment with the selected NHIF officials for face to face interviews. Informed consent and room to voluntary participation in the study was established for the sampled respondents before engaging in the study. The researcher

avoided any action that may cause physical or emotional harm to the the respondents by carefully phrasing sensitive or difficult questions in the instruments. The researcher avoided subjectivity in the research by keeping personal biases and opinions at bay. The researcher objectively and accurately represented the responses. The highest level of confidentiality, anonymity and privacy was observed by ensuring that the information obtained from the respondents were only be used for academic purpose.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter presents discussion of the research findings and it comprises of the response rate, demographic characteristics of the respondents, uptake of NHIF primary care scheme in Nakuru Town, knowledge of the health service providers on NHIF primary care scheme, perceived benefits of NHIF primary care health services, organization capacity on the uptake of NHIF primary care service providers, barriers to the uptake of NHIF primary care health services as well as the inferential statistics.

#### 4.2 Response Rate

Although the study targeted a sample of 120 service providers, only 96 accepted to be participate and fill the questionnaires. This represented 80% response rate which was adequate enough to allow analysis. Some of the remaining 24 either returned incomplete questionnaires, or not available or not willing to be interviewed. Therefore, they were removed from analysis. Drost (2012) asserts that 70% response rate and above would be very good for analysis and reporting from manual surveys. Thus, the response rate was deemed sufficient for further analysis of the research objectives.

**Table 4.4: Response Rate**

<b>Concept</b>	<b>Number</b>	<b>%</b>
Response	96	80
Non-Response	24	20
<b>Total</b>	<b>120</b>	<b>100</b>

### 4.3 Demographic Characteristics of the Respondents

This section presents a brief description of the demographic characteristics of the sampled service providers drawn from health facilities in Nakuru town. Such a description is considered to be very important in providing a better understanding of the respondents and health facilities included in the study and therefore provided a good foundation for a detailed discussion of the results based on the stipulated objectives of the study. The demographic characteristics included age, gender, academic qualifications, position in the health facility, number of years worked in the health facility, and the type of health facility studied. Out of the targeted 120 service providers from 60 health facilities in the study area, only 96 service providers from 48 health facilities responded to the study questionnaire. Table 4.5 summarizes the targeted background demographic characteristics of the respondents.

**Table 4.5: Demographic Characteristics of the Sample (n = 96)**

Characteristics	Categories	Frequency	Percentage
Gender	Male	57	59.4
	Female	39	40.6
Age	18-24	5	5.2
	25-34	44	45.8
	35-44	29	30.2
	45-54	17	17.7
	>55	1	1.0
Academic qualifications	Certificate	5	5.2
	Diploma	38	39.6
	Degree	46	47.9
	Masters	7	7.3
Position in hospital	Admin	50	52.1
	Finance	46	47.9
Years worked in the facility	<3	26	27.1
	4-6	46	47.9
	7-18	19	19.8
	19-30	5	5.2
Type of health facility	Public	31	32.3
	Private	47	49.0
	Mission	18	18.8

Table 4.5 indicates that out of the 96 sampled service providers, there were 57 (59.4%) male and 39 (40.6%) female. This suggests that the sampled health facilities employed both male and female service providers in the finance and administrative positions. The respondents varied in their ages with 90 (93.8%) of them aged between 25 and 54 years. This suggests that majority of the respondents were in their prime years and thus relatively young, economically and biologically productive. Service providers in such an age group were more likely to be adaptive, flexible and receptive to new ideas and methods of operations. This was very important especially with the technology being adopted by organizations for higher efficiency and effectiveness. The respondents also varied in the number of years that they had worked in their current health facilities with 70 (72.9%) respondents having worked in their facilities for more than 3 years, while the remaining 26 (27.1%) had less than 3 years in the current stations. This suggests adequate work experience and enough period to reflect on the application of NHIF scheme in the health facilities.

The sampled respondents varied in their employment position in their workplaces. From the 96 respondents, 50 (52.1%) were administrator while 46 (47.9%) were finance officers. The two groups are very critical in the implementation and operationalization of the NHIF scheme. Finally, the sampled 96 services providers were drawn from different types of health facilities including 31 (32.3%) from public health facilities, 47 (49.0%) from private health facilities and 18 (18.8%) from mission health facilities. This shows that the sample covered different types of health facilities and provides opportunity and diversity in the approach to NHIF scheme to emerge among the different types.

#### 4.4 Uptake of NHIF Primary Care Scheme

The uptake of the NHIF primary health care scheme was the dependent variable of the study. It was measured by means of 12 items in a five-point likert scale ranging from 5=Strongly agree (SA), 4=Agree (A), 3=Undecided (U), 2=Disagree (D) and 1=Strongly Disagree (SD). Scores obtained were used to compute a mean score ( $\bar{x}$ ) and a standard deviation (s) for each statement and a global mean score for all the statements which was used to rate the uptake of NHIF primary care scheme. Scores below 3.0 were said to indicate below average level of uptake of NHIF primary care scheme, 3.0 – 3.9 indicated average level and scores of 4.0 and above were considered an indication of an above average level (Welsh government, 2011).

**Table 4.6 Uptake of NHIF primary Care Scheme**

Statement	SD	Frequencies				Subtotal	
		D	U	A	SA	$\bar{x}$	s
General consultations	0(0.0%)	3(3.6%)	2(2.4%)	51(61.4%)	27(32.5%)	4.23	.67
Pharmaceutical services	0(0.0%)	3(3.6%)	0(0.0%)	55(66.3%)	25(30.1%)	4.23	.63
Laboratory	0(0.0%)	1(1.3%)	1(1.3%)	55(68.8%)	23(28.8%)	4.25	.54
Maternity	0(0.0%)	2(2.7%)	0(0.0%)	42(56.0%)	31(41.3%)	4.36	.63
Optical	2(2.8%)	6(8.3%)	3(4.2%)	45(62.5%)	16(22.2%)	3.93	.92
Dental	0(0.0%)	6(8.2%)	4(5.5%)	50(68.5%)	13(17.8%)	3.96	.75
Renal	0(0.0%)	5(6.6%)	10(13.2%)	33(43.4%)	28(36.8%)	4.11	.87
Endoscopy	0(0.0%)	7(9.9%)	7(9.9%)	46(64.8%)	11(15.5%)	3.86	.80
Radiology	2(2.5%)	4(5.1%)	4(5.1%)	54(68.4%)	15(19.0%)	3.96	.82
Cardiac (Heart)	4(5.5%)	4(5.5%)	8(11.0%)	43(58.9%)	14(19.2%)	3.81	1.00
Oncology (Cancer)	2(2.6%)	4(5.3%)	8(10.5%)	48(63.2%)	14(18.4%)	3.89	.86
Surgery	0(0.0%)	4(5.2%)	6(7.8%)	48(62.3%)	19(24.7%)	4.06	.73

Table 4.6 shows that the service providers rate the delivery of the services under the cover of the NHIF primary care scheme as above average; surgery ( $\bar{x} = 4.06$ ), pharmaceutical services ( $\bar{x} = 4.23$ ), maternity ( $\bar{x} = 4.36$ ), laboratory ( $\bar{x} = 4.25$ ), renal ( $\bar{x} = 4.11$ ) and general consultations ( $\bar{x} = 4.4.23$ ). They also rated the following as average; optical ( $\bar{x} = 3.93$ ), dental ( $\bar{x} = 3.96$ ), endoscopy ( $\bar{x} = 3.86$ ), radiology ( $\bar{x} = 3.96$ ), cardiac ( $\bar{x} = 3.81$ ) and oncology ( $\bar{x} = 3.89$ ). The overall computed mean score of uptake of NHIF primary care scheme was 4.07 and standard deviation  $s=.553$ . This mean score indicates that the uptake of the NHIF primary health care scheme was above average. The National Hospital Insurance Fund (NHIF) is the primary provider of Health Insurance in Kenya with a sole mandate of increasing access to Health services thereby positioning itself as a key player in the attainment of Universal Health care in the country.

#### **4.5 Knowledge of Service Providers of NHIF Primary Care Health Services**

The first objective of the study sought to determine the influence of knowledge of the service providers about the scheme on the uptake of NHIF primary care scheme in Nakuru Town. The objective was informed by the assumption that the level of uptake of any social security scheme depends on the level of knowledge of the service providers. The more knowledgeable the services providers were about the merits and demerits of the available social security, the more they were in a position to make informed decision on its implementation. Knowledge of the service providers was measured by means of 10 items in a five-point likert scale that ranged from 5=Strongly Agree (SA), 4=Agree (A), 3=Undecided (U), 2=Disagree (D) and 1=Strongly Disagree (SD). Scores obtained for each subscale were used to compute a mean score ( $\bar{x}$ ) and a standard deviation (s) for each statement and a global mean score for all the statements which was used to rate the service providers level of



knowledge about the NHIF primary care scheme. The mean scores ranged from 1 to 5 which were divided into high, average and low. The maximum score was 5 while the minimum was 1. Scores below 3.0 were said to have a low level of knowledge, 3.0 – 3.9 indicated average level and scores of 4.0 and above were considered an indication of high level of knowledge about the NHIF (Welsh government, 2011). The findings are presented in Figure 4.1

**Figure 4.1 Knowledge of Service Providers of NHIF Primary Care Health Services**

Statement	SD	D	Frequencies			Subtotal	
			U	A	SA	( $\bar{x}$ )	s
1. You have Knowledge of contribution by members to the scheme	1(1.1%)	4(4.6%)	2(2.3%)	51(58.6%)	29(33.3%)	4.18	.79
2. You have Knowledge of contribution by the employer to the scheme	1(1.2%)	0(0.0%)	2(2.3%)	51(58.6%)	29(33.3%)	4.29	.63
3. You understand the funding mechanisms of the scheme.	2(2.3%)	6(6.9%)	2(2.3%)	60(69.0%)	17(19.5%)	3.97	.84
4. You understand the beneficiaries of the scheme (age, relationship to the contributor).	2(2.3%)	4(4.6%)	1(1.1%)	61(70.1%)	19(21.8%)	4.05	.79
5. You know the requirements of the service providers to implement the scheme.	2(2.3%)	6(6.9%)	2(2.3%)	59(67.8%)	18(20.7%)	3.98	.85
6. You know the benefits package of the scheme	2(2.3%)	6(6.9%)	2(2.3%)	56(64.4%)	21(24.1%)	4.01	.87
7. The facility staff are often sensitized on NHIF services	7(8.0%)	0(0.0%)	5(5.7%)	43(49.4%)	32(36.8%)	4.07	1.08
8. There are often community outreaches to sensitize citizens on NHIF benefits	9 (10.5%)	5(5.8%)	13(14.9%)	40(46.0%)	19(21.8%)	3.64	1.20
9. The facility has informative posters displayed for customers within the facility on NHIF services	7(8.1%)	5(5.8%)	7(8.0%)	47(54.0%)	20(23.0%)	3.79	1.12
10. There is mechanism by NHIF for health providers and clients to give their feedback.	9(10.3%)	3(3.4%)	10(11.5%)	46(52.9%)	19(21.8%)	3.72	1.16

Analyzed data presented in Table 4.7 indicates that the service providers had high level of knowledge about the following statements; contribution by members to the scheme ( $\bar{x} = 4.18$ ), contribution by the employer to the scheme ( $\bar{x} = 4.29$ ), understand the beneficiaries of the scheme ( $\bar{x} = 4.05$ ), benefits package of the scheme ( $\bar{x} = 4.01$ ) and sensitized on NHIF services ( $\bar{x} = 4.07$ ). However, the service providers knowledge was average in the following areas; funding mechanisms of the scheme ( $\bar{x} = 3.97$ ), requirements of the service providers to implement the scheme ( $\bar{x} = 3.98$ ), community outreaches to sensitize citizens on NHIF benefits ( $\bar{x} = 3.64$ ), informative posters displayed for customers within the facility on NHIF services ( $\bar{x} = 3.79$ ) and mechanism by NHIF to receive feedback from health providers ( $\bar{x} = 3.72$ ). The overall computed mean score for the service providers knowledge of service providers of NHIF primary care health services was ( $\bar{x} = 4.00$ ) and standard deviation of ( $s = .73$ ). This mean score indicates that the service providers had high level of knowledge about the NHIF primary care scheme.

The study findings indicate that service providers had adequate knowledge of the NHIF primary care scheme and therefore expected to be aware of its merits and demerits and mode of operation and implementation. If the scheme is well implemented by NHIF then such response will boost the level of uptake of NHIF primary care scheme by service providers. These findings support previous studies such as Nolte and McKee (2008) who observed that a more a more highly knowledgeable service provider is critical to the implementation of the scheme. However, this study disputed earlier findings of Study by Sieverding et al (2018) in Kenya and Ghana targeting private healthcare providers revealed knowledge gap on

private healthcare provider’s perspective of social health insurance despite the fact that they serve more than 40% of the population.

#### 4.5.1 Relationship between Knowledge of Service Providers and Uptake of NHIF Scheme

To establish whether a relationship existed between knowledge of the service providers and uptake of NHIF primary care scheme, the researcher tested the first hypothesis. The first null hypothesis stated thus;

*H0<sub>1</sub>: There is no significant relationship between knowledge of the service providers and uptake of NHIF primary care scheme in Nakuru Town.*

To verify the hypothesis the researcher computed the Pearson moment correlation coefficient at ( $\alpha = 0.05$ ) to determine the strength of the relationship and if the relationship was significant. The findings are presented in Table 4.8

**Table 4.8: Correlation between Knowledge of Service Providers and Uptake of NHIF Primary Care Scheme**

		Knowledge of Service Providers about the Scheme	Uptake of NHIF Primary Care Scheme
<b>Knowledge of Service Providers about the Scheme</b>	Pearson Correlation	1	.266*
	Sig. (2-tailed)		.016
	N	87	82
<b>Uptake of NHIF Primary Care Scheme</b>	Pearson Correlation	.266*	1
	Sig. (2-tailed)	.016	
	N	82	83

\*. Correlation is significant at the 0.05 level (2-tailed).

Analyzed data presented in Table 4.8 indicates that there was a significant, weak, positive correlation between the two variables ( $r = .266$ ,  $n = 82$ ,  $p < .05$ ). The null hypothesis was therefore rejected on the basis of this finding. The findings indicate that respondents who had higher levels of knowledge as service providers about the scheme had uptake of NHIF primary care scheme. Hence, in this study high level of

uptake of NHIF primary care scheme was associated with uptake of NHIF primary care scheme. It was concluded that a positive relationship existed between knowledge of service providers about the scheme and uptake of NHIF Primary care scheme; positive increase in knowledge on service providers about the scheme results in an increase in uptake of NHIF primary care scheme. This suggests that the government had put in place adequate mechanisms to create awareness among the providers and clients about the NHIF primary care scheme. This could be attributed to the vigorous campaign by the Ministry of Health and other stakeholders about social service scheme in the country. Such service providers are expected to uptake the scheme in their facilities. The findings of this study agree with research conducted by Laferrère et al. (2011) which revealed that NHIF was not a new concept as people were getting aware about it from the radios, television, newspapers, agents, friends among others. This awareness had not proved the level of subscription and as a result the respondents were being covered by NHIF. There is increased knowledge about NHIF amongst the Kenyan population as a recent survey indicated (WHO, 2010). Similarly, a study conducted in Kenya and Ghana targeting private healthcare providers revealed knowledge gap on private healthcare providers' perspective of social Health insurance despite the fact that they serve more than 40% of the population (Sieverding et al., 2018). This view shared by Sochalski and Aiken (1999) who explained the need for forums that create room for the interaction between the health care providers and patients.

#### **4.6 Perceived Benefits of NHIF Primary Care Health Services**

The second objective of this study sought to examine the influence of the perceived benefits of the NHIF primary care scheme on the uptake of NHIF primary care scheme by health facilities in Nakuru Town. Perceived benefits of NHIF primary

health care services was measured by means of three sub scales that gathered information on social protection, health seeking behaviour and structural features of the health insurance system. The items were on a five-point likert scales. The mean scores ranged from 1 to 5 which were divided into high, average and low. The maximum score was 5 while the minimum was 1. Scores below 3.0 were said to have a low level of knowledge, 3.0 – 3.9 indicated average level and scores of 4.0 and above were considered an indication of high level of the attribute being measured concerning the NHIF (Welsh government, 2011).

#### 4.6.1 Social Protection

The first sub-scale of perceived benefits of the NHIF primary care scheme was social protection which was measured using five items in a likert scale. The findings are presented in Table 4.9

**Table 4.9 Perceived Benefits of NHIF Primary Care on Social Protection**

S. No	Statement	Frequencies					Subtotal	
		SD	D	U	A	SA	( $\bar{x}$ )	s
1.	Provides equity in health care access	2(2.4%)	0(0.0%)	8(9.6%)	59(71.1%)	14(16.9%)	4.00	.70
2.	Enhances quality services	0(0.0%)	4(4.7%)	6(7.1%)	59(69.4%)	16(18.8%)	4.02	.67
3.	Ensures risk sharing among the population	2(2.4%)	2(2.4%)	11(13.3%)	57(68.7%)	11(13.3%)	3.88	.76
4.	Acts as a means of avoiding catastrophic health-care expenditure	2(2.4%)	1(1.2%)	14(16.9%)	55(66.3%)	11(13.3%)	3.87	.75
5.	Protects impoverishment of individuals as a result of seeking healthcare	0(0.0%)	0(0.0%)	9(10.8%)	62(74.7%)	12(14.5%)	4.04	.50

Data presented in Table 4.9 shows that the service providers rated the following statements as occurring to a high level in the attributes being measured; Provision of equity in health care access ( $\bar{x} = 4.00$ ), enhancement of quality services ( $\bar{x} = 4.02$ ) and protection of impoverishment of individuals as a result of seeking healthcare

( $\bar{x} = 4.04$ ). The following statements were rated as average; ensuring risk sharing among the population ( $\bar{x} = 3.88$ ) and acting as a means of avoiding catastrophic health-care expenditure ( $\bar{x} = 3.87$ ). The overall computed mean score for social protection was ( $\bar{x} = 4.00$ ) and a standard deviation ( $s = .54$ ). This mean score indicated that on a general scale the service providers perceived NHIF primary care scheme as providing a high level of social protection. The study established that the service providers perceived that the NHIF primary care scheme protected them against impoverishment, enhanced quality services, ensured risk sharing among the population, protected against high health-care expenditure, and provided equity in access to health care. This suggests that NHIF aims of protecting the population against high health expenses and increase to access of health care to all had been embraced by health care providers. These findings concur with a GOK (2010) report that indicated that a health financing strategy is built around the principles of solidarity that involves cross-subsidization, offer quality services and promote efficiency, equity and access to all.

#### **4.6.2 Health Seeking Behaviour**

The second sub-scale on perceived benefits of NHIF primary care scheme was health seeking behaviour, which was assessed by means of four (4) items in a likert scale.

The findings are presented in Table 4.10.

**Table 4.10 Health Seeking Behaviours**

S.No	Statement	Frequencies (%)					Subtotal	
		SD	D	U	A	SA	x	S
1.	Creates improvement in the utilization of health services among citizens	5(6.1%)	0(0.0%)	8(9.8%)	42(51.2%)	27(51.2%)	4.05	.99
2.	Helps Preventing delays in seeking health services	5(5.9%)	2(2.4%)	9(10.6%)	50(58.8%)	19(58.8%)	3.89	.98
3.	Helps in Preventing self-treatment	5(5.9%)	2(2.4%)	12(14.1%)	42(49.4%)	24(49.4%)	3.92	1.03
4.	Helps in Preventing the use of alternative forms of care	6(7.4%)	1(1.2%)	10(12.3%)	41(50.6%)	23(50.6%)	3.91	1.06

Data provided in Table 4.10 clearly shows that the service providers indicated that NHIF primary care scheme created improvement in the utilization of health services among citizens to a high level ( $\bar{x} = 4.05$ ). They however, rated the statements as average in relation to NHIF primary health care; delays in seeking health services ( $\bar{x} = 3.89$ ), preventing self-treatment ( $\bar{x} = 3.92$ ) and prevention of using alternative forms of care ( $\bar{x} = 3.91$ ). The overall computed mean score for health seeking behaviour was ( $\bar{x} = 3.98$ ) and standard deviation ( $\bar{x} = 1.03$ ). This mean is between 3.00 and 4.00 which indicated that on average the service providers rated the health seeking behaviours as average. The service providers observed that NHIF creates improvement in the utilization of health services among citizens, prevent self-treatment, use of alternative forms of care and delays in seeking health services. This suggests that through NHIF, targeted clients were more responsible for their health which improved their health-seeking behaviours.

#### **4.6.3 Structural Features of the Health Insurance System**

The last sub scale on measurement of perceived benefits of NHIF primary care scheme was health seeking behaviour, which was assessed by means of five (5) items in a likert scale. The findings are presented in Table 4.11

**Table 4.11: Structural Features of the Health Insurance System**

S. No	Statement	Frequencies (%)					Subtotal	
		SD	D	U	A	SA	x	S
1.	Contribution levels are favourable	2(2.4%)	4(4.9%)	15(18.3%)	54(65.9%)	7(98.5%)	3.73	.79
2.	Practices considerable eligibility criteria	1(1.3%)	3(3.8%)	14(17.5%)	47(58.8%)	15(18.8%)	3.90	.79
3.	Services covered are of quality and comprehensive	0(0.0%)	6(7.1%)	14(16.7%)	49(58.3%)	15(17.9%)	3.87	.79
4.	Their administration is efficient and transparent	0(0.0%)	8(9.5%)	15(17.9%)	47(56.0%)	14(16.7%)	3.80	.83
5.	Communities are the major beneficiaries	2(2.4%)	3(4.9%)	13(18.3%)	46(65.9%)	20(8.5%)	3.94	.87

Data in Table 4.11 indicates that the service providers rated all the statements on structural features of the health insurance system as average: contribution levels ( $\bar{x} = 3.73$ ), eligibility criteria ( $\bar{x} = 3.90$ ), quality and comprehensiveness of services ( $\bar{x} = 3.87$ ), efficiency and transparency of administration ( $\bar{x} = 3.80$ ) and communities as the major beneficiaries ( $\bar{x} = 3.94$ ). The overall computed mean score was ( $\bar{x} = 3.85$ ) and standard deviation ( $s = .691$ ). The responses show that on average the service rated the structural features of the health insurance system as average. Through the NHIF system, communities are the major beneficiaries, there is a considerable eligibility criterion, administration is efficient and transparent, services covered are of quality and comprehensive and contribution levels are favorable. This suggests they trust and belief in the NHIF system to fulfill its mandate. This is consistent with the Government of Kenya [GOK], (2010) report which asserted that health financing strategy is built around the principles of solidarity, where income and risk cross-subsidization will play a major role; responsibility, ensuring that the health system puts people first and that health care providers offer quality services and promote efficiency; equity, where all Kenyans will have access to a basic package of health services according to their need and; transparency, which involves ensuring



that purchasers, providers and users have access to information regarding the operations of the system.

#### 4.6.4 Overall Perceived Benefits of the NHIF Primary Care Scheme

To get the overall perceived benefits of the NHIF primary care scheme, the researcher combined the findings of the three-sub scale, namely; social protection, health seeking behaviour and structural features of the health insurance system. The findings are presented in Table 4.8

**Table 4.12: Perceived Benefits of the NHIF Primary Care Scheme**

S.No	Sub Scale of Perceived Benefits	Mean ( $\bar{x}$ )	Std. Dev ( $s$ )
1.	Social protection	4.00	.54
2.	Health seeking behaviour	3.98	1.03
3.	Structural features of the health insurance system	3.85	.691

Table 4.12 shows that the overall mean for the perceived benefits of the NHIF primary care scheme was ( $\bar{x} = 3.97$ ) and standard deviation of ( $s = .73$ ) on a scale of 1-5. This mean score shows that the service provides rated perceived benefits of the NHIF primary care scheme as average. Kenya has made advanced plans in UHC as detailed in the Kenya health financing strategy, the constitution and the country's vision 2030. It is highlighted as central to the country's development and commitment to its achievement by 2030 (GOK, 2008). The health financing strategy is built around the principle's solidarity, responsibility, ensuring equity, putting people first by ensuring health care providers offer quality services and promote efficient use of resources, geared towards ensuring all Kenyans access basic package of health services according to their needs. Finally, enhanced transparency ensures that users,

providers and purchasers have access to information regarding the operations of the system (GOK, 2010).

#### 4.6.5 Relationship between Perceived Benefits of PC Scheme and Uptake of NHIF Scheme

To find out if a relationship existed between perceived benefits of NHIF primary care scheme and uptake of NHIF primary care scheme, the researcher tested the second null hypothesis. The second null hypothesis stated thus;

*H0<sub>2</sub>: There is no significant relationship between perceived benefits of NHIF primary care scheme and uptake of NHIF primary care scheme in Nakuru Town.*

To verify the hypothesis the researcher computed Pearson moment correlation coefficient at ( $\alpha = 0.05$ ) to determine the strength of the relationship and if the relationship was significant. The findings are presented in Table 4.13.

**Table 4.13: Correlation between Perceived Benefits of NHIF Primary Care Scheme and Uptake of NHIF PC Scheme**

		Perceived Benefits of NHIF Primary Care Scheme	Uptake of NHIF Primary Care Scheme
Perceived Benefits of NHIF Primary Care Scheme	Pearson Correlation	1	.297**
	Sig. (2-tailed)		.006
	N	83	83
Uptake of NHIF Primary Care Scheme	Pearson Correlation	.297**	1
	Sig. (2-tailed)	.006	
	N	83	85

\*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.13 indicates that that the relationship between perceived benefits of NHIF Primary care scheme and uptake of NHIF primary care scheme was significant, moderate and positive ( $r = + .297$ ,  $n = 83$ ,  $p < .05$ ). Consequently, the null hypothesis

was rejected and the study concluded that increase in perceived benefits of NHIF primary care scheme resulted in an increase in the uptake of NHIF primary care scheme. It's important for NHIF to develop clear policy details on the various benefits and risks involved in the scheme to increase uptake of the scheme across the general population and also understand people's perceptions and develop packages that are accessible, affordable and acceptable to all sections of the society. This concurs with Jehu-Appiah et al. (2011) who asserted that it is important for policy makers to recognize household perceptions related to providers, schemes and community attributes as they act as enablers or barriers in their decisions to voluntarily enroll and remain enrolled in an insurance scheme. In support of this position, Philip and Alexander (2012) assert that utilization of health services among citizens is improved remarkably after reduction of the financial barriers associated with the cost of health services, and also health care seeking behaviour is greatly influenced (whether, when, from where care is sought for an illness) by preventing delays in seeking services, self-medication and use of alternative forms of care such as herbal medicine.

#### **4.7 Health Facility Organization Capacity**

The third research objective sought to establish the influence of health facility organization capacity on the uptake of NHIF primary care scheme in Nakuru Town. Health facility organization capacity was measured by means of three sub scales, namely; physical facilities, ICT facilities and health facilities human resource capacity which had seven (7) four (4) and five (5) items respectively. The items were in a five-point likert scale. The responses obtained were used to compute a mean score for each statement and a global mean score for the all the items. The mean scores ranged from Strongly Agree (5) to Strongly Disagree (1) and were divided into high, average and low. The maximum score was 5 while the minimum was 1. Scores below 3.0 were

said to have a low level of the attribute, 3.0 – 3.9 indicated average level and scores of 4.0 and above were considered an indication of above average of attributed being measured (Welsh government, 2011).

#### 4.7.1 Physical Facilities

The last first sub-scale on measurement of health facility organization capacity was the nature of physical facilities, which was assessed by means of seven (7) items in a likert scale. A summary of the responses is presented in Table 4.14.

**Table 4.14: Nature of Physical Facilities**

S.No	Statement	Frequencies(%)					Subtotal	
		SD	D	U	A	SA	$\bar{x}$	S
1.	The physical location of the facility is ideal.	0(0.0%)	5(5.3%)	0(0.0%)	42(44.7%)	47(50.0%)	4.39	.75
2.	The health facility is easily accessible to clients especially to formal employees	0(0.0%)	5(5.3%)	4(4.3%)	37(39.4%)	48(51.1%)	4.36	.80
3.	The infrastructures in the health facility is mostly adequate	2(2.1%)	6(6.4%)	1(1.1%)	59(62.8%)	26(27.7%)	4.07	.86
4.	There is always sufficient waiting space for patients	0(0.0%)	5(5.3%)	7(7.4%)	43(45.7%)	39(41.5%)	4.23	.81
5.	The health facility has always adequate medical supplies.	2(2.1%)	6(6.4%)	8(8.5%)	51(54.3%)	27(28.7%)	4.01	.91
6.	The health facility has always adequate patient's examination equipment	0(0.0%)	9(9.6%)	12 (12.8%)	52(55.3%)	21(22.3%)	3.90	.86
7.	The health facility has mostly sufficient laboratory facilities	0(0.0%)	7(7.4%)	13(13.8%)	44(46.8%)	30(31.9%)	4.03	.87

Table 4.14 indicates that the service providers rated the nature of physical facilities as above average on all the seven statements provided. Physical location of the facility ( $\bar{x} = 4.39$ ), ease of access of health facility by clients ( $\bar{x} = 4.36$ ), adequacy of infrastructure in the health facility ( $\bar{x} = 4.07$ ), adequacy of waiting space for patients ( $\bar{x} = 4.23$ ), adequacy of medical supplies ( $\bar{x} = 3.90$ ), adequacy patients examination equipment ( $\bar{x} = 4.03$ ) and sufficiency of laboratory facilities ( $\bar{x} = 4.03$ ). The overall

computed mean score for the nature of physical facilities was ( $\bar{x} = 4.14$ ) and standard deviation ( $s = .65$ ). This mean score indicated that the service providers rated the nature of the physical facilities as above average on the scale used. The study established the health facilities were easily accessible; there was sufficient waiting space for patients, laboratory facilities, patient's examination equipment, medical supplies and infrastructures. This suggests that the health facilities had adequate physical facilities for effective provision of NHIF primary care services. These findings support previous studies such as Anell and Willis (2000) who observed that the structural resources of health care facilities and organizations are the foundation upon which quality health care services are provided.

#### 4.7.2 ICT Facilities

The second sub scale on measurement of health facility organization capacity was the nature of ICT facilities, which was assessed by means of four (4) items in a likert scale. Table 4.15 provides a summary of the responses.

**Table 4.15: Nature of ICT Facilities**

S.No	Statement	Frequencies (%)					Subtotal	
		SD	D	U	A	SA	x	S
1.	The health facility has the right number of IT resources to support service provision	3(3.2%)	6(6.5%)	5(5.4%)	50(53.8%)	29(31.2%)	4.03	.96
2.	The health facility has right types of IT resources to support service provision	5(5.4%)	6(6.5%)	2(2.2%)	60(64.5%)	20(21.5%)	3.90	.99
3.	The health facility has access to high-speed internet connectivity	6(6.5%)	7(7.6%)	11(2.0%)	42(45.7%)	26(28.3%)	3.82	1.13
4.	The health facility has a functioning health management information system	6(6.5%)	7(7.5%)	11(1.8%)	44(47.3%)	25(26.9%)	3.81	1.12

Data presented in Table 4.15 clearly indicates that the service providers indicated that the health facility had the right number of IT resources to support service provision ( $\bar{x} = 4.03$ ). However, was average in the; right type of IT resources to support service provision ( $\bar{x} = 3.90$ ), access to high-speed internet connectivity ( $\bar{x} = 3.82$ ) and a functioning health management information system ( $\bar{x} = 3.81$ ). The overall computed mean score for the nature of ICT facilities was ( $\bar{x} = 3.89$ ) and standard deviation of ( $s = .96$ ). This mean score indicates that the nature of ICT facilities in health facilities were average. The study revealed that there was average number of IT resources to support service provision, access to high-speed internet connectivity, a functioning health management information system and right types of IT resources to support service provision. This suggests that sampled health facilities had adequate ICT facilities to support and effectively implement NHIF primary care. These findings support previous studies such as Farnsworth (2005) who observed that technology has many benefits leading to great improvements in health care.

#### **4.7.3 Hospital Human Resource Capacity**

The third subscale on measurement of health facility organization capacity assessed the health facility human resource capacity, which was measured by means of five (5) items in a likert scale. Table 4.12 provides a summary of the responses.

**Table 4.16: Hospital Human Resource Capacity**

S.No	Statement	Frequencies					Subtotal	
		SD	D	U	A	SA	x	S
1.	The facility has always adequate number of health providers	2(2.2%)	6(6.5%)	7(7.6%)	63(68.5%)	14(15.2%)	3.88	.82
2.	The skill mix among the health providers is often adequate	0(0.0%)	4(4.4%)	5(5.5%)	67(73.6%)	15(16.5%)	4.02	.63
3.	The health providers are adequately trained for duties they perform	0(0.0%)	4(4.3%)	6(6.5%)	51(55.4%)	31(33.7%)	4.18	.74
4.	The health workers are always deployed according to their skills	0(0.0%)	2(2.2%)	8(8.9%)	52(57.8%)	28(31.1%)	4.18	.68
5.	The work environment is always conducive.	0(0.0%)	2(2.2%)	6(6.5%)	60(65.2%)	24(26.1%)	4.15	.63

Table 4.16 provides a summary of the service providers rating of five statements on health facility human resource capacity. The respondents indicated that on average the facility always had adequate number of health providers ( $\bar{x} = 3.88$ ). All the other statements were rated as above average as follows; adequacy of skill mix among the health providers ( $\bar{x} = 4.02$ ), adequacy of training of health providers for duties they perform ( $\bar{x} = 4.18$ ), deployment of health workers according to their skills ( $\bar{x} = 4.18$ ) and conduciveness of work environment ( $\bar{x} = 4.15$ ). The overall computed mean score for health facility human resource capacity was ( $\bar{x} = 4.08$ ) and standard deviation ( $s = .571$ ). This mean score indicated that health facility human resource capacity was above average. There were adequate numbers of health workers deployed according to their skills, health providers are trained for their duties, the work environment is conducive, skill mix among the health providers, and number of health providers. This shows that the health facilities had adequate human resource to support and effectively implement NHIF primary care. These findings support previous studies such as Norris (2007) who emphasized on the need for a vibrant

human resource in health facilities that can be trusted based on their capability and commitment in delivering quality health services.

#### 4.7.4 Overall rating of Health Facility Organization Capacity

To obtain the service providers' overall rating of the health facility organization capacity, the researcher combined the findings of the three-sub scale, namely; nature of physical facilities nature of ICT facilities and the health facility human resource capacity. The findings are presented in Table 4.17

**Table 4.17: Health Facility Organization Capacity**

S.No	Sub Scale of Health Facility Organization Capacity	Mean ( $\bar{x}$ )	Std. dev. (s)
1.	Nature of Physical Facilities	4.14	<b>.65</b>
2.	Nature of ICT facilities	3.89	.96
3.	Hospital Human Resource capacity	4.08	.571
4.	<b>Health Facility Organization Capacity</b>	<b>3.97</b>	<b>.73</b>

Table 4.17 shows the findings of the three subscales used to assess the health facility organization capacity and their combined total. Nature of physical facilities ( $\bar{x} = 4.14$ ), nature of ICT facilities ( $\bar{x} = 3.89$ ) and hospital human resource capacity ( $\bar{x} = 4.08$ ). The combined effect of the three subscales yields the health facility organization capacity, which gave a mean score of ( $\bar{x} = 3.97$ ) and a standard deviation of (s= .73). This mean score indicates that the respondents rated health facility organization capacity as average. Health facilities organizational capacity is the analysis of the facility in terms of adequacy; structurally, staffing levels, technology facilities, equipment and support services (laboratory, pharmacy, radiology). These structural features as well as resources of the health care facilities and institutions are key foundation upon which quality health care services are provided and which enhance uptake of health services (Anell & Willis, 2000).



#### 4.7.5 Relationship between Health Facility Organization Capacity and Uptake of NHIF Scheme

To find out whether a relationship existed between health facility organization capacity and uptake of NHIF primary care scheme, the researcher tested the third null hypothesis. The third null hypothesis sought to establish if a statistically significant relationship existed between the health facility organization capacity and uptake of NHIF primary care scheme. The hypothesis stated, thus;

*H0<sub>3</sub>: There is no significant relationship between organization capacity and uptake of NHIF primary care scheme in Nakuru Town.*

To test this hypothesis Pearson moment correlation coefficient was computed at ( $\alpha = 0.05$ ) to determine the strength of the relationship and if the relationship was significant. The findings are presented in Table 4.18

**Table 4.18: Correlation between Health Facility Organization Capacity and Uptake of NHIF PC Scheme**

		<b>Health Facility Organization Capacity</b>	<b>Uptake of NHIF Primary Care Scheme</b>
<b>Health Facility</b>	Pearson Correlation	1	.109
<b>Organization</b>	Sig. (2-tailed)		.329
<b>Capacity</b>	N	83	83
<b>Uptake of</b>	Pearson Correlation	.109	1
<b>NHIF Primary</b>	Sig. (2-tailed)	.329	
<b>Care Scheme</b>	N	83	96

\*. Correlation is significant at the 0.05 level (2-tailed).

As indicated in Table 4.18 there was positive correlation between the two variables which was not significant ( $r = + .109$ ,  $n = 82$ ,  $p < .05$ ). The null hypothesis was therefore accepted on the basis of this finding. Thus, variations in the level of the health facility organization capacity were independent of changes in the uptake of NHIF primary care scheme. The study therefore concluded that there was no relationship between the two variables. Availability of quality health care facilities

and services among health care providers affects the uptake of the cover among citizens of any particular country. Structural facilities and their unique characteristics are expected to influence the quality of health care services. One perspective in the accreditation of health facilities is the analysis of how adequate the facility is structurally, staffing levels, including on-call staff, technology facilities, equipment and support services (laboratory, pharmacy, radiology). These findings support of a previous study by Farnsworth (2005) which revealed that healthcare system rarely emphasizes, advertise, or campaign about their upgrade of facilities, diffusion of new technology or the quality of their human resource base, consequently the consumers remain largely unaware and thus are unlikely to be attracted to such facilities. However, the findings of this study seem to be at variance with this view. This study disputed earlier findings of a study by Gobah and Zhang (2011) which reported that lack of quality health care facilities and services in health care Centre's is a factor that affects uptake of health insurance cover.

#### **4.8 Influence of Barriers to Health Facilities and NHIF on the Uptake of NHIF PC Scheme**

The fourth research objective sought to assess the influence of barriers of health facilities on the uptake of NHIF primary care health services in Nakuru Town. Barriers of health facilities were measured by four subscales, namely; hospital-based challenges, national challenges, policy constraints and NHIF institutional problems. A total of 23 items in likert scale ranging from Strongly Agree (5) to Strongly Disagree (1) were used. The responses obtained were used to compute a mean score for each statement and a global mean score for the all the items. The mean scores ranged from 1-5 and were divided into above average, average and low. The minimum score was 1 while the maximum was 5. Scores below 3.0 were said to have a low level of the attribute, 3.0 – 3.9 indicated average level and scores of 4.0 and above were

considered an indication of above average level of the attribute being measured about the NHIF (Welsh government, 2011).

#### 4.8.1 Hospital Based Challenges

The first subscale of measurements of barriers to health facilities and NHIF was hospital-based challenges; it consisted of seven (7) items on a likert scale. The summary of the responses to these items is provided in Table 4.19

**Table 4.19: Hospital Based Challenges**

S.No	Statement	Frequencies					Subtotal	
		SD	D	U	A	SA	$\bar{x}$	s
1.	Adequacy of hospital facilities	2(2.4%)	8(9.4%)	27(31.8%)	44(51.8%)	4(4.7%)	3.47	.83
2.	Adequacy of hospital staffing	2(2.5%)	15(18.5%)	25(30.9%)	36(44.4%)	3(3.7%)	3.28	.90
3.	Inefficient technologies	3(3.7%)	20(24.4%)	19(23.2%)	36(43.9%)	4(4.9%)	3.22	.99
4.	Standards of services	6(7.1%)	23(27.4%)	28(33.3%)	25(29.8%)	2(2.4%)	2.93	.98
5.	Accessibility by citizen from all walks of life	6(7.1%)	25(29.8%)	19(22.6%)	30(35.7%)	4(4.8%)	3.01	1.07
6.	Knowledge on healthcare service providers on their mandate in implementing the UHC	8(9.4%)	25(29.4%)	16(18.8%)	34(40.0%)	2(2.4%)	2.96	1.09
7.	Awareness on the benefits of the scheme to the institutions	8(9.5%)	21(25.0%)	16(19.0%)	35(41.7%)	4(4.8%)	3.07	1.12

Table 4.19 shows the service providers indicated that the attributes in the following statements were average; health facility facilities ( $\bar{x} = 3.47$ ), hospital staffing ( $\bar{x} = 3.28$ ), technologies ( $\bar{x} = 3.22$ ), accessibility by citizen from all walks of life ( $\bar{x} = 3.01$ ) and awareness on the benefits of the scheme to the institutions ( $\bar{x} = 3.07$ ). However, the following statements were rated below average; standards of services ( $\bar{x} = 2.93$ ) and knowledge on healthcare service providers on their mandate in implementing the UHC primary care ( $\bar{x} = 2.96$ ). The overall computed

mean score for hospital-based challenges was ( $\bar{x} = 3.14$ ) and standard deviation of ( $s = .801$ ). This mean score indicates that overall hospital-based challenges were rated as average. The study established that the level of adequacy of; health facilities, technologies, health facilities staffing, accessibility by citizens and awareness on the benefits of the scheme were average. Knowledge on healthcare service providers on their mandate in implementing the UHC and awareness on the benefits of the scheme to the institutions was below average. These results suggest that the health facilities had some internal barriers that could have negatively affected their uptake of NHIF primary care scheme. These findings support previous studies such as Cummings and Worley (2005) who observed that there were numerous challenges in healthcare facilities affecting the uptake of social insurance schemes.

#### 4.8.2 National Challenges

The second subscale of measurements of barriers to health facilities and NHIF was national challenges; it consisted of three (3) items on a likert scale. The summary of the responses to these items is provided in Table 4.20

**Table 4.20: National Challenges**

S.No	Statement	Frequencies					Subtotal	
		SD	D	U	A	SA	$\bar{x}$	S
1.	NHIF primary care don't conform with international standards	6(7.1%)	16(18.8%)	35(41.2%)	24(28.2%)	4(4.7%)	3.05	.97
2.	Government has not domesticated the provisions of international treaties and conventions on the right to social security	7(8.3%)	15(17.9%)	32(38.1%)	26(31.0%)	4(4.8%)	3.06	1.01
3.	The policy is discriminative without any legal reprieve	8(9.4%)	10(11.8%)	27(31.8%)	31(36.5%)	9(10.6%)	3.27	1.11

Data presented in Table 4.20 shows that the service providers rated all statements on national challenges as average; NHIF primary care ability to conform with international standards ( $\bar{x} = 3.05$ ), government domestication of provisions of international treaties and conventions on the right to social security ( $\bar{x} = 3.06$ ) and policy discriminative nature without any legal reprieve ( $\bar{x} = 3.27$ ). The overall mean score for national challenges was ( $\bar{x} = 3.13$ ) and standard deviation ( $s = .94$ ). This indicates that the national challenges were average. The study established that the national challenges included non-conformity to international standards, lack of domestication of international treaties and conventions on the right to social security, and discrimination without any legal reprieve. This suggests that there are still some national issues that need to be harmonized in order for health facilities to effectively uptake the scheme. These findings support previous studies such as McIntyre et al. (2008) who identified national challenges affecting social insurance schemes including general poor state of the nation's health care system, the excessive dependence and pressure on government-provided health facilities, dwindling funding of health care in the face of rising costs as well as poor integration of private health facilities in the nation's health care delivery system.

#### **4.8.3 NHIF Policy Constraints**

The third subscale of measurements of barriers to health facilities and NHIF was policy constraints; it consisted of seven (7) items on a likert scale. The summary of the responses to these items is provided in Table 4.21.

**able 4.21: Policy Constraints**

S.No	Statement	Frequencies					Subtotal	
		SD	D	U	A	SA	$\bar{x}$	S
1.	Implementation of NHIF is faced by delays against the original plan	1(1.1%)	15(17.0%)	20(22.7%)	33(37.5%)	19(21.6%)	3.61	1.04
2.	Ineffective coordination of activities	2(2.3%)	15(17.2%)	22(25.3%)	44 (50.6%)	4(4.6%)	3.38	.91
3.	Attention from the implementation deviation by competing activities	2(2.3%)	15(17.2%)	23(26.4%)	33 (37.9%)	(14)16.1%)	3.48	1.03
4.	Uncontrollable external environmental factors create problems	4(4.6%)	16(18.4%)	14(16.1%)	36(41.4%)	17 (19.5%)	3.53	1.14
5.	Inadequate leadership and direction by the departmental managers	4(4.6%)	18(20.7%)	20(23.0%)	35(40.2%)	10(11.5%)	3.33	1.07
6.	Inadequate monitoring of activities by the information system.	2(2.3%)	18(20.9%)	16(18.6%)	35(40.7%)	15(17.4%)	3.50	1.08
7.	Unclear responsibility and accountability in the execution process	2(2.3%)	18(20.7%)	21(24.1%)	35(40.2%)	11(12.6%)	3.40	1.03

Table 4.21 indicates that the service providers rated all the statements assessing policy constraints as average; delays in implementation of NHIF scheme against the original plan ( $\bar{x} = 3.61$ ), coordination of activities ( $\bar{x} = 3.38$ ), competing activities to implementation ( $\bar{x} = 3.48$ ), uncontrollable external environmental factors create problems ( $\bar{x} = 3.53$ ), inadequate leadership and direction by the departmental managers ( $\bar{x} = 3.33$ ), inadequate monitoring of activities by the information system ( $\bar{x} = 3.50$ ) and unclear responsibility and accountability in the execution process ( $\bar{x} = 3.40$ ). The overall computed mean score for national challenges ( $\bar{x} = 3.47$ ) and standard deviation ( $s = .94$ ). This mean score indicated that the level of policy constraints was average.

The research established that there were delays in implementation, competing activities, uncontrollable external environmental factors, ineffective coordination of activities, inadequate monitoring of activities by the information system, unclear responsibility and accountability, and inadequate leadership and direction by the departmental managers. All these constraints combined were likely to negatively impact on the uptake of NHIF primary care. These findings support previous studies such as Beer and Eisenstant (2000) who identified various policy-related barriers facing the strategy implementation including a top-down/laissez-faire senior management style, unclear strategic intentions and conflicting priorities, an ineffective senior management team, poor vertical communication, weak coordination across functions, business or borders, and inadequate down-the-line leadership skills development.

#### 4.8.4 NHIF Institutional Constraints

The fourth subscale of measurements of barriers to health facilities and NHIF was NHIF institutional problems; it consisted of six (6) items on a likert scale. The summary of the responses to these items is provided in Table 4.22

**Table 4.22: NHIF Institutional Constraints**

Statement	Frequencies					Subtotal	
	SD	D	U	A	SA	x	S
1. Numerous and conflicting priorities	4(4.5%)	21(23.9%)	37(42.0%)	21(23.9%)	5(5.7%)	3.02	.95
2. Ineffective management style (top down)	2(2.3%)	21(23.9%)	41(46.6%)	21(23.9%)	3(3.4%)	3.02	.84
3. Inter-functional conflicts and poor coordination	0(0.0%)	23(26.4%)	39(44.8%)	22(25.3%)	3(3.4%)	3.06	.81
4. Poor vertical communication	0(0.0%)	24(27.3%)	44(50.0%)	18(20.5%)	2(2.3%)	2.98	.76
5. Integrity issues	0(0.0%)	25(28.4%)	40(45.5%)	18(20.5%)	3(5.7%)	3.03	.85
6. Unclear strategic intentions	4(4.6%)	21(24.1%)	30(34.5%)	30(34.5%)	3(2.3%)	3.06	.93

Table 4.22 clearly shows the service providers rating of NHIF institutional problems. The following statements were rated as average; numerous and conflicting priorities ( $\bar{x} = 3.02$ ) ineffective management style ( $\bar{x} = 3.02$ ), inter-functional conflicts and poor coordination ( $\bar{x} = 3.06$ ), integrity issues ( $\bar{x} = 3.03$ ) and unclear strategic intentions ( $\bar{x} = 3.06$ ). Vertical communication was rated below average ( $\bar{x} = 2.98$ ). The overall mean score for NHIF institutional problems was ( $\bar{x} = 3.03$ ) and standard deviation ( $s = .77$ ). This mean score indicates that the NHIF institutional constraints were average. The study revealed that barriers related to NHIF institutional challenges too had some impact on the uptake of NHIF primary care. The NHIF institutional constraints included; unclear strategic intentions, inter-functional conflicts and poor coordination, poor vertical communication, integrity issues, ineffective management style and numerous and conflicting priorities. This suggests that there some inherent barriers within the NHIF structures that should be addressed to enable uptake of the scheme. All these constraints combined were likely to negatively impact on the uptake of NHIF primary care. These findings support previous studies such as Shaw and Griffin (2007) who highlights the inability to manage change, including cultural change as well as lack of sufficient communication in the implementing institutions.

#### **4.8.5 Overall rating of Barriers to the Uptake of Primary Care Scheme**

To obtain the service providers' overall rating of the barriers to the uptake of NHIF primary care scheme, the researcher combined the findings of the four-sub scale, namely; hospital-based challenges, national challenges, policy constraints and NHIF institutional problems. The findings are presented in Table 4.23.



**Table 4.23: Barriers to the Uptake of Primary Care Scheme**

S.No	Subscales of Barriers to the Uptake of Primary Care Scheme	$\bar{x}$	S
1.	Hospital based challenges	3.14	.801
2.	National challenges	3.13	.94
3.	Policy constraints	3.47	.94
4.	NHIF institutional problems	3.03	.77
5.	Barriers to the Uptake of Primary Care Scheme	3.21	.65

Table 4.23 shows the findings of the three subscales used to assess the barriers to the uptake of primary care scheme and their combined total. All the subscales were rated average; NHIF institutional problems ( $\bar{x} = 3.14$ ), national challenges ( $\bar{x} = 3.13$ ), policy constraints ( $\bar{x} = 3.47$ ) and hospital-based challenges ( $\bar{x} = 3.03$ ). The combined effect of the four subscales yielded the mean score of barriers to the uptake of primary care scheme ( $\bar{x} = 3.21$ ). This mean score indicates that the respondents rated barriers to the uptake of primary care scheme as average. The government has a responsibility of providing affordable and adequate health services to its people. However, there are numerous challenges facing this mandate. The barriers range from inadequate physical facilities and staffing, inefficient technologies, quality and standards of health services being wanting in some instances. Lencer (2015) observed that following the devolution of health function, challenges associated with decentralization of UHC primary care policy, inadequate knowledge of the service providers on their mandate in implementation of the primary care as well as the benefits of the PHC schemes to the institution. Further, Mendoza (1990) noted that the standards of UHC are below the acceptable international standards due to various challenges such as; domestication of the provisions of international treaties and conventions by the government on the right to social security.

#### 4.8.6 Relationship between Barriers to NHIF and uptake of NHIF Primary Care Scheme

To find out if a relationship existed between barriers to NHIF and uptake of NHIF primary care scheme, the researcher tested the fourth null hypothesis. The fourth null hypothesis sought to establish if a statistically significant relationship existed between the health facility organization capacity and uptake of NHIF primary care scheme. The hypothesis stated, thus;

*H04: There is no significant relationship between barriers to NHIF and uptake of NHIF primary care scheme in Nakuru Town.*

Pearson moment correlation coefficient was computed at ( $\alpha = 0.05$ ) to determine the strength of the relationship and if the relationship was significant. The findings are presented in Table 4.24

**Table 4.24: Correlation between Barriers to NHIF and Uptake of NHIF Primary Care Scheme**

		<b>Barriers to NHIF</b>	<b>Uptake of NHIF Primary Care Scheme</b>
<b>Barriers to NHIF</b>	Pearson Correlation	1	-.246*
	Sig. (2-tailed)		.025
	N	88	83
<b>Uptake of NHIF Primary Care Scheme</b>	Pearson Correlation	-.246*	1
	Sig. (2-tailed)	.025	
	N	83	83

\*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.24 shows that the results of data analysis revealed that there was a moderate correlation that was significant and negative ( $r = - .246$ ,  $n = 83$ ,  $p < .05$ ). It was concluded that a negative relationship existed between barriers to NHIF and uptake of NHIF primary care scheme. Decrease in barriers to NHIF resulted in a moderate increase in the uptake of NHIF primary care scheme. Barriers to the enrollment of NHIF primary care scheme by communities can come from varied areas such as

socio-economic and demographic characteristics of the household which include income level, education of household members, employment, and health status, presence of children, age, marital status, and sex of household head as significant determinants of demand for health insurance.

This agrees with Shaw and Griffin (2007) who observed that there are key barriers such as; poor or inadequate sharing of information, the need for involvement of many people in the execution process, lack of understanding of organizational structure and coordination methods as well as inability to manage change especially cultural change.

#### 4.9 Regression Analysis between the Independent and Dependent Variables

A combined relationship between the independent variables (Knowledge of Service Providers, Perceived Benefits of the NHIF Scheme, Health Facility Organization capacity and Barriers of the Health Facilities and NHIF) on the uptake of NHIF Primary care scheme was computed using multiple regression analysis. The findings are presented in Tables 4.25 and 4.26 and 4.27.

**Table 4.25: Model summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square of the Change	F	Change	df1	df2
1	.417 <sup>a</sup>	.174	.131	.48324	.174	4.058	4	77	.005

a. Predictors: (Constant), Barriers of the Health Facilities and NHIF, Health Facility Organization Capacity, Perceived Benefits of NHIF PC Scheme,  
 b. Knowledge of service Providers

Table 4.25 presents the values of  $R$  and  $R^2$ . The  $R$  value represents the simple correlation and is 0.417, which indicates a moderate degree of correlation. The  $R^2$  value indicates how much of the total variation in the dependent variable (uptake of NHIF primary care scheme) can be explained by the independent variables (Barriers of the Health Facilities and NHIF, Health Facility Organization Capacity, Perceived Benefits of NHIF PC Scheme, Knowledge of service Providers). In this case, 17.4% can be explained, which is moderate.

**Table 4.26: ANOVA**

<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	3.791	4	.948	4.058	.005 <sup>b</sup>
	Residual	17.981	77	.234		
	Total	21.772	81			

a. Dependent Variable: Uptake of PC Scheme

b. Predictors: (Constant), Barriers of the Health Facilities and NHIF, Health Facility Organization Capacity, Perceived Benefits of NHIF PC Scheme, Knowledge of service Providers

Table 4.26 is the ANOVA table, which reports how well the regression equation fits the data. This table indicates that the regression model predicts the dependent variable significantly well. This indicates the statistical significance of the regression model that was run. Here,  $p = 0.005$ , which is less than 0.05, and indicates that, overall, the regression model statistically significantly predicts the outcome variable (i.e., it is a good fit for the data).

#### **4.9.1 Regression Analysis between the Independent and Dependent Variables**

It was important to compute a regression analysis between the independent and dependent variables so as establish the contribution of each of the four independent variables (Barriers of the Health Facilities and NHIF, Health Facility Organization Capacity, Perceived Benefits of NHIF PC Scheme, Knowledge of service Providers).

Cawley, Moriya and Simon, (2008) observes that for computation of regression analysis that data should assume a normal distribution; otherwise if this assumption is violated then it would invalidate the regression analysis. In this study, Kolmogorov-Smirnov test statistic (KS-test) and Shapiro-Wilk test (SW-test) were computed to establish whether the data in the study was collected from a normal population. The findings are presented in Table 4.27.

**Table 4.27: Regression Analysis between Independent and Dependent Variables**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1. (Constant)	1.968	.340		5.791	.000
2. Knowledge of service Providers	.356	.143	.514	2.490	.015
3. Perceived Benefits of NHIF PC Scheme	.186	.137	.210	1.360	.178
4. Health Facility organization Capacity	.454	.183	-.489	-2.487	.015
5. Barriers of the Health Facilities and NHIF	-.068	.090	-.083	-.758	.451

a. Dependent Variable: Uptake of PC Scheme

Table 4.27 shows that coefficients of the regression model. Coefficient on Knowledge of service Providers (0.356) and the relationship is statistically significant ( $p = 0.015$ ) indicating that increase in Knowledge of service Providers results in increase in Uptake of PC Scheme. The regression coefficient on Perceived Benefits of NHIF primary care scheme is positive (0.186) and the relationship with Uptake of PC Scheme is not statistically significant ( $p = 0.178$ ). Health Facility Organization Capacity showed a positive regression coefficient (.454) and the relationship with Health Facility Organization Capacity is statistically significant ( $p = 0.015$ ). Barriers of the Health Facilities and NHIF indicated a negative regression coefficient (.068) and the relationship with Uptake of PC Scheme is not statistically significant ( $p = 0.$

451). This model suggests that Uptake of PC Scheme has a lot to do with Knowledge of service Providers, Health Facility Organization Capacity but little to do with Perceived Benefits of NHIF primary care scheme and Barriers of the Health Facilities and NHIF. The beta coefficient is the predictive power of the assumed model variable relationship. Thus, the regression equation when re-modeled looks as follows:

The following regression model was used.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

$$Y = 1.968 + .356X_1 + .2X_2 +$$

Where:

Y represents NHIF Primary Care scheme Uptake

X<sub>1</sub> represents Service Providers' Knowledge

X<sub>2</sub> represents Health Facility Organization Capacity

β<sub>0</sub> represents regression constant

β<sub>1</sub>, β<sub>2</sub>, β<sub>3</sub>, β<sub>4</sub> represents beta coefficient for independent variables

ε = represents error term which is normally distributed

This was in line with earlier studies such as Sochalski and Aiken (1999) who established that service providers' knowledge influence uptake of health insurance schemes. They assert that the interaction between the health care providers and patients over time is an important process of health care. The process of care may be examined from multiple perspectives: the sequence of services received over time, the relationship of health services to a specific patient complaint or diagnosis, and the numbers and types of services received over time or for a specific health problem. Health facility organization capacity is an important factor in the uptake of NHIF Primary Care scheme. This is attributed to the fact that adequacy of physical facilities, ICT facilities and human resource capacity improve reliability through provision of

quality services which enhance consumer confidence and thus facilitate higher uptake of NHIF primary care. This supports previous studies such as Anell and Willis (2000) who observed that structural resources of health care facilities and organizations capacity are the foundation upon which quality health care services are provided and which enhance uptake of health care policies and social protection.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents a summary of the major findings from the study based on the research objectives, conclusions from the findings and recommendations derived from the conclusions. Both primary and secondary data were collected and used to understand the topic under study. Primary data was collected using a structured questionnaire with the service providers and an in-depth interview with NHIF officers. Secondary data was collected from documented information about the topic under study from the study area, country and elsewhere. The collected data were analyzed using descriptive statistics with the aid of SPSS version 21.0.

#### 5.2 Summary of Findings

The main aim of the study was to find out the determinants of uptake of national health facilities insurance fund primary care scheme amongst service providers within the scope of NHIF Nakuru Town Branch. Based on the results of this study, the following are the major findings:

##### 5.2.1 Influence of Knowledge of NHIF on Uptake of NHIF Primary Care Scheme

This established that the service providers had adequate knowledge of the NHIF primary care scheme and therefore expected to be aware of its merits and demerits and mode of operation and implementation. From the findings of this study, there was a significant, weak, positive correlation between knowledge of NHIF and uptake of NHIF primary care scheme ( $r = + .266$ ,  $n = 82$ ,  $p < .05$ ). The findings indicated that a positive relationship between knowledge of service providers and uptake of NHIF primary care scheme. It was concluded that a positive relationship existed



between knowledge of service providers about the scheme and uptake of NHIF primary care scheme; increase in knowledge of service providers about the scheme resulted in an increase in uptake of NHIF primary care scheme.

### **5.2.2 Influence of the Perceived Benefits Scheme on the Uptake of NHIF Scheme**

The study established that the perceived benefits through the NHIF system were; NHIF scheme protected members against impoverishment, enhanced quality services, ensured risk sharing among the population, protected members against high health-care expenditure, and provided equity in access to health care. This suggests that NHIF goals of protecting the population against high health expenses and increase to access of health care to all had been embraced by health care providers. In addition, the members perceived that NHIF scheme operated efficiently and transparently, services offered were of high quality and comprehensive and contribution levels are favourable. This suggests they trust and belief in the NHIF system to fulfill its mandate. Pearson correlation computed between perceived benefits of NHIF Primary care scheme and uptake of NHIF scheme was between the two variables was significant, moderate and positive ( $r = + .297$ ,  $n = 83$ ,  $p < .05$ ). The study concluded that increase in perceived benefits of NHIF primary care scheme resulted in an increase in the uptake of NHIF primary care scheme.

### **5.2.3 Influence of Health Facility Organization Capacity on the Uptake of NHIF Scheme**

The study established that the health facilities that the members of the NHIF scheme had adequate access to health facilities, physical location, sufficient waiting space for patients, laboratory facilities, patient's examination equipment, medical supplies and infrastructures. It was also established that there was an adequate number of IT

resources to support service provision, access to high-speed internet connectivity, a functioning health management information system and right types of IT resources to support service provision. In addition, it was observed that there were adequate health workers deployed according to their skills, health providers are trained for their duties, the work environment is conducive, skill mix among the health providers, and number of health providers. This suggests that the health facilities had adequate; ICT facilities, human resource and physical facilities for effective implementation of NHIF primary care. Pearson correlation coefficient between health facility organization capacity on the uptake of NHIF scheme was not significant ( $r = + .109$ ,  $n = 82$ ,  $p < .05$ ). Thus, it was concluded that variations in the level of the health facility organization capacity were independent the uptake of NHIF primary care scheme. The study therefore concluded that there was no relationship between the two variables.

#### **5.2.4 Influence of Barriers of the Health Facilities on the Uptake of NHIF Primary Scheme**

The study revealed that uptake of NHIF was negatively affected by inadequate health facilities, little awareness on the benefits to the institutions, inadequate hospital staffing, inefficient technologies, inaccessibility by citizen and poor standards of services. This suggests that sampled health facilities had some internal barriers that would have negatively affected their uptake of NHIF primary care scheme. The study also established that there were delays in implementation, competing activities, uncontrollable external environmental factors, ineffective coordination of activities, inadequate monitoring of activities by the information system, unclear responsibility and accountability, and inadequate leadership and direction by the departmental managers. The study also found out that there were unclear strategic intentions, inter-

functional conflicts and poor coordination, poor vertical communication, integrity issues, ineffective management style and numerous and conflicting priorities. This suggests that there some inherent barriers within the NHIF structures that should be addressed to enable uptake of the scheme. All these constraints combined were likely to negatively impact on the uptake of NHIF primary care. Results of Pearson correlation revealed that the relationship between barriers of the health facilities on the uptake of NHIF primary scheme was moderate, significant and negative ( $r = -.246, n = 83, p < .05$ ). It was concluded that a decrease in barriers to NHIF resulted in a moderate increase in the uptake of NHIF primary care scheme.

### **5.3 Conclusions**

The study assessed the uptake of National health facility Insurance Fund primary care scheme amongst service providers in Nakuru Town. Such an assessment was considered useful in analyzing the way in which NHIF primary care scheme has been implemented in health facilities, the level of preparedness of health facilities in implementing the scheme and the perceptions of the service providers about its effectiveness. The concerned agencies and stakeholders could use the important insights of this study in coming up with measures to strengthen the effectiveness of NHIF primary care scheme in health facilities in the country. Based on the summary findings, the study concludes that NHIF primary care scheme is an important social insurance scheme aimed at bringing equity in access to basic medical services. However, the following conclusions are based on the specific objectives of the study: Service providers had adequate knowledge of NHIF primary care scheme in terms of what it entails and how it is supposed to be implemented. There was significant relationship between service provider knowledge and uptake of the scheme due to the fact that the service providers who participated in the survey had adequate knowledge

about the scheme. Hence the null hypothesis indicating there is no significant relationship between the service providers knowledge and uptake of the scheme was rejected.

NHIF scheme has numerous benefits to the patients as well as the health facilities. This was indicated by the high rate of positive perception of the service provider on the benefit of the scheme giving a positive correlation between perceived benefit of the scheme and the uptake of the scheme. NHIF primary care scheme is effective in addressing basic primary care needs leading to high level of utilization by service providers in offering basic services. Therefore, the null hypothesis indicating there is no significant relationship between perceived benefit of the scheme and uptake was rejected.

Health facilities had the necessary organization capacity such as human resource, infrastructure, ICT, equipment and supplies to support and implement NHIF primary care scheme. This was indicated by them reporting adequate facilities which are a requirement for their contracting by NHIF to serve the scheme beneficiaries, without which they could not qualify to be contracted. Therefore, the null hypothesis indicating there is no significant relationship between the organization capacity of the facility and the uptake of the scheme was rejected.

Although a very important social insurance scheme, NHIF faces a number of barriers that needs to be addressed for effective implementation and operationalization. However, there was no significant relationship between these barriers and the uptake of the scheme meaning they were not critical for the service providers. Therefore, the null hypothesis indicating there is no significant relationship between the national barriers, policy constraints and NHIF institutional challenges was accepted.

## **5.4 Recommendations**

In view of the above conclusions, this study makes the following recommendations about effective NHIF primary care scheme in the study area and beyond:

- i) The management of the NHIF scheme should embark on a campaign of knowledge dissemination and education of all potential consumers of their services.
- ii) NHIF should develop clear policy details on the various benefits and risks involved for health facilities that are not willing to take up the implementation of the scheme to increase uptake of the scheme across the country.
- iii) NHIF should sensitize the management of health facility about the requirement for accreditation for provision of NHIF outpatient services.

### **5.4.1 Suggestions for Further Research**

- i. A study should be carried out targeting the general public that is expected to be beneficiaries of the scheme.
- ii. A similar study should be conducted in more health facilities in both rural and urban settings in the entire country to relate the results of this study with all settings.
- iii. In addition to replicating study, future research should examine the perception of other stakeholders in implementation of NHIF including the central government so as to have a holistic understanding of the perception of all the critical stakeholders.

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## APPENDICES

### Appendix I: Questionnaire for Hospital Coordinator

Dear Respondent,

I am a student pursuing Masters of Health Systems in Kenya Methodist University (KEMU) in the process of collecting data to help me write a research project titled ‘Uptake of National Hospital Insurance Fund Primary Care Amongst Service Providers in Nakuru Town’. This questionnaire is intended to collect the data. The information obtained will be used for academic purposes only and shall be held in total confidence.

#### Instructions:

Please answer all the questions honestly and exhaustively. The information provided will be treated with the highest level of confidentiality. Welcome.

#### Section A: Background Information

In this section, please tick the correct answer:

1. Indicate your gender: Male  Female
2. What is your age (in years):  
18-24  25-34  35-44  45-54  55+
3. What is your academic qualification?  
Certificate  Diploma   
Bachelor’s Degree  Post-Graduate Degree
4. How many years have worked in this health facility?  
Less than 3  19 - 30   
4 – 6  More than 30   
7– 18
6. Health facility type;  
Public health facility  Private health facility  Mission health facility

#### Section B: Organization Capacity

Please tick against the following statements indicating your judgment with regard to organization capacity of the health facility. 5=Strongly Agree (SA), 4=Agree (A), 3=Undecided (U), 2=Disagree (D) and 1=Strongly Disagree (SD)

##### 2.1 Physical facilities

<b>Statement</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
The physical location of the facility is ideal.					
The health facility is easily accessible to clients especially to formal employees					
The infrastructures in the health facility is mostly adequate					
There is always adequate sufficient waiting space for patients					
The health facility has always adequate medical supplies.					
The health facility has always adequate patients' examination equipments					
The health facility has mostly sufficient laboratory facilities					

## **2. ICT Facilities**

<b>Statement</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
The health facility has the right number of IT resources to support service provision					
The health facility has the right types of IT resources to support service provision					
The health facility has access to high-speed internet connectivity					
The health facility has a functioning health management information system					

## **3. Hospital Human Resource Capacity**

<b>Statement</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>S D</b>
The facility has always adequate number of health providers					
The skill mix among the health providers is often adequate					
The health providers are adequately trained for duties they perform					
The health workers are always deployed according to their skills					
The work environment is always conducive.					

## **Section C: Understanding of NHIF Primary Care**

### 1. Levels of Awareness

Please tick indicating your level of understanding of the NHIF Primary Care Characteristics; 5=*Strongly Agree (SA)*, 4=*Agree (A)*, 3=*Undecided (U)*, 2=*Disagree (D)* and 1=*Strongly Disagree (SD)*

	SA	A	U	D	SD
NHIF always contracts accredited health facilities to provide outpatient services					
Location of the facility to the population is a key consideration in accreditation					
Wide range of services offered by the facility is always key consideration in accreditation					
The service contract openly outlines the formularies / standard treatment guidelines to be used					
I understand the payment rates per beneficiary per year for outpatient care					
The NHIF outpatient payments are regular					
I understand the benefit package for the NHIF outpatient services					

### Section C: Understanding of NHIF Primary Care

#### 1. Levels of Awareness

Aspects of NHIF Primary Care	SA	A	U	D	SD
You have Knowledge of contribution by members to the scheme					
You have Knowledge of contribution by the employer to the scheme					
You understand the funding mechanisms of the scheme.					
You understand the beneficiaries of the scheme (age, relationship to the contributor).					
You know the requirements of the service providers to implement the scheme.					
You know the benefits package of the scheme					

#### 2. NHIF Primary Care Understanding Creation Initiatives

Please fill out this part of the questions indicating the frequency of the following initiatives put in place to create understanding of the NHIF Primary Care aspects. 5=Strongly Agree (SA), 4=Agree (A), 3=Undecided (U), 2=Disagree (D) and 1=Strongly Disagree (SD)

<b>Initiatives</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
The facility staff are often sensitized on NHIF services					
There are often community outreaches to sensitize citizens on NHIF benefits					
The facility has informative posters displayed for customers within the facility on NHIF services					
There is mechanism by NHIF for health providers and clients to give their feedback.					

#### **Section D: Perceived Benefits of NHIF Primary Care**

Please fill out this part of the questionnaire indicating your level of agreement concerning the benefits of NHIF Primary care. 5=Strongly Agree (SA), 4=Agree (A), 3=Undecided (U), 2=Disagree (D) and 1=Strongly Disagree (SD)

##### **1. Social Protection**

<b>Benefits</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
Provides equity in health care access					
Enhances quality services					
Ensures risk sharing among the population					
Acts as a means of avoiding catastrophic health-care expenditure					
Protects impoverishment of individuals as a result of seeking healthcare					

##### **2. Health Seeking Behaviour**

<b>Benefits</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
Creates improvement in the utilization of health services among citizens					
Helps Preventing delays in seeking health services					
Helps in Preventing self-treatment					
Helps in Preventing the use of alternative forms of care					

### **3. Structural Features of the Health Insurance System**

<b>Benefits</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
Contribution levels are favourable					
Practices considerable eligibility criteria					
services covered are of quality and comprehensive					
Their administration is efficient and Transparent (access to information regarding the operations)					
Communities are the major beneficiaries					

### **Section E: Barriers to the Uptake of NHIF Primary Care**

Please fill out this part of the questions indicating your level of agreement concerning the followings aspects as barriers to the uptake of NHIF Primary care. 5=*Strongly Agree (SA)*, 4=*Agree (A)*, 3=*Undecided (U)*, 2=*Disagree (D)* and 1=*Strongly Disagree (SD)*

#### **1. Hospital based challenges**

<b>Barriers</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
Inadequate health facilities					
Inadequate health facility staffing					
Inefficient technologies					
Poor standards of services					
Inaccessibility by citizen from all walks of life					
Low levels knowledge on healthcare service providers on their mandate in implementing the UHC primary care					
Little awareness on the benefits of the scheme to the institutions					

#### **2. National challenges**



<b>Barriers</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
NHIF primary care don't conform with international standards					
Government has not domesticated the provisions of international treaties and conventions on the right to social security					
The policy is discriminative to persons with no cover without any legal reprieve					

### 3. Policy Constraints

<b>Barriers</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
Implementation of NHIF is faced by delays against the original plan					
Ineffective coordination of activities					
Attention from the implementation deviation by competing activities					
Uncontrollable external environmental factors create problems					
Inadequate leadership and direction by the departmental managers					
Inadequate monitoring of activities by the information system.					
Unclear responsibility and accountability in the execution process					

### 4. NHIF Institutional Problems

<b>Barriers</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
Numerous and conflicting priorities					
Ineffective management style (top down)					
Inter-functional conflicts and poor coordination					
Poor vertical communication					
Integrity issues					
unclear strategic intentions					

## Section F: Uptake of NHIF Primary Care

Indicate the delivery of the services listed below under the cover of NHIF Primary Care in the hospital; 5=*Strongly Agree (SA)*, 4=*Agree (A)*, 3=*Undecided (U)*, 2=*Disagree (D)* and 1=*Strongly Disagree (SD)*

**1. Health services offered**

<b>Services</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
General consultations					
Pharmaceutical services					
Laboratory					
Maternity (Prenatal, delivery and postnatal)					
Optical					
Dental					
Renal					
Endoscopy					
Radiology					
Cardiac (Heart)					
Oncology (Cancer)					
Surgery					

**2. Quality of Services rendered by NHIF to Hospitals**

<b>Quality</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>
Timely					
Adequate funds					
NHIF staff implement PC with integrity					

*Thank you*

## Appendix II: Interview Schedule for NHIF Officer

Dear Respondent,

I am a student pursuing Masters of Health Systems in Kenya Methodist University (KEMU) in the process of collecting data to help me write a research project titled **‘Uptake of National Hospital Insurance Fund Primary Care Amongst Service Providers in Nakuru Town’**. Please answer the questions asked in the interview to the best of your knowledge and with honest. The information provided will be treated with the highest level of confidentiality. Welcome.

1. What is was the main purpose for the establishment of NHIF by the government of Kenya?
2. What is scope of NHIF Primary Care?
3. What have you to create awareness to the institution done to service providers?
4. What have you to create awareness to the clients (Citizens)?
5. How have NHIF Primary Care contributed to the overall efficiency and health system performance?
6. As for the collection of revenue for facilitating NHIF Primary Care;
  - a) Explain the source and authorization of funds allocated to NHIF;
  - b) What is your opinion concerning the accessibility and adequacy of the funds?
  - c) What are the challenges faced as far as the funds disbursement is concerned?
7. As the pooling of funds for NHIF Primary Care?
  - a) What informs pooling of the funds?
  - b) What is the nature of pooling (explicit or implicit) and discuss its benefits?
  - c) What are the challenges faced as far as pooling of funds is concerned?
8. As for the purchasing of services rendered to clients through NHIF Primary Care;
  - a) Explain the process followed when transferring the collective funds to service providers to cover for the healthcare services accessed by the targeted citizens.
  - b) What efforts have NHIF institution put in place to ensure universal coverage?

- c) What are the challenges faced as far as purchasing of services is concerned?
9. Discuss the general problems facing NHIF primary care and suggest the remedy.

### **Appendix III: Informed Consent**

Kenya Methodist University

P. O Box 267-60200

MERU, Kenya

Dear Respondent,

#### **Subject: Informed Consent**

My name is Elizabeth Wagura. I am a Msc. student from Kenya Methodist University. I am conducting a study titled: Uptake of National Hospital Insurance Fund Primary Care Amongst Service Providers in Nakuru Town.

The findings will be utilized to strengthen the health systems in Kenya and other Low-in- come countries in Africa. As a result, countries, communities and individuals will benefit from improved quality of healthcare services. This research proposal is critical to strengthening health systems as it will generate new knowledge in this area that will inform decision makers to make decisions that are research based.

#### **Procedure to be followed:**

Participation in this study will require that I ask you some questions and also access the entire health facility department to address the six pillars of the health system. I will record the information from you in a questionnaire check list.

You have the right to refuse participation in this study. You will not be penalized nor victimized for not joining the study and your decision will not be used against you nor affect you at your place of employment.

Please remember that participation in the study is voluntary. You may ask questions related to the study at any time. You may refuse to respond to any questions and you may stop an interview at any time. You may also stop being in the study at any time without any consequences to the services you are rendering.

#### **Discomforts and risks:**

Some of the questions you will be asked are on intimate subject and may be embarrassing or make you uncomfortable. If this happens; you may refuse to answer if you choose. You may also stop the interview at any time. The interview may take about 40 minutes to complete.

**Benefits:**

If you participate in this study you will help us to strengthen the health systems in Kenya and other Low-income countries in Africa. As a result, countries, communities and individuals will benefit from improved quality of healthcare services. This field attachment is critical to strengthening the health systems as it will generate new knowledge in this area that will inform decision makers to make decisions that are research based.

**Rewards:**

There is no reward for anyone who chooses to participate in the study.

**Confidentiality:**

The interviews will be conducted in a private setting within the health facility. Your name will not be recorded on the questionnaire and the questionnaires will be kept in a safe place at the University.

**Contact Information:**

If you have any questions you may contact the following supervisors:

1. Dr. Wanja Mwaura Tenambergen

Head of Department of Health Systems Management of Kenya Methodist University, Nairobi campus.

Cell phone: 0726678020

Email: Wanja.Tenambergen@kemu.ac.ke

2. Ms Eunice Muthoni

Department of Health System Management Kenya Methodist University

Cellphone: 0722986349

Email: eunicelucki@yahoo.com

The above statement regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that my records will be kept private and that I can leave the study at any time. I understand that I will not be victimized at my place of work whether I decide to leave the study or not and my decision will not affect the way I am treated at my work place.

Name of Participant.....

Date.....

Signature.....

**Investigator's Statement:**

I, the undersigned, have explained to the volunteer in a language s/he understands the procedures to be followed in the study and the risks and the benefits involved.

Name of Interviewer: Elizabeth Wagura      Date: 2<sup>nd</sup> November 2017

Interviewer

Signature.....

## Appendix IV: Ethical Clearance



### KENYA METHODIST UNIVERSITY

P. O. BOX 267 MERU - 60200, KENYA  
TEL: 254-064-30301/31229/30367/31171

FAX: 254-64-30162  
EMAIL: info@kemu.ac.ke

18<sup>TH</sup> APRIL 2018

Elizabeth Wanjiku Wagura  
HSM-3-6413-1/2015

Dear Elizabeth,

RE: **ETHICAL CLEARANCE OF A MASTERS' RESEARCH THESIS**

Your request for ethical clearance for your Masters' Research Thesis titled "**Uptake of National Hospital Insurance Fund Primary Care Amongst Service Providers in Nakuru Town**" has been provisionally granted to you in accordance with the content of your project proposal subject to tabling it in the full Board of Scientific and Ethics Review Committee (SERC) for ratification.

As Principal Investigator, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the project.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the SERC for re-review and approval **prior** to the activation of the changes. The Proposal number assigned to the project should be cited in any correspondence.
3. Adverse events should be reported to the SERC. New information that becomes available which could change the risk: benefit ratio must be submitted promptly for SERC review. The SERC and outside agencies must review the information to determine if the protocol should be modified, discontinued, or continued as originally approved.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by subjects and/or witnesses should be retained on file. The SERC may conduct audits of all study records, and consent documentation may be part of such audits.



5. SERC regulations require review of an approved study not less than once per 12-month period. **Therefore, a continuing review application must be submitted to the SERC in order to continue the study beyond the approved period.** Failure to submit a continuing review application in a timely fashion will result in termination of the study, at which point new participants may not be enrolled and currently enrolled participants must be taken off the study.

Please note that any substantial changes on the scope of your research will require an approval.

Yours sincerely



18 APR 2018

DEAN  
GRADUATE  
STUDIES  
METHODIST UNIVERSITY  
Box 267 - D.C. MD 20017

**DR. WAMACHI**  
Chair, SERC

cc: Director, RI & PGS

## Appendix V: NACOSTI Research Authorization



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,  
2241349, 3310571, 2219420  
Fax: +254-20-318245, 318249  
Email: dg@nacosti.go.ke  
Website: www.nacosti.go.ke  
When replying please quote

NACOSTI, Upper Kabete  
Off Waiyaki Way  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/25840/22932**

Date: **13<sup>th</sup> July, 2018**

Elizabeth Wanjiku Wagura  
Kenya Methodist University  
P.O. Box 267- 60200  
**MERU.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Uptake of National Hospital Insurance Fund Primary care amongst service providers in Nakuru Town”* I am pleased to inform you that you have been authorized to undertake research in **Nakuru County** for the period ending **11<sup>th</sup> July, 2019.**

You are advised to report to **the County Commissioner and the County Director of Education, Nakuru County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

**DR. STEPHEN K. KIBIRU, PhD.**  
**FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner  
Nakuru County.

The County Director of Education  
Nakuru County.

## Appendix VI: NACOSTI Research Permit

**THIS IS TO CERTIFY THAT:**  
**MS. ELIZABETH WANJIKU WAGURA**  
**of KENYA METHODIST UNIVERSITY,**  
**0-20100 NAKURU, has been permitted to**  
**conduct research in Nakuru County**

**on the topic: UPTAKE OF NATIONAL**  
**HOSPITAL INSURANCE FUND PRIMARY**  
**CARE AMONGST SERVICE PROVIDERS IN**  
**NAKURU TOWN**

**for the period ending:**  
**11th July, 2019**

**Applicant's**  
**Signature**

**Permit No : NACOSTI/P/18/25840/22932**  
**Date Of Issue : 13th July, 2018**  
**Fee Received :Ksh 1000**



**Director-General**  
**National Commission for Science,**  
**Technology & Innovation**

### CONDITIONS

1. The License is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.



**REPUBLIC OF KENYA**



**National Commission for Science,**  
**Technology and Innovation**

**RESEARCH CLEARANCE**  
**PERMIT**

**Serial No.A 19380**

**CONDITIONS: see back page**