

**FACTORS CONTRIBUTING TO POST DISCHARGE STAY AT KENYATTA
NATIONAL HOSPITAL, NAIROBI.**

BY

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**RESEARCH PROJECT REPORT SUBMITTED AS PARTIAL FULFILMENT FOR
THE AWARD OF MASTERS OF ARTS IN PROJECT PLANNING AND
MANAGEMENT OF THE UNIVERSITY OF NAIROBI.**

DECLARATION

I hereby declare that this research project report is my original work and has not been presented for a degree in any university.

Date.....

Signed.....

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L50/76754/09

This research project report has been submitted for examination with my approval as University Supervisor.

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DEDICATION

This work is dedicated to my wife Mikelina, my daughter Sharon and my son Kelvin. Albeit for their patience. To my parents Daniel Maina and Lydia Wangui who endeavoured to educate me in my formative years.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACN	Assistant Chief Nurse
ALOS	Average length of stay
AIDS	Acquired immunodeficiency Syndrome
DOD	Date of Discharge
ERC	Ethics and Research Committee
CBHI	Community Based Health Insurance
GDP	Gross Domestic Product
GOK	Government of Kenya
HIV	Human immunodeficiency Virus
ILO	International Labour Organization
KDHS	Kenya Demographic Health Survey
KNH	Kenyatta National Hospital
Kshs	Kenya Shillings
LMIC	Low and Middle Income Countries
MSW	Medical Social Worker
MOH	Ministry of Health
NGO's	Non-Governmental Organizations
NHIF	National Insurance Hospital Fund
OOP	Out of Pocket Payments
RA's	Research Assistant
SES	Socioeconomic status
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WTP	Willingness to pay

ABSTRACT

Discharge planning is embedded in the clinical pathway of patient's treatment in hospitals during overnight admissions. Actual discharge from a hospital allows patients to leave the facility and convalesce at their homes while preparing to resume normal lives. This also creates space for other overnight admissions and eases stress within the referral system. However, a number of patients are unable to leave health facilities after clinical discharge where co-payments and user fees are required to facilitate clearance. This study was based at Kenyatta National Hospital (KNH), the apex of the referral health care system in Kenya and sought to understand factors that contribute to post discharge stay (PDS) in KNH. This study evaluated the effects of socio-demographic, health insurance status, social support and nature of illness as components of post discharge stay in KNH. Moreover, factors contributing to post discharge stay as a barrier of exit from a health facility has not been systematically explored by previous research as most studies have dwelt on access and equity of healthcare. This descriptive survey targeted discharged patients in KNH who were unable to clear their hospital bills and health workers involved in the administration of systems which assist discharged patients leave the hospital. Patients (n=186) had an average post discharge stay of 33.3 (SD 12.6) days, and 78% came from Nairobi and its metropolis. Further, 52% of the patients were not referred to the facility while only 17.2% reported to have no occupation. Of the patients with No NHIF (95.5%), 78.6% cited lack of knowledge on NHIF benefits as non-enrolment reason. Patients with higher level of social support were able to obtain instrumental aid (p=0.000) than those with low levels of social support, although the support was not substantial enough to wholly influence post discharge stay. Although social-demographic and clinical characteristics were not statistically significant with post discharge stay, a positive trend was observed as both influenced ability to pay and size of hospital bills respectively. Importantly, the ability to leave the facility was at the discretion of the hospital administration and the absence of a viable coping mechanism within households influenced post discharge stay. The results revealed two post discharge groups with distinctive characteristics. The low income group with low risk aversion and were willing to pay an agreed pre-payment premium and the impoverished poor. From a NHIF hypothetical model, 90.3% of outstanding bills would be covered in full while 9.7% would be co-shared and this showed health insurance status would influence post discharge stay. Therefore, NHIF and other forms of pre-payment should be considered as an integral part in public health care financing. Projects to enhance the low penetration of health insurance for unregistered eligible members of the population should be adopted. Medical programmes should seek convergence with economic programmes such as social protection initiatives for vulnerable groups involving clear eligibility criteria and matching funds provided to sustain health facilities.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

In many parts of the world, plans to restructure the health sector are being implemented within a macroeconomic policy environment, which emphasizes the limitations of government and the financial responsibilities of the individual citizen. In some countries, such as those in central and eastern Europe, economic restructuring means far-reaching economic and social reform (Creese, 1991). Global blueprints have been advocated by agencies such as the World Bank to promote privatisation of health-service providers, and to increase private financing via user fees of public providers. These policies have paved the way for public funding of private operators in health and education sectors, especially in wealthy, industrial countries in the northern hemisphere (Whitehead, 2001).

Today user fees constitute an important source of financing for health care in most regions of the developing world (Bitran & Gideon 2003). In the late 80s and early 90s many developing countries, mainly in Africa, introduced user charges for public health services in an attempt to use private funds, either to supplement or substitute the government budgetary resources for the health sector (Arhin, 2000). Introduction of user fees raised a lot of controversy with common claims that their implementation reinforced the poverty trap in developing world, which has considerable health and livelihood impacts (Creese, 1991).

In the early 70s, Kenya basically had a predominantly tax-funded health system, but then gradually the government introduced a series of health financing policy changes (MOH, 2005). In particular user charges for health services were introduced in 1989. To date, these user fees still exist and their impact on health care access has been the subject of several empirical studies. (Bitran and Gideon 2004; Mwabu 1997; Mwabu and Wang'ombe 1997;

Mwabu et al 1995). One of the results being that when patients cannot afford to pay their bills they were not allowed to leave the health facility (Bitran and Gideon 2004) and indigent patients detained in hospitals (Kippenberg et al 2007). The World Bank recognized that fees could limit access to health services by the poor, and therefore most of its policy papers prescribed that fees should be accompanied by appropriate systems of waivers (Bitran & Gideon, 2003).

Kenyatta National Hospital (KNH) is the apex of the referral system in Kenya and was established in 1901 as a Native Civil Hospital with a two bed facility for European settlers on Kenya. The hospital expanded its services to cater for Africans and Asians between 1922 and 1937. In 1952 it was renamed King George VI hospital and later took its present name following Kenya's independence in 1963. It became a state corporation provided for in legal notice No 109 of 1987. KNH through its mandate provided for in legal notice has the core functions of providing specialized quality health care, facilitation of training and research, and participation in the health planning and policy of the country (KNH 2005).

Waivers and exemptions as a safety net for the poor had been used in Kenya's health system but they were scrapped in Kenyatta National Hospital in the year 2004 and a credit facility introduced for patients unable to clear their hospital bills (Obonyo 2008). The credit system was suspended in February 2009 leaving the poor, vulnerable groups (widows, orphans and destitute) and the uninsured patients with no safety net. In addition, this means there is no explicit policy in place to handle discharged patients unable to pay hospital bills in KNH leading to prolonged stay and congestion in the wards. This in turn puts strain on the referral system when discharged patients continue to occupy hospital beds.

Over the years there has been an observed increase in the number of patients overstaying in the wards after discharge resulting to KNH incurring debts whose certainty of collection is

remote (KNH 2006). Of concern, the most affected departments being orthopaedics, Medicine and paediatrics wards where discharged patients were reported to stay for more than 100 days.

1.2 Statement of the problem

User fees were introduced in public hospitals by the government in 1989. It was recognized that user fees could affect utilization and access of health care to the poor and vulnerable groups, therefore waivers and exemption mechanisms were put in place to protect these groups.

Waivers and exemptions as a safety net for the poor in KNH were scrapped in the year 2004 and a credit system was introduced where patients who were not able to pay became hospital debtors (Obonyo 2008). The credit system was suspended in February 2009 after the hospital accumulated huge debts whose certainty of collection was remote. This left KNH with no explicit policy on discharge, exemptions and credit facilities. In addition, this in turn leads to prolonged stay after discharge for patients unable to clear hospital bills, congestion in the wards and putting strain on the referral system when discharged patients occupy hospital beds meant for sick patients seeking specialized health care.

Despite the coverage of NHIF to the informal sector at the rate of Kshs 160 per household, the sector remains largely untapped by NHIF due to lack systematic methods to reach informal workers. Therefore, the poor, the un-insured and vulnerable groups have been left with no safety nets. Moreover, the hospital has to incur the cost of keeping each discharged patient at the rate of Kshs 800 per day, yet these patients eventually are unable to settle their bills later.

This study therefore seeks to draw an understanding of the factors contributing to post discharge stay in public hospitals.

1.3 Purpose of the study

This study sought to investigate the factors contributing to post discharge stay in Kenyatta National Hospital. Most of the studies have dwelt with access, equity and health shocks. Moreover, factors contributing to post discharge as a barrier of exit from a health facilities has not been systematically explored by previous research in Kenya.

1.4 Objectives of the study

1. To determine the effect of socio-demographic characteristics on post discharge stay in KNH.
2. To establish the influence of health insurance status on post discharge stay in KNH.
3. To examine the influence of social support on post discharge stay in KNH.
4. To establish the influence of nature of illness on post discharge stay in KNH.

1.5 Research questions

1. How does the socio-demographic characteristics influence post discharge stay at KNH?
2. How does health insurance status influence post discharge stay at KNH?
3. What are the social support influences of post discharge stay at KNH?
4. To what extent does nature of illness influence post discharge of stay at KNH?

1.6 Significance of the study

The study sought to improve our understanding on the factors contributing to post discharge stay in public hospitals. The information obtained will contribute to further research in post discharge stay.

The study gives insight to the KNH management and the MOH in regard to developing policies of discharged patients unable to pay their hospital bills. In addition, it's envisaged

to contribute to KNH's core mandate of national health planning and development of policies. Lastly, the study gives insight to NHIF on the untapped potential within the informal sector workers.

1.7 Delimitation of the study

The study was confined to inpatients admitted at Kenyatta National Hospital (KNH) in the paediatric, orthopaedics and medical wards that had been discharged and were within the hospital facility. Secondly, although the Hospital has both public and private sections, the patients involved were from the public funded wards.

1.8 Assumptions of the study

The study hoped all respondents were cooperative and provided reliable responses and that patient files contained relevant information used in document analysis.

1.9 Definitions of significant terms

Catastrophic (health care) payments: combined levels of health care payment (including, for example, fees, drug costs and transport costs) that are at such a high level they force households to reduce spending on other basic goods, sell assets or incur high levels of debt, ultimately risking impoverishment.

Community Based Health Insurance (CBHI): a form of voluntary, not-for-profit insurance mechanism that often involves some form of community management. They are based on a collective entity defined by for example, geographical, professional or religious affiliations.

Credit facility: is where patients are provided treatment and pays part of the cost and commits him/her self to pay the balance later in instalments.

Exemptions: from payments are automatic and are based on individual characteristics of the patients or type of health problems. Because its automatic, it usually involves minimal decision making at the facility.

Health insurance: is insuring against the risk of incurring medical expenses which is a form of pre-payment where a premium is paid to cover part or whole amount of hospital bills.

Nature of illness: Illness is considered as a state of poor health. This may be acute (less than 6 months) or chronic (more than 6 months) illness and both may require hospitalization and hence need for more financial and social support.

Policy: is typically described as a principle or rule to guide decisions and achieve rational outcome(s). For example the government policy on waiver of children less than five years and cost sharing fees in public hospitals.

Post discharge: when a patient is clinically allowed to leave a hospital after his or her medical treatment is completed by the doctor but still remains within the hospital facility due to reasons within or beyond the patient such as inability to clear the hospital bills, abandonment by caregivers and patients refusal to go home due to reasons like free meals and impoverishment at home.

Socioeconomic: Socioeconomic status (SES) is an economic and sociologically combined total measure of a person's work experience and of an individual's or family's economic and social position relative to others, based on income, education, and occupation.

Social Health Insurance (SHI): a form of compulsory insurance, that aims to provide universal coverage.

Social support: is the physical and emotional comfort given to us by our family, friends, co-workers and others. It knows that we are part of a community of people who love and care for us, and value and think well of us.

User fees: are out of pocket payments made by patients at the time they use health care services.

Waivers: defined as discretionary releases from fees payment based on inability to pay at government health facilities.

1.10. Organization of the study

The research study was organized in five chapters. Chapter one comprised background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, delimitation and limitation of the study, assumptions and key terms. Chapter two dealt with literature review and conceptual framework. Chapter three dealt with research methodology and design. Chapter four dealt with data analysis and interpretation and was divided according to research objectives. Chapter five was set aside for conclusion and recommendations. Lastly, there was a section for references and appendices of the study.

CHAPTER TWO LITERATURE REVIEW

2.1 Introduction

This chapter reviews four major themes which contribute to post discharge stay in public hospitals. These themes are; social economic status, health insurance status, social support and nature of illness. Although the literature presents them in a variety of contexts, this paper primarily focuses on their relationship with post discharge stay in KNH and is presented diagrammatically in theoretical and conceptual frameworks.

2.2 Socioeconomic status and post discharge stay

In this study socioeconomic status is incorporated within social demographic construct to denote relative ranking of individuals and households. Jaques et al (2005) defines socioeconomic status (SES) as relative social ranking based on income, wealth, status and/or power. Stawarski and Boesel (1988) notes that, although the term “socioeconomic status” is used frequently, there is no general consensus regarding how to define and measure this construct. Often, measures cited in the literature are those of convenience or availability. In general, socioeconomic status is considered as an indicator of economic and social position. Including indicators such as income combined with education will typically increase the explained variance. Using multiple indicators helps represent a more complete picture of the construct (Nam & Terrie, 1981).

Granted socioeconomic status can be difficult to measure, Twenge and Campbell’s (2002) on a meta-analytic study of 446 research articles exploring the relationship of SES and self-esteem found that either the participant’s (or family’s or parents’) occupational status, income, and educational attainment or a combination of these were used in the various definitions of SES. Although occupational status, income, and educational attainment are distinct, they are nonetheless correlated (Twenge & Campbell, 2002). Such indicators can be

included in the same hypothetical rubric, measuring both social status and social class. For example, occupations with higher status typically provide a higher salary than those with low status (Twenge & Campbell, 2002). To ensure more accurate assessment of SES, family income, patients or caregiver occupation, and education will be combined in this study.

Kaufman et al (2010) in a survey to measure socio-economic status and wealth index uses household asset quintiles computed using principal components analysis. The household questionnaire collected information on household assets (e.g. radio, television, bicycle, car, etc.), as well as dwelling characteristics (e.g. flooring and roofing materials, type of drinking water source and toilet facilities). This type of analysis is routinely used to measure household wealth because of difficulties in collecting accurate information on household income and expenditure.

Analysis of the Household Health Expenditure and Utilisation Survey (MOH, 2003) shows that there is marked difference in utilization of health services across different income groups. Lower income groups are also more likely to face catastrophic health expenditure. The number of households facing catastrophic health expenditure at the 2003 utilization levels is estimated to be around 4%. Additionally, lower income households are more likely to fall under the poverty line due to health expenditures than higher income households. Overall, 1.5% of Kenyan households are estimated to be impoverished due to health expenditures (Xu et al., 2006b).

WHO (1997) in a report show that people in formal employment are generally better off than the average informal workers and that they are easier to organize into insurance schemes as their income is easily identified and can often be taxed at the source. In Ghana, Nketiah (2009) in a study on health insurance among women reveals that that the most significant determinants of a woman's propensity to insure are marital status, income, age, religion and access to Television and Newspapers (proxies for health information)

Hermeto and Gaetano (2009) in a study in Brazil show a link between socioeconomic status and health. They report socioeconomic status contributes to the ability of a family to both detect and treat a chronic condition in the short run, due to differences in lifestyle and/or environmental factors such as poor housing quality, lack of preventive care and inadequate nutrition.

2.3 Health insurance and post discharge stay

Health services need a steady revenue stream to function properly. In Kenya user charges for health services were introduced in 1989. Today, these user fees still exist and their negative impact on health care access has been the subject of several empirical studies (Leive and Xu 2008; Xu et al 2006; Collins et al 1996). As a result, studies have shown majority of health care services have been financed through Out-of-pocket payments. When this is coupled with the rapid increase in medical costs, health services become unaffordable to many households causing health shocks and catastrophic expenditures (Kruk et al 2009; Leive and Xu 2008).

In these circumstances, social health insurance has come to be viewed as an attractive alternative financing mechanism (WHO 2006). This is in turn vitally connected to Scheid et al (2007) where it was shown that the percentage of households with catastrophic expenditure was lower among the insured than the uninsured. Similarly, Gustafsson et al (2009) on a study on HIV related health shocks reports health insurance had a mitigating effect on loss of income and out of pocket health expenditure. The study links health seeking behaviour where the poor used all coping mechanisms such as social support or sale of assets in order to cope with health shocks with lack of social health insurance.

Several other studies have pointed at the negative impact of user fees on utilization of health care services in Kenya (Kivumbi and Kintu 2002; Mwabu 1997; Mwabu and Wang'ombe 1997; Mwabu et al 1995). User fees impede access to healthcare where they typically add to

the cost of health services faced by patients, resulting in poor and vulnerable population groups not always seeking appropriate care when it is needed (Xu et al 2005). The poor and other vulnerable groups who need health care the most are the most affected by these shortcomings, especially the high reliance on user fees and other out-of-pocket expenditures on health which are both impoverishing and provide a financial barrier to needed care (McIntyre et al 2005; Xu et al 2005).

Xu et al (2006 b) notes that Out-of-pocket health payments (OOP) are a substantial burden of as well as barrier to accessing healthcare .OOP can lead to households facing catastrophic health expenditure and impoverishment. Perkins et al (2005) in a study of out of pocket based facility maternity care in Kenya, Tanzania and Burkina Faso, notes the majority of women interviewed reported paying out-of-pocket costs for facility-based deliveries. Out-of-pocket costs were highest in Kenya (a mean of US\$18.4 for normal and complicated deliveries), where 98% of women who delivered in a health facility had to pay some fees. In Burkina Faso, 92% of women reported paying some fees (mean of US\$7.9). Costs were lowest in Tanzania, where 91% of women reported paying some fees (mean of US\$5.1).

Research from several studies suggests that households employ different strategies to cope with health shocks when medical bills exceed a household's income, households may use savings, sell assets, borrow money from friends and family, or take a loan using collateral (Xu et al 2006; McIntyre et al 2005; Russell 1996).

Mwabu et al (1995) in a survey observed that people paid medical care costs with wage income, with loans from friends and relatives and with proceeds from sale of food or assets. The study reported on the sources of money used to pay for medical treatments as reported by people interviewed in the community and at the facilities (percentage of respondents from community and facilities respectively): salary or wage income of a family member (41.2%; 35.3%), loans from relatives and friends (21.1%; 34.2%), proceeds from food sales (19.3%;

25.9%), proceeds from livestock sales (13.2%; 3.5%), other (4.4%; 1.2%). This information suggests that the people who could not afford to pay user fees were likely to be those without wage employment, strong social or family connections, and without livestock or other assets. Scheil et al (2007) points out that Health insurance coverage seem to reduce the need to sell assets in case of financial difficulty in a study done in Kenya and Senegal.

In Namibia, Wright et al (2010) in a study of HIV related health investigated the possible mitigating effects of insurance on income and loss of out of pocket health expenditure. The study found out that economic consequences of health shocks can be severe even in a country with a relatively well developed health care system. The uninsured resort to a variety of coping strategies to deal with the high medical expenses and reductions in income, such as selling assets, taking up credit or receiving financial support from relatives and friends.

Importantly, there are indications of a vicious circle where typically the poor have been most negatively affected by user fees. And even when poorer individuals are able to access care, studies have shown how many of the poorer households have resorted to reducing consumption of food, self-medicating, seeing traditional healers, and using various other coping mechanisms or had to endure catastrophic health expenditures (Xu et al 2005). In such cases, insurance mechanisms are in principle a more efficient strategy than user fees, since they counter uncertainty by pooling risk (Arhin 2000).

Similarly, Scheil et al (2007) reports that social health protection has the potential to reduce the shortfall in income generation as a result of sickness, and to protect households from hazardous, wealth-threatening health financing strategies such as borrowing money or selling assets to cover health care cost. Against this background, social health protection can play an important role in reducing impoverishment.

More recently, risk protection mechanisms such as community-based insurance and social health insurance have been touted as ideal solutions to alleviate some of the undesirable

effects of user fees. These mechanisms for risk protection are seen to combine the desirable elements of raising funds from members of the insurance scheme at a rate set according to their ability to pay, together with that of protecting households from payments at their most vulnerable time when a family member is ill (Kaen 2006).

Financial protection from the costs of illness is a major function of health care systems (Xu et al 2006a). This is most often accomplished by pooling risk through public or private insurance. Households' direct out-of-pocket payments for health care, on the other hand, do not bring the benefits of pooling (Bennet and Gilson 2002). This is of concern because out-of-pocket payments account for 70 percent of health financing in low-income countries, compared to 14.9 percent in developed countries consistent with the low availability of prepayment (that is, tax-based social health insurance or voluntary insurance) in low-income countries (James et al 2005). The relative spending on health in Kenya stands at 4.9 per cent of GDP, with Government spending on health accounting for 44 per cent of total health expenditure. Private prepayment schemes and NGO contributions amount to 11.2 per cent, whilst out-of-pocket payments stand at 44.8 per cent, the highest of the three countries (Scheil et al 2007).

Saksena et al (2006) in an economic model show that universal health insurance has a significant impact on changing the utilization of health services as well as on household health expenditures. In implementation of universal health insurance in Kenya, it would lead to significant decrease in the incidence of total potential catastrophic health expenditure. The decrease is higher for lower quintiles than for higher quintiles in absolute terms. In the model the first expenditure quintile decreases from 19.05% to just 8.46%. Similarly, the incidence in second expenditure quintile decreased from 10.11% to just 3.19%. In comparison, the incidence in the highest expenditure quintile decreased from 2.30% to 0.66%.

Recently, there has been an increasing focus on social health protection through health insurance as a potentially promising way to better deal with health risks in developing countries (Scheil et al 2007). Carrin et al (2005) notes, one way to facilitate access and overcome catastrophic expenditure is through a health insurance mechanism, where risks are shared and financial inputs pooled by way of contributions from salaries or taxation. However, in developing countries today, the majority of people are either self employed or work in the informal sector, which makes expansion of formal health insurance, if any, much more difficult. Taxation systems are generally insufficiently developed and do not allow for adequate revenue collection to ensure universal coverage (Carrin et al 2007).

In a study on Kenya, Senegal and South Africa, Scheil et al (2007) reports the level of coverage from any form of health insurance is quite low, ranging from 7 to 17 per cent. At the same time, out-of-pocket payments are very high in Senegal and Kenya, and account for about 45 per cent of total health expenditure in both countries. It could furthermore be shown that the social health protection deficit concerns particularly vulnerable groups in the three countries, such as people living close to or in poverty, persons living in rural regions, women and the elderly. Similarly, HERAF (2008) report on the poorest sections of society in Kenya are unable to access the NHIF, as they cannot afford the full cost of insurance and the government has insufficient resources to subsidize the cost. Critically, the large informal sector is untouched by the NHIF, due to a lack of systematic methods to reach informal workers.

More studies show that access to affordable and effective health care is a major problem in low and middle income countries (LMIC) and out-of-pocket expenditure for health care a major cause of impoverishment (McIntyre et al. 2005; Meessen et al 2003). One way to facilitate access and overcome catastrophic expenditure is through a health insurance

mechanism, where by risks are shared and financial inputs pooled by way of contributions from salaries or taxation (Carrin et al 2007).

In LMIC today, the majority of people are either self employed or work in the informal sector, which makes expansion of formal health insurance, if any, much more difficult. Taxation systems are generally insufficiently developed and do not allow for adequate revenue collection to ensure universal coverage (Carrin et al 2007). One response to the difficulty of providing insurance coverage for people in the informal sector is the development of community-based health insurance (CBHI). Such an arrangement implies that the community plays an important role in mobilizing, pooling, allocating, managing and/or supervising health-care resources (Criel and Waelkens 2003). In practice, however, most CBHI schemes are small. A review of 258 CBHI schemes found that 50% had less than 500 members [International Labour Organisation (ILO) 2002], which undermines the CBHI's potential (Criel & Waelkens 2003; Carrin et al, 2005).

Witter et al (2000) reports that Community financing schemes are being developed in many developing countries having being promoted by the Bamako initiative launched by UNICEF and WHO. They define community financing as a general term for a wide variety of alternative risk pooling and pre-payment schemes introduced in most parts of the world. In Kenya, we have the Kenya Community Based Health Financing Association (KCBHFA) a Kenyan not-for profit organization which reports of having nine members. The association indicates that the introduction of user fees and reduction in donor funds to mission facilities in Kenya led to the rise of community based health insurance schemes with the aim of improving financial access to health care and the health of the people of Kenya.

In addition, Witter (2000) notes that National tax-based and social insurance schemes have limited potential in settings where a high proportion of the population operate in the informal

or agricultural sector and private or employment-based schemes can lead to the neglect of poorer groups. Gilson et al(2006) in a study demonstrate that such settings where formal sector schemes effectively cover only the relatively wealthy, appropriately designed and managed community-based health insurance schemes (CBHIs) are seen as a means of improving health service access, affordability, quality and community participation. The study reports CBHIs can be both insurance (where financial risks are shared among groups of people) and prepayment schemes (where an individual pays in advance for a set of defined, non-transferable health care benefits, such as five outpatient visits).

2.4 Social support and post discharge stay

The importance of interpersonal relationships to our lives has become increasingly clear. Both seeking and receiving help from other people is a major form of coping activity (Wilcox and Vernberg, 1995). The availability of someone to provide help or emotional support may protect individuals from some of the negative consequences of major illness or stressful situations (Sherbourne, 1988). Kenya's Household Health Expenditure Survey Report 2007 shows that for nearly 67 percent of the admissions where cash was available to pay, the cash was provided by friends, relatives and family members in 19 percent of the admissions. While 7 percent households had to borrow money; for another 7 percent, household assets were sold (MOH, 2009).

The concept of social network is the framework most applicable to the study of social support. Social network and social support are different concepts. Networks are defined as a web of identical relationships that surround an individual and the characteristics of those linkages (Bowlin 1991). It sees an individual as a node in the network of people and exchange between them as a link. It is the set of people with whom one maintains contact and has some social bond. Social contacts and relationships are important ways for the individual to influence the

environment and provide pathways through which environment influence the individual (Soranson et al 1977).

Russell (2005) in a case study shows the relationship between social network strength and vulnerability where clients with weak social networks when faced with a health shock had little choice but to sell assets or borrow at high interest to meet health expenses. Moreover, it meant exclusion from social groups if clients had personality problems such as bad repayment histories and alcoholism.

Bowlin (1991) puts social support can be defined as the interactive process in which emotional, instrumental or financial aid is obtained from one's social network. One approach to defining social support proceeds from a consideration of its source, such as who provides it; the functions it serves for people (e.g. material aid) and the intimacy characteristics of the relationship (e.g. whether it's a confiding relationship).

Methods used to assess social support are quite varied due to different definitions of social support and to the lack of a clear conceptualization of the concept (Cohen & Syme 1985; Cohen et al 1985). In recent years, however, investigators have attempted to measure the functional components of social support under the belief that the most essential aspect of social support is the perceived availability of functional support .Functional support refers to the degree to which interpersonal relationships serve particular functions. Sherbourne and Stewart (1991) report the functions most often cited as;

- (1) Emotional support which involves caring, love and empathy.
- (2) Instrumental support (referred to by many as tangible support).
- (3) Information, guidance or feedback that can provide a solution to a problem.
- (4) Appraisal support which involves information relevant to self-evaluation.
- (5) Social companionship, which involves spending time with others in leisure and

recreational activities.

A second approach to social support measurement has focused on the structure of interpersonal relationships. Structure refers to the existence and quantity of social relationships (e.g. marital status, group membership, the number of friends one has), and the interconnectedness of a person's social relationships or social network (e.g. the degree to which a person's friends know each other). This type of social support is most frequently measured in terms of the existence of or contact with potentially supportive persons (Elis 1984; Lantajes et al 1985).

Russell (2004) in a study notes two key factors which influence household ability to cope with illness costs successfully. The first is the household's vulnerability or ability to cope with a shock, which is founded on its asset portfolio that includes tangible assets such as physical and financial capital, and less tangible assets such as education (human capital) and social resources. The latter are the social networks on which claims can be made to obtain other resources, particularly information, opportunities, and support. Social resources include kin and friendship networks, links to influential contacts, and membership in organizations such as credit associations or funeral societies (Russell, 2004).

Research from developing countries shows that networks are one of the most important resources mobilized by households to obtain money to pay for treatment (Witter et al 1996; Russell 1996; Sauerbon et al 1996). But some evidence also suggests that the poorest have the weakest social resources and are more likely to be excluded from inter-household community support mechanisms (Sauerbon et al 1996, Russell et al 2001, Witter et al 1996).

Meessen et al (2008) in a study in Asia reports the rise of the cost of health care and the rise of the share of out-of-pocket payment in the total financing of health care in South-East Asia have been remarkable indeed. The current predicament of many rural households is obvious; they are mainly self-employed farmers and are therefore not covered by any form of social

health insurance. Moreover, for the poorest of them, who are deprived of social networks and access to capital markets, foregoing treatment is too often the practice they adopt.

Ayuku et al 2003 in a study on street children in Eldoret implemented the Maastricht Social Network Analysis (MSNA) as the core instrument in a battery to measure the health status of the street children. The social network-based assessment methodology allowed the team to gain insight into both the deficiencies and strengths in scavenging street children's social networks. The study found that the street children had social networks from where they derived their social support. Most children had no problems with social network in satisfying their needs for connection and affection. They noted problems in social support lay in the fulfilment of material resource needs and most glaringly in stability. However, the study notes this support can never be the same as a family, especially when illness strikes. Other findings were where a street child had parents, and one of these parents was completely absent from the network, the family members related to that parent were also completely absent.

2.5 Nature of illness and post discharge stay

Ill health causes household impoverishment through income losses and medical expenses that trigger a spiral of asset depletion, indebtedness and cuts to essential consumption (Russell 2004). Other studies report that, apart from the pain and distress suffered by the affected person and those who care for them, serious illness can have a wide range of deleterious impacts and is generally accepted to be a common cause of household impoverishment (Gertler and Gruber 2002; Wagstaff and Van Doorslaer 2003).

One of the most sizable and least predictable shocks to the economic opportunities of families is major illness. Reports from KNH indicate that patients undergoing specialized treatments average length of stay (ALOS) are longer than 7 days which normal illnesses usually takes due to the critical care involved in specialized treatment. This in turn translates to more costs to the patients (KNH, 2006).

Gertler and Gruber (2002) reports that there are two important economic costs associated with illness: the cost of the medical care used to diagnose and treat the illness, and the loss in income associated with reduced labour supply and productivity. The size and unpredictability of both of these costs suggests that families may not be able to insure their consumption over periods of major illness, especially in developing countries where few individuals are covered by formal health and disability insurance (WHO 2005).

Khrisna (2006) in recent series of participatory studies in Kenya, Uganda, India and Peru found “that healthcare is overwhelmingly the single-most important reason for households descending into poverty”. More recently, the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) epidemic has brought in sharper focus lately of household asset depletion and income loss that cause consumption levels to fall below minimum needs because of loss of productivity within households (Russell, 2004).

Russell (2005) in a case study reports a relationship between Income and illness cost fluctuations even where family’s daily wages from informal employment (cooking lunch packets, hair dresser) and the relative reliability of their work meant they earned income above a local minimum needs poverty line each month. The study reports that, illness was noted to be the main threat to their earning capacity and livelihood security where families lost work days each month due to adult and child recurrent illnesses. This involved direct and indirect costs to treatment.

Lucas et al (2008) reports more serious conditions such as HIV can disrupt identity and one’s deeply embedded orientation towards future life course, which can have profound psychological effects and make normalization even more difficult. Russell (2004) reports other variety of conditions, for example vitiligo, incontinence and even some STIs, may have limited immediate consequences in terms of physical health, income or expenditures but

potentially extremely serious social implications in terms of loss of status, isolation, rejection and persecution.

Russell (2007) notes that health service challenges in many countries, including low coverage, user charges, and poor quality of care, contributed to high direct and indirect costs for patients. Evidence from TB and HIV/AIDS studies, for which the costs of illness were highest, showed that households struggled to cope and adopted unsustainable strategies that damaged asset portfolios and caused or sustained impoverishment. Because household assets in resource-poor settings were inadequate to cope with the costs of these diseases there is an urgent need for more collective health service and resource provision to support household treatment and coping strategies.

2.6 Policy and post discharge stay

Waivers and exemptions are mechanisms intended to boost equity in access and in financing of health services when user fees are in place. Bitran and Gideon (2004) in a study show that different countries have tried different approaches regarding waivers and exemptions for health services. Those that have carefully designed and implemented waiver systems (e.g., Thailand and Indonesia) have had much greater success in terms of benefits incidence than countries that have improvised such systems (e.g. Ghana, Kenya, Zimbabwe).

After the emergence of user fees, the World Bank recognized that user fees could limit access to health services by the poor, and therefore most of its policy papers prescribed that fees should be accompanied by appropriate systems of waivers (Newbrander et al 2000). Other findings indicate Kenya simply did not contemplate the creation of a fund to pay for the incremental cost of waivers in public health facilities (Bitran & Gideon 2004).

The introduction of user-payment for health services is frequently followed by concern about the impact on equity of access for poor people. Governments often try to remedy the created inequities by putting in place safety nets in the form of exemptions and waivers in the user-fee

systems. Studies point to implementation problems as exemptions depends on the interests, positions and actions of various stakeholders that have kept changing over time depending on the pressure from the population (Meng et al 2002; Kivumbi & Kintu 2002; Obonyo 2008)

The provision of safety nets to the poor and other vulnerable groups in the health sector in many developing countries is derived from the need to ensure equity in provision of health services. The rationale for cushioning catastrophic health spending is within the health systems. Since per capita health need may be higher among the poor than the non poor, these safety nets are necessary to promote equal per capita consumption by the poor and non poor (Bitran & Gideon 2002).

Waivers and exemption policies are a way to deal with the negative impact of user fees on particular client groups. Evidence suggests that these have often been difficult to implement as some of the studies have shown (Obonyo 2008; Meng 2005; Kivumbi et al 2002; Xu et al 2005). A recent World Bank study also found that waiver and exemption mechanisms were ineffective in three of the four low-income countries studied. For instance, facilities in Kenya rarely granted more than 2 waivers per month – an insignificant fraction of the 42% of Kenyans living under the poverty line (James et al 2005).

Obonyo (2008) in a study on Kenyatta National Hospital found waivers and exemption scheme appeared to be undermined by lack of information necessary to determine eligibility e.g. household income. In the absence of these criteria the staff applied their own criteria for assessing eligibility. Thus, it was noted that people who could pay got exempted (leakage) while the poor who had no information about the system do not use it at all (under coverage). According to Gilson et al (1997) the eligibility criteria for waiver and exemption varies across countries and vague simply stating that fees should be waived in cases of “financial hardship” (Kenya), for those who are “destitute” (Ghana), or for the “very poor” (Uganda).

2.7 Post Discharge stay

A patient is discharged after his or her medical treatment is completed and leaves a hospital and these eases pressure on hospital beds and these allows for more admissions. After the introduction of user fees patients are supposed to clear their hospital bills before they leave the facility. These has been quite a challenge to the poor patients with no social health protection leading to patients still occupying hospital facilities even after clinical discharge.

Kippenberg et al 2007 in a study, notes that between February and June 2006, Human Rights Watch and the Association for the Promotion of Human Rights and Detained Persons conducted an investigation into the detention of insolvent hospital patients in Burundi. Of 11 hospitals visited, nine were found to be holding former patients in detention for being unable to pay their hospital bills. The detention of insolvent hospital patients was described as a routine practice, dating from the 1990s. Conditions of detention included overcrowding, insufficient food and water, and withholding of further medical treatment. Seventy-two per cent of patients interviewed had been detained for 1 month or longer at the time of interview. The study noted that mechanisms designed to exempt or reimburse the health fees of low-income and indigent people failed to protect patients from becoming detained.

In Kenya, the debate on post discharge patients unable to clear their hospital bills and are still held up in public hospitals has been debated severally in parliament, and the plight of these patients highlighted in the media whenever there's a crisis. Kiarie (2009) on a report on KNH notes that close to half of the patients in orthopaedics wards were discharged when the report was done but were either been detained due to unpaid bills, or opted to stay in the hospital to escape destitution.

2.8 Theoretical framework

The study was guided by systems theory that emphasizes the reciprocal relationship between elements that constitute a whole. These concepts also emphasize the relationships among individuals, groups, organizations, or communities and mutually influencing factors in the environment. WHO defines a health system as consisting of all organizations, people and actions whose primary intent is to promote and maintain health. Its goals are improving health and health equity in ways that are responsive, financially fair, and make the best, or most efficient, use of available resources (WHO 2009). WHO’s framework of health system building blocks effectively describes six sub-systems of an overall health system architecture as shown in figure 1.

Figure 1: The building blocks of the health system

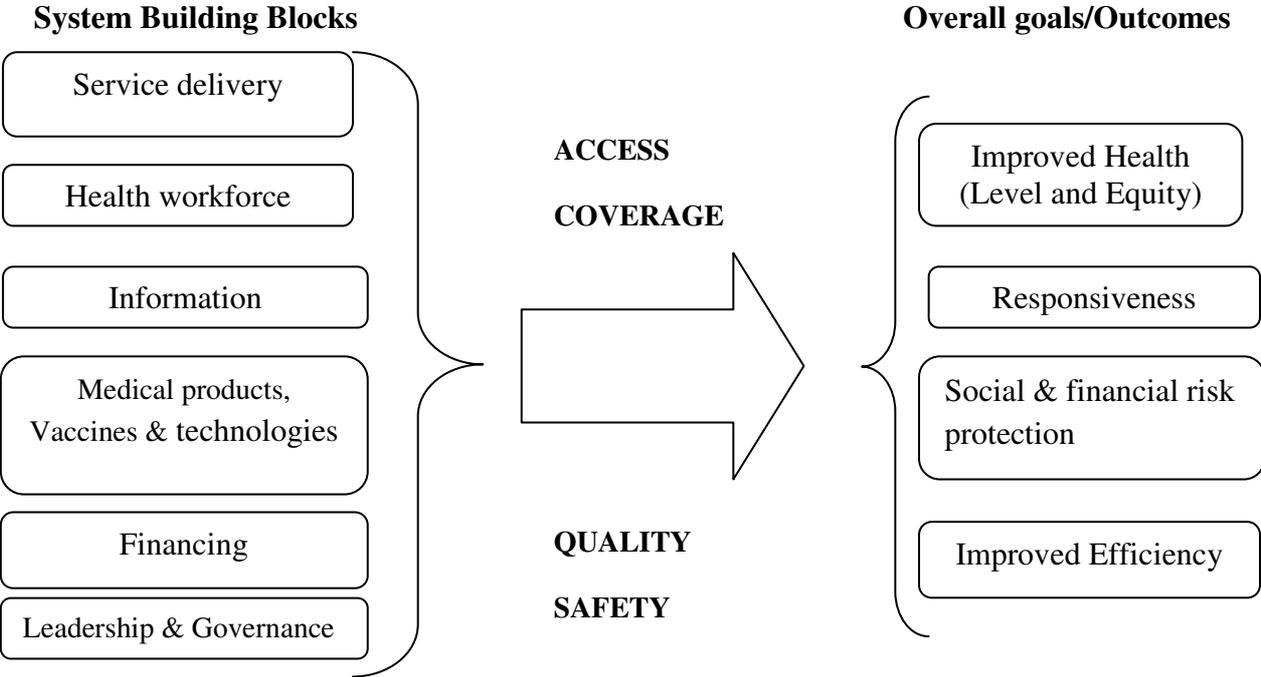


Figure1. The building blocks of the health system: Aims and attributes. This figure illustrates WHO Health Systems Framework building blocks that together constitute a complete system.

It's the multiple relationships and interactions among the blocks; how their influence and affect the other that converts the blocks into a system. In referring to the individual components of health systems, this study evaluates health financing block where raising adequate funds for health in effective ways that ensure people can use needed services and are protected from financial catastrophe or impoverishment. KNH operates in a system where it's a producer of health care and also a consumer of financial inputs from the population. Finance is required to make KNH sustainable whereas mechanisms for social financial risk protection are incorporated in the health policy system to adequately provide effective interventions.

Despite a long range of interventions that can prevent much burden of disease in poor countries, effective interventions been expanding too slowly and health inequities are widening (WHO 2009). Cost effective interventions when available are inadequate and underused. In this regard user fees, health insurance, waivers and exemptions had been proposed as intervention for the financial block but their effectiveness in lessening the disease burden has not been effective.

Using systems perspective in this study sought to understand how health system building blocks, contexts, and actors act, react and interact with each other as an essential approach in designing and evaluating interventions.

KNH is an actor around a system of stakeholder networks where it's a participant and a beneficiary in the systems network. The perspectives operating within these systems include; corporate system- Independence from government, distribution system - to pharmaceuticals, employment system -health workers, health resource system - clients, social support system - to the community, policy system - government , sub-systems to MOH and market system to providers of health services and goods (NHIF).

2.9 Knowledge Gap

In the literature search, no study was found that has been done on post discharge stay in KNH. Moreover, most emphasis on the health systems were on equity and access to health care leaving financial risk and social protection on discharge least explored. This study evaluated the effects of socio-demographic, health insurance, social support and nature of illness as components of post discharge stay in KNH. The approach of systems analysis gave the study a wider look at challenges facing health financing block which has been overlooked as other health systems such as pharmaceuticals delivered drugs regardless of financing bottlenecks.

2.10 Study conceptual framework

In this conceptual framework the post discharge stay is the dependent variable that is influenced by patient characteristics. The study was intended to describe how post discharge stay in KNH is affected by patient characteristics. The components of patient characteristics are socio-demographic, health insurance, social support and nature of illness. Institutional and government policy are intervening variables. They act as a catalyst or inhibitors in the interaction between independent variable and dependent variable.

CONCEPTUAL FRAMEWORK

Independent variable

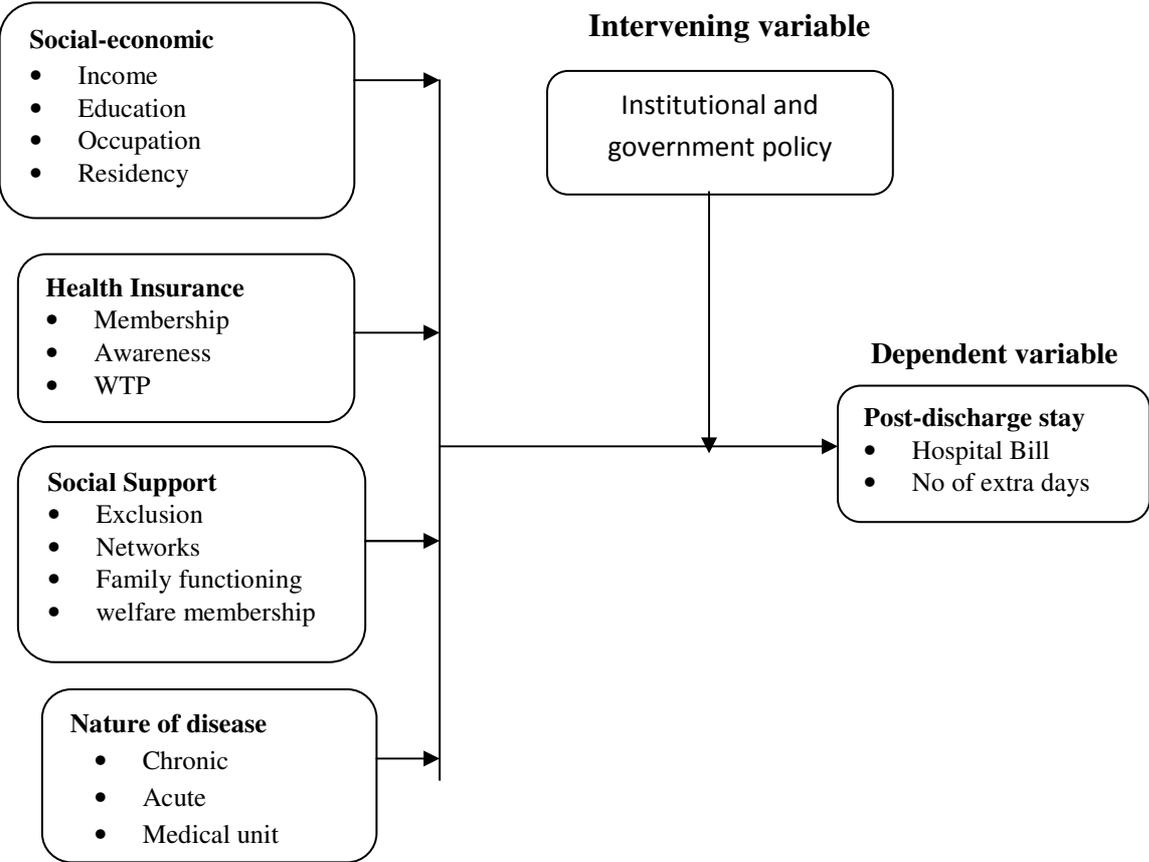


Figure 2: Conceptual framework. This figure illustrates a brief explanation of the relationships between the variables identified in the study

2.11 Summary of literature review

Health requires financing to provide sustainable quality health care to the ever growing populations. Initially, health was financed by governments through taxes. Globally there has been a shift to cost sharing in order to improve efficiency and effectiveness of health programs. The introduction of user fees in developing countries in the 1990’s through the World Bank structural adjustment program identified Out of Pocket (OOP) payments and Pre-payment schemes as means of financing health care. This was meant to improve quality assurance and also invite private players in provision of health care. Waivers and exemptions were identified as means of providing a safety net for the near poor and vulnerable groups.

Most studies have been on access to health services after introduction of user fees and the review on the literature shows a gap to barriers of exit for patients treated in KNH which is a state corporation and is supposed to generate its internal revenue to sustain its operations.

User fees generated unintended consequences of catastrophic spending where households plunged into poverty traps. Waivers and exemptions were discretionary to the health facilities management and most studies show targeting of indigent patients has not been very effective. In KNH waivers were scrapped in 2004 leaving the poor with no safety nets. Moreover, intended use of pre-payment schemes like NHIF has not been effective due to the low penetration of such schemes in developing countries especially among the informal sector. The review shows that pre-payment schemes mitigates health shocks for poor families and prevents households from falling into poverty traps. When faced with health calamities due to major illness, majority of the poor people relied on traditional coping skills such as social networks which depended more on the individual's social investment on the networks. Thus persons with poor relations tended to fall more on sale of assets to mitigate health shocks. Further, the nature of illness had a debilitating effect on household economic outcomes and ability to withstand health shocks. Acute illness had an urgent untimely attention for resources while a chronic illness was like a long wave disaster to household occupations and income. Finally, the demographic characteristics of informal populations show low risk aversion with a low awareness towards health insurance and the need to eliminate the systemic failures which exist in rolling out the schemes.

CHAPTER THREE RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains details of the methodology that was used by the researcher .It discusses the research design, target population, sample size and sampling procedures, research instruments, validity and reliability of instruments as well as data analysis techniques that were used.

3.2 Research Design

The study took a descriptive survey research where the researcher sought to ascertain respondent's perspectives or experiences on a specified subject in a predetermined and structured manner (Scarborough and Tarenbaum 1998).This survey aimed at establishing the factors which contribute to post discharge stay in public hospitals. It sought to describe the existing phenomena in Kenyatta National Hospital by inquiring into the experiences of patients and health Workers.

3.3 Target Population

Borg and Gall (1982) have defined target population or the universe as being all the members of the real set of people, events or objects to which the researcher wishes to generalize his findings.

The study targeted discharged patients within the hospital facility. The ideal population would have been all discharged patients in KNH, however due to logistical and other factors the justifiable population of this study was discharged patients from Orthopaedic, Medical and paediatric wards which are twelve wards in total. Data from KNH show that they have most discharged patients.

This formed a population of approximately 196 distributed as follows: 186 discharged patients from Orthopaedics, Paediatrics and Maternity wards, Assistant Chief Nurse (3), Medical Social Workers (3), Administrators (3) and Finance Manager (1).

3.4 Sampling procedures and sample size determination

According to Mugenda and Mugenda (1999), where time and resources allow, a researcher should take a big sample as possible. Further they argue that purposive sampling is a sampling technique which allows a researcher to use cases that have the required information with respect to the objectives of his or her study.

Mugenda and Mugenda (1999) recommendations will be adopted and 50% of the target population will be used in selection of the target population.

The researcher adopted simple random sampling to ensure each patient got an equal chance of being selected. Purposive sampling was used for the health workers in the study. The sampling procedures adopted ensured that relatively small sampling error occurred and that it would help in the control of systematic bias. A combination of purposive and simple random was used.

3.4.1 Sampling of patients

Simple random technique was used to select patients within each unit (orthopaedics, paediatrics and medicine) to ensure each patient got an equal chance of being selected.

The desired sample size was determined using the following Fisher et al (1991) formulae:-

$$n = \frac{Z^2 p}{d^2}$$

$$d^2$$

Where:

n = the desired sample size (when population is greater than 10,000)

Z = the standard normal deviate, set at 1.96, which corresponds to 95% confidence level.

p = the proportion was set at 0.5 (since there was no estimate available of the proportion in the target population who had the study characteristics, 50% was used as recommended by Fisher's et al (Mugenda and Mugenda 1999)

$$q = 1.0 - p = 0.5$$

d = degree of accuracy desired, here set at 0.05 corresponding to the 1.96 z-statistic used in the numerator.

In substitution,

$$n = \frac{1.96^2 \times 0.5 (1 - 0.5)}{0.05^2} \\ = 384$$

The total number of patients discharged in a month is about 360 and because N was less than 10,000 the second formula was applied in determining the sample size thus:

$$nf = \frac{n}{1 + \frac{n}{N}}$$

Where:-

nf = desired sample size for a population less than 10,000

n = desired sample size for population more than 10,000 which was found to be 384

N = Population which is 360 (KNH 2012)

In substitution,

$$nf = \frac{384}{1 + \frac{384}{360}} \\ = 186$$

Therefore the desired n = 186.

Table 3.1: Distribution of patients by units

Unit	weekly credit requests	proportion	Sample size required
Orthopaedics	140	$140/360 \times 186$	72
Medicine	120	$120/360 \times 186$	62
Paediatrics	100	$100/360 \times 186$	52
Total	360		186

3.4.2 Sampling of staff

Purposive sampling was used on health care workers because they had the information required with respect to the objectives of this study. They include; Assistant Chief Nurse (3), Medical Social workers (3), Administrators (3) and Finance Manager (1).

Table 3.2: Sampling Matrix

Respondents	Target	Sample	Percentage
KNH	1	1	100%
Patients	360	186	52%
Administrative Officers	3	3	100%
Social Workers	3	3	100%
Assistant Chief Nurse	3	3	100%
Finance Manager	1	1	100%

The targeted sample included 196 respondents as follows; Patients (N=186) and health care staff (N=10).

3.5 Research Instruments

The methods used to collect data for this study were through Questionnaires, Key Informant interviews and Document analysis.

3.5.1 Questionnaire

According to Wood and Haber (1998), questionnaires are paper and pencil instruments designed to gather data from individuals about knowledge, attitude, beliefs and feelings.

By using questionnaire method each question was developed and analyzed to address a specific objective and research question. The types of questions were structured and unstructured.

The questionnaires were subdivided in subsections to capture responses of details required. Questionnaire for patients were closed ended due to patient factors such as illiteracy and illness capabilities. While closed and open ended questions were used for health care workers to get varied answers that did not confine the respondents to fixed answers.

3.5.2 Interview Guide

Before conducting interviews on the key informants, an interview guide was developed to help direct conversation towards meeting the objectives of the study. Key informant who was interviewed was the Finance manager .The interview guide which was developed was semi-structured with open ended questions and targeted the dependent variable.

3.5.3 Document Analysis

Document analysis involved a systematic procedure of reviewing or evaluating documents both printed and electronic. The data that was obtained was examined and interpreted in order to elicit meaning in relation to the study objectives. Documents that were examined included patient's records files, registers and financial accounts.

3.6. Validity and Reliability

Validity and reliability are important to ascertain whether an instrument measures what it is supposed to measure and that the test results are consistent from one administration to another.

3.6.1 Pilot testing

Pilot testing of the research instrument was conducted with a few respondents. According to Mugenda and Mugenda (2003), a pre-test sample of a tenth of the total sample with homogenous characteristics is appropriate for a pilot study. For this study, 18 participants from the three medical department's equivalent to 10% of the sample size from the respondents were interviewed during the pilot study. After 7 days the same participants were requested to respond to the same questionnaire but with prior notification in order to ascertain any variations in the responses for the 1st and 2nd test. This was to assist the researcher identify and correct vague questions and improve efficiency of the instrument.

3.6.2 Validity

Validity refers to whether a measurement instrument accurately measures what was supposed to measure. When an instrument is valid, it truly reflects the concept it is supposed to measure (Wood & Haber, 1998). The questionnaire was pre-tested in a test sample to enhance its validity. The validity of the instrument was ascertained by the pilot study. This ensured that the instructions were clear and all possible responses to each question captured. Content validity of a measuring instrument is the extent to which it provides adequate coverage of the investigative questions during the study (Mugenda and Mugenda 2003). In this study content validity was determined by the judgement of research supervisors within the university. The supervisor reviewed the instruments, recommended improvements and verified whether the instrument would be able to address the objectives of the study.

3.6.3 Reliability

Reliability refers to the consistency of the scores obtained from one administration of an instrument to another (Scarborough & Tarenbaum, 1998). Reliability of a research instrument likewise is defined as the extent to which the same instrument yields the same results on

repeated measures (Wood & Haber, 1998). The study was designed to use both qualitative and quantitative techniques to enrich the reliability of data.

Reliability was found using Cronbach's Alpha based on standardized items was .72 and indicative to be strong. This shows the instrument was reliable as the figure was approaching 1. Strict supervision of interviewers by the researcher ensured that reliable data was collected. The questionnaire was self administered ensuring reliability was maintained.

3.7 Data Collection Procedure

A letter of introduction to collect and conduct research was obtained from Extra-mural department-University of Nairobi and authorization to conduct the research in KNH obtained from Ethics and Research Committee KNH/UON. The approvals are contained in the annexes. Two research assistants were recruited for data collection and they were trained on interviewing techniques prior to data collection. Those recruited were trained on the following;

1. Contents of structured questionnaires. i.e. Questions and their expected responses.
2. Procedure of administering the questionnaire .i.e. courteous approach with a thorough explanation of the purpose of the study.
3. Completion of the questionnaire and entering of the responses correctly.
4. The need for valid data and reliable data.
5. The types of data, the concept of healthcare services, the concept of participation and the concept of gender.

Questionnaires were filled and collected the same day to ensure respondents didn't discuss and modify responses and besides to ensure some did not leave the hospital facility on clearing while holding on a questionnaire.

For Health Workers questionnaires drop in method was used to be filled at reasonable time convenience due to their work schedules, and the researcher did follow ups.

The researcher went through patient's reports for document analysis which was to ensure triangulation of data. For key informant interviews and face to face interviews calls were made to book appointments.

3.9 Ethical issues in research

The KNH/UON ethics committee consent was obtained. The researcher provided adequate and clear explanation on the purpose of the study to each respondent. The study also sought the respondent's permission to participate in the study while assuring them that participation was voluntary. All participants were assured of total confidentiality and the information provided would be for research only.

3.10 Data Analysis Technique

Mixed method mode was adapted. The collected data underwent cleaning to ensure the completeness, accuracy, uniformity and consistency. Data were analyzed using SPSS version 17. For quantitative data the filled questionnaires were first be edited and coded. Univariate analysis was performed to obtain descriptive statistics .Thus, proportions, means, standard deviations and percentages have been used to describe the data according to the level and distribution. The results obtained are presented in the form of tables. Bivariate and multivariate analyses were performed in order to examine associations between independent variables and post discharge stay at KNH. X^2 was used for data not normally distributed to determine the effects of the variables on post discharge stay. The P level was set at

0.05. Linear regression analysis was used to determine the independent predictors of post discharge stay using variables overall length of stay, nature of illness and medical unit, with all variables entered at once for explanatory analysis.

For qualitative method, the researcher manually analyzed the data obtained from the respondents in relation to the study objectives and coded the results in themes, and presented in narrative form.

Table 3.3: Operation definition of terms

Objective	Variable	Indicator(s)	Measurement	Scale	Data Collection instruments	Data Analysis
Post Discharge stay	<u>Dependent variable</u> Post Discharge stay	No of post discharge days Hospital bill	No of days Amount of bill	Ratio	Questionnaire Document analysis Interview guide	Descriptive
To determine social-demographic factors influence post discharge stay in KNH.	<u>Independent Variable</u> Socio-economic background	Income Level of education Profession/Occupation Hospital bill	a)Earnings b) Years of schooling, c) occupation d) amount of bill	Ratio and nominal	Interview guides Questionnaire	Correlation and descriptive statistics
To establish the influence of health insurance status on post discharge stay in KNH.	<u>Independent Variable</u> Health Insurance	Membership Awareness Options WTP	a)Proof of membership. b) Knowledge of NHIF c) Other membership d)Agreement	ordinal	Interview guides Questionnaire	Correlation and descriptive statistics
To examine the influence of social support on post discharge stay in KNH.	<u>Independent Variable</u> Social support	Networks Exclusion Group membership Marital status	a)Visitors b)acknowledgement c)Membership d)status	Ordinal	Interview guides Questionnaire	Correlation and descriptive statistics
To establish the influence the nature of illness has on post discharge stay in KNH.	<u>Independent Variable</u> Nature of illness	Duration No of Admissions	a)Acute/Chronic b)No of admissions	Ratio	Interview guides Questionnaire	Correlation and descriptive statistics

CHAPTER FOUR DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 INTRODUCTION

This chapter presents the study findings based on the research questions of the study from 196 respondents. Univariate analysis was performed to obtain descriptive statistics thus means, standard deviations and percentages have been used to describe the data according to the level and distribution. The results obtained were presented in the form of tables. Bivariate and multivariate analyses were performed in order to examine associations between independent variables and post discharge stay at KNH.

4.2 Study results

There were two possible bases for calculation of patients and respondents. This is because there were patients who were children and could not be interviewed thus their guardians and accompanying them were the respondents along with adult patients. The study randomly targeted discharged patients (N=186) and there was 99% response rate realized. Health care workers (N=9) were purposively interviewed and the finance manager was a key informant. On the survey questionnaire 55.9% were males and 44.1% females.

4.2.1 Age distribution of patients

The respondents were asked to indicate their age and the data was classified in aged groups as shown in table 4.1

Table 4.1: Patients Age Distribution

Age group	No of respondents	%
<=20	12	6.5
21 - 40	121	65.1
41 - 60	42	22.6
>60	11	5.9
Total	186	100

The population constituted 186 persons with a mean age of 36.1 (SD 12.6). At least 65.1% of the respondents were aged 21-40 years. This represents a young age population who were stranded in the wards. 22.6% were aged 41-60 years, 6.5% were below 21 years and 5.9% more than 60 years old. The mean age was 36.1 years.

4.2.2 Respondents occupation

The respondents were asked to state whether they were employed at the time of the survey and the responses categorized in table 4.2 as; unemployed, farmers, wage employment, casuals and business trader (self employed).

Table 4.2: Current Occupation

Occupation	No of respondents	%
Unemployed	32	17.2
Farming	24	12.9
Wage	25	13.4
Casual	71	38.2
self employed	34	18.3
Total	186	100

From the results, 38.2% of the respondents were on casual employment and 13.4% were on wage employment. 18.3% were self employed while 12.9% were farmers. 17.2% were unemployed. This was indicative of an informal sector population facing health shocks.

4.2.3 Household income distribution

Income was used as an indicator of social position and class in this study. Respondents were asked to indicate average household income which was grouped and presented in table 4.3.

Table 4.3: Income Distribution

Income	No of respondents	%
<3000	42	22.6
3001-7000	87	46.8
7001-15000	43	23.1
15001-30000	9	4.8
30001-60000	5	2.7
Total	186	100

Majority of the respondents 87 (46.8%) earned between 3000-7000 Kenya shillings. These findings are consistent with previous findings on occupation of the respondents where majority of the respondents were informally employed. Less than 43 (23.1%) earned from 7001-15000 while 42 (22.6%) got less than 3000. Only 11 (7.5%) of the respondents earned over 15000 shillings. These findings suggest a low income population and have direct impact on their ability to pay for healthcare services more so when the hospital emphasizes more on revenue collection.

4.2.4 Marital status

Respondents were asked to indicate their marital status during the study. The responses were categorized as; married, single, divorced/ separated and widowed.

Table 4.4: Marital Status

Marital status	No of respondents	Percent
Married	75	40.3
Single	54	29
Divorced/Separated	29	15.6
Widowed	28	15.1
Total	186	100

Majority of the respondents 75 (40.3%) were married while 54 (29 %) were single. On the other hand, 29 (15.6%) were separated from their spouses or divorced and 28 (15.1%) were widowed.

4.2.5 Educational background of the respondent

Education in this study was used as an indicator of social economic position and the respondents were asked to indicate their level of education. The distribution of the respondent population by the level of education attained is shown in table 4.5.

Table 4.5: Level of education

Level of education	No of respondents	%
None	9	4.8
Primary	114	61.3
Secondary	52	28
College	10	5.4
University	1	0.5
Total	186	100

Majority of the respondents 114 (61.3%) were of primary school level of education, 52 (28%) had attained secondary school level and 11 (5.9%) had gone up to college and above. 4.8% had no education.

Level of education attainment is directly related with ability to secure employment and earn better income with greater disposable income and ability to withstand health shocks (Russell 2005). More so, it also influences health financing options and predictive behaviour towards acquisition of health insurance.

4.2.6 Referral to KNH

The respondents were asked to state “yes” if they were referred to the facility and “no” if they were not referred. Majority of the patients 110 (59.1%) were not referred to the facility as

opposed to 76(40.9%) who were referred to the facility. KNH has pricing cues to encourage referrals from low tier health facilities but still the facility continues to serve as a level 1-5 hospital, and this corresponds with a study by Obonyo ((2008).

4.2.7 Residence of the respondents

Respondents were asked to indicate county of residence in order to ascertain their geographical distribution and results presented in table 4.6.

Table 4.6: Residence

Residence	No of respondents	%
Nairobi county	122	65.6
Nairobi Metropolis	23	12.4
Other counties	41	22
Total	186	100

From the results, 65.6% of the respondents were from Nairobi County while 12.4% were from Nairobi metropolis. Only 22% of the respondents came from other counties. This is indicative of KNH target population are from Nairobi County and its metropolis.

4.3 NHIF Registration

NHIF is the statutory health insurance scheme in Kenya and rebates health costs incurred by both the informal and formal sectors in various classified public and private hospitals. The respondents were asked to state “yes” if they had NHIF cover and “no” if they were not registered with NHIF.

Table 4.7: NHIF Registration

Response	No of respondents	%
YES	9	4.8
NO	177	95.2
Total	186	100

Majority of the patients 177 (95.2%) were not registered as opposed to 9 (4.8%) who were registered.

4.3.1 Non registration reasons

The respondents were asked to state reasons of non registration to NHIF in narrative form and the emerging themes were coded and presented in table 4.8.

Table 4.8: Non registration reasons

Reasons	No of respondents	%
Lack of awareness on benefits	107	57.6
No expected major expenditure	39	21
Defaulter	15	8.1
Poverty	17	9.1
No response	8	4.3
Total	186	100

Results shows that among the reasons cited for non registration with the NHIF were lack of awareness (57.6%) , No expected major expenditure 21% and defaulter 8.1%.This reasons can be tackled with education and awareness programs to facilitate social change among the non risk averse citizens.

4.3.2 Willingness to pay for NHIF.

The respondents were asked a hypothetical question on their willingness to pay for NHIF premiums at the present Kshs.160 per month. 141 (75.8%) of the respondents were willing to pay for NHIF while 37 (19.9%) were not 4.3% did not respond to the question.

4.3.3 NHIF Rebates

NHIF rebates Kshs 2,400 per day to KNH for every insured patient admitted for overnight stay less specialized tests (i.e. CT-Scan and MRI) which members incur from their pockets.

From this computation, where short stays incur large bills after a short stay is counteracted and reimbursed from long stay patients with small bills but with higher rebates. From the hospital bills incurred by the respondents 168 (90.3%) would be wholly covered by NHIF while 18 (9.7%) would be covered minus X-rays fees. This indicates the respondents bills would be mitigated by NHIF alleviating the health shock and revenue streaming to KNH account.

4.3.4 Registration with community based health insurance

Community based health insurance membership as an alternative to NHIF was probed where the respondents were asked to state “yes” if registered and “no” if not registered. Only 3 (1.6%) of the respondents were registered with other community based health insurance schemes and majority 183 (98.4%) were not. Those registered hailed from counties outside Nairobi County where KNH is located.

4.4 Social support

Respondents were asked on their interpersonal relationships and the kind of social support they got from other people as a form of coping activity. Respondents were asked to state “yes” if they had visitors in the hospital and “no” if they didn’t have visitors in the facility. 119 (64%) of the respondents had visitors in the ward while 67 (36%) were not visited.

4.4.1 Social exclusion

Respondents were asked to state if they had being excluded in anyway after admission or discharge in KNH by relatives or friends and they were not able to obtain emotional, instrumental or financial aid. Responses were given in narrative form and results were coded in themes. Of the respondents, 83(44.6%) stated they had experienced some form of exclusion as opposed to 103(55.4%) who didn’t. Reasons for exclusion are listed in Table 4.10.

Table 4.9: Reasons for Exclusion (N=83)

Reason	No of respondents	%
Stigma	16	19.3
Poverty	31	37.3
Social misfits	14	16.9
Claim avoidance	22	26.5
Total	83	100

4.5 Nature of illness

Nature of illness was categorized as acute (< 6 months) and chronic (>6 months) and the data obtained from the respondents and document analysis. The results are presented in table 4.10.

Table 4.10: Nature of Illness

	Medical unit			Total
	Orthopaedic	Medicine	Paediatrics	
Acute	67 (36.0%)	26 (14.0%)	42 (22.6%)	135 (72.6%)
Chronic	5 (2.7%)	36 (19.4%)	10 (5.4%)	51 (27.4%)
Total	72 (38.7%)	62 (33.3%)	52 (28.0%)	186 (100.0%)

On analysis, majority (72.6%) of the respondents were admitted due to acute illness while 27.4% had chronic conditions. Further, 56 (30.1%) respondents had previous admissions in KNH.

4.5 Inferential statistics

Bivariate and multivariate analysis was performed in order to examine associations between the independent variables and post discharge stay at KNH. X^2 was used for data not normally distributed to determine the effects of the variables on post discharge stay. The P level was set at 0.05. Linear regression analysis was used to determine the independent predictors of post

discharge stay using variables overall length of stay, nature of illness and medical unit, with all variables entered at once for explanatory analysis.

4.5.1 Relationship between Post Discharge Stay and Visitors in the ward.

X^2 test on post discharge and visitors as an indicator of social support was done to establish relationship between the two variables as indicated in table 4.11.

Table 4.11: Relationship between Post Discharge Stay and Visitors in the ward.

Post discharge stay	Visitors in the ward		Total	X^2
	YES	NO		
Less than 30 days	72(38.7%)	39(21.0%)	111(59.7%)	$X^2 = 0.094$ df = 1 P = 0.759
More than 30 days	47(25.3%)	28(15.1%)	75(40.3%)	
Total	119(64.0%)	67(36.0%)	186(100.0%)	

Table 4.11 shows no statistically significant association between post discharge stay and visitors in the ward, $X^2(1, n=186) = 0.094$, $p > 0.05$.

The results show visitors did not offer substantial instrumental aid for the patients to leave the ward.

4.5.2 Relationship between post discharge stay and department

X^2 test on the relationship between post discharge stay and medical department as an indicator of nature of illness was done as presented in table 4.12.

Table 4.12: Relationship between Post Discharge Stay and Department.

Post discharge stay	Department			Total	X^2
	Orthopaedic	Medicine	Paediatrics		
Less than 30 days	53(28.5%)	31(16.7%)	27(14.5%)	111(59.7%)	$X^2 = 9.521$ df = 2 p = 0.009
More than 30 days	19(10.2%)	31(16.7%)	25(13.4%)	75(40.3%)	
Total	72(38.7%)	62(33.3%)	52(28.0%)	186(100.0%)	

Table 4.13 shows a statistically significant association between post discharge stay and department, $X^2 (2, n=186) = 9.521, p < 0.05$.

From the results, patients in medicine department had a longer more than 30 days post discharge stay which has long debilitating illness. Whereas, orthopaedic department which deals with sudden acute trauma had most cases with shorter post discharge stay.4.5.3 Relationship between Post Discharge Stay and Length of Illness.

4.5.3 Relationship between Post Discharge Stay and Length of Illness.

X^2 test on the relationship between post discharge stay and length of illness an indicator of nature of illness was done and results presented in table 4.13

Table 4.13: Relationship between Post Discharge Stay and Length of Illness.

Post discharge stay	Length of illness		Total	X^2
	Acute	Chronic		
Less than 30 days	86(46.2%)	25(13.4%)	111(59.7%)	$X^2 = 3.317$ df = 1 P = 0.069
More than 30 days	49(26.3%)	26(14.0%)	75(40.3%)	
Total	135(72.6%)	51(27.4%)	186(100.0%)	

Table 4.13 shows no statistically significant association between post discharge stay and length of illness, $X^2 (1, n=186) = 3.317, p > 0.05$.

Health shocks affect both acute and chronic illnesses. This conforms to Russell (2005) on the sudden costs of acute illness and the wave length disaster of chronic illness. Moreover, Post discharge stay was determined by the discretion of hospitals management after health shock irrespective of nature of illness.

4.5.4: Relationship between length of illness and visitors in the ward.

X^2 test on the relationship between length of illness and visitors in the ward was done and the results presented in table 4.14

Table 4.14: Relationship between length of illness and visitors in the ward.

Length of illness	Visitors in the ward		Total	X ²
	YES	NO		
Acute	86(46.2%)	49(26.3%)	135(72.6%)	X ² = 0.016
Chronic	33(17.7%)	18(9.7%)	51(27.4%)	df = 1
Total	119(64.0%)	67(36.0%)	186(100.0%)	P = 0.899

Table 4.15 shows no statistically significant association between length of illness and visitors in the ward, $X^2 (1, n=186) = 0.016, p > 0.05$. The results inferred that social support had no direct influence on the nature of illness whether chronic or acute.

4.5.5: Relationship between Admission Deposit and Visitors in the Ward.

X^2 test on the relationship between admission deposit an indicator of post discharge stay and visitors in the ward was done. Results are presented in table 4.15

Table 4.15: Relationship between Admission Deposit and Visitors in the Ward.

Admission deposit	Visitors in the ward		Total	X ²
	YES	NO		
Yes	88(47.3%)	6(3.2%)	94(50.5%)	X ² = 72.439
No	31(16.7%)	61(32.8%)	92(49.5%)	df = 1
Total	119(64.0%)	67(36.0%)	186(100.0%)	P = 0.000

Table 4.16 shows a strong association between admission deposit and visitors in the ward which was statistically significant, $X^2 (1, n=186) = 72.439, p < 0.01$.

Results inferred that patients who had some form of social support were able to obtain instrumental aid (deposits) from their support network .This corresponds with previous studies on social support on health care shocks (Mwabu et al 1995; MOH 2003).

4.5.6 Relationship between Overall Length of stay, Length of Illness and Department.

Multiple regression between overall length of stay, length of illness and medical department was done and presented in table 4.16.

Table 4.16: Relationship between Overall Length of stay, Length of Illness and Department.

Length of illness	Department			Total	F
	Orthopaedic	Medicine	Paediatrics		
Acute	67 (36.0%)	26 (14.0%)	42 (22.6%)	135 (72.6%)	F = 2.913 df = 2 P = 0.057
Chronic	5 (2.7%)	36 (19.4%)	10 (5.4%)	51 (27.4%)	
Total	72 (38.7%)	62 (33.3%)	52 (28.0%)	186 (100.0%)	
Overall stay					
Less than 30 days	1 (0.5%)	8 (4.3%)	10 (5.4%)	19 (10.2%)	
More than 30 days	71 (38.2%)	54 (29.0%)	42 (22.6%)	167 (89.8%)	
Total	72 (38.7%)	62 (33.3%)	52 (28.0%)	186 (100.0%)	

Multiple regression done to test the relationship between overall length of stay, length of illness and department showed no statistically significant relationship $F(2, 185) = 2.913$, $p > 0.05$.

4.5.7: Relationship between Hospital bill and Department

χ^2 test on the relationship between hospital bill and medical department was done and results presented in table 4.17.

Table 4.17: Relationship between Hospital bill and Department

Hospital bill	Department			Total	χ^2
	Orthopaedics	Medicine	Paediatrics		
<=50,000	2(1.1%)	27(14.5%)	18(9.7%)	47(25.3%)	$\chi^2 = 52.833$ df = 6 P = 0.000
50,001 - 100,000	28(15.1%)	26(14.0%)	26(14.0%)	80(43.0%)	
100,001 - 150,000	22(11.8%)	5(2.7%)	2(1.1%)	29(15.6%)	
> 150,000	20(10.8%)	4(2.2%)	6(3.2%)	30(16.1%)	
Total	72(38.7%)	62(33.3%)	52(28.0%)	186(100.0%)	

Table 4.18 shows a strong statistically significant association between hospital bill and department, $\chi^2(6, n=186) = 52.833$, $p < 0.01$.

From the results, Orthopaedic department which had majority of sudden acute trauma cases patients incurred larger hospital bills larger than Kshs.100, 000. While medicine and paediatric departments which deal with pathological diseases, majority of the bills were less than Kshs.100, 000.

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND
RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, discussions, conclusions and recommendations based on the objectives which the study sought to address. The key questions revolved around effects of social-demographic characteristics, health insurance awareness, social support and nature of illness on post discharge stay in KNH.

5.2 Summary of the findings

The first objective to determine the effect of social-demographic characteristics on post discharge stay in KNH, the study considered SES characteristics within demographic as they influence the disposable income available to an individual or household and their ability to pay for health care. In this study, majority of the respondents (61.3%) had attained primary school level of education while only (28%) had attained secondary school level. Only 5.9% had college level education and above. Education is seen as a resource, Majority of respondents were unskilled with no professional training where 38.2% were casual workers, 12.9% peasant farmers, 18.3% self-employed and 17.5% unemployed .Further, 64.9% of the respondents earned equal or less than Kshs 7,000 the minimum wage derived by the International Labour Organization (ILO).This is indicative of a low income and low class population within the geographical region of KNH where 78% of the respondents were residents of Nairobi county and its environs.

On referrals, 59.1% of the respondents were not referred to the facility and this compares favourably with a study by Obonyo (2008) which shows the non-existent of a referral system in the county. Further, 68.2% of the respondents had hospital bills equal or less than Kshs

100,000 and when this is contrasted with their income levels where 69.4% earned less than Kshs 7,000 per month, their ability to pay for hospital bills was compromised.

The second objective sought to establish the influence of health insurance status on post discharge stay in KNH. The study results show 95.2% of the respondents were not insured with NHIF while 4.8% were NHIF registered. Consequently, this posed a challenge as respondents were not able to pay their hospital bills from their pockets. 57.6% of the non registered respondents cited lack of awareness of NHIF benefits to informal workers, 21% viewed lack of expected major expenditure on health as a reason for non enrolment while 9.1% cited poverty and impoverishment as a barrier. 8.1% were NHIF defaulters.

On the hypothetical question to the respondents on willingness to pay (WTP) for NHIF at the rate of Kshs 160 per month 75.8% were willing to pay, 19.9% were not able while 4.3 % were non responsive. This was indicative of unexplored market for health insurance and that informal sector citizens get into pre-payment health schemes after an encounter with a health shock

NHIF offers a rebate of Kshs 2,400 per day to KNH for insured inpatients and all bills are covered by NHIF exclusive of specialized X-rays (CT scan & MRI). Results from the study indicate 90.3% of the incurred hospital bills would be wholly covered by NHIF while 9.7% there would be co-payments of special tests. Out of pocket (OOP) was established in 50.5% of the respondents who paid an admission deposit.

The third objective sought to examine the influence of social support on post discharge stay in KNH. From this study, social support had no significant relationship with post discharge stay but had a strong significant relationship in raising part of admission deposits. Respondents who had paid admission deposits 53.2% obtained them through claims on kinship while 14.9% had both claims from kin and wages. Another 10.6% had claims on kin and sale of productive assets. Further, 64% of the respondents had visitors during their treatment whereas

36% did not have visitors. 44.6% of the respondents cited social exclusion after falling ill with 37.3% citing Impoverishment, 26.5% claim avoidance by kin, 19.3% stigma and 16.9% were society social misfits.

From health staff narratives, some poor patients were even reluctant to leave the facility because the hospital offered four square meals a day of which it was a luxury which they couldn't afford back at their homes. Further, very sick patients were abandoned in KNH by their care givers further compounding their post discharge stay. Other cases involved where relatives abandoned patients only to re-appear after KNH had facilitated their clearances. It was further revealed that some patients preferred to convalesce at the hospital as they had shelter and leave when they felt better to seek employment. Establishing social support systems for patients was a challenge to health staff as the real face value was subjective, self reported and real intentions in some cases was hidden by discharged patients purposively.

The fourth objective sought to establish the influence nature of illness has on post discharge stay in KNH.). From the study 72.6% had acute illness(Less than 6 months) while 27.4% had chronic illness (More than 6 months). Post discharge stay had a significant relationship with Medical unit with orthopaedics department being an acute trauma specialty; patients incurred high bills while medicine and paediatrics unit's experienced pathological chronic illnesses had moderate average bills. The nature of illness had no significant relationship with post discharge stay as any exit from any health shock experienced was exercised at the discretion of the hospital administration. From descriptive analysis, the study reported nature of illness influenced instances of social exclusion (N=86) where 16 (19.3%) and 31 (37.3%) cited stigma and impoverishment by illness respectively as causes of exclusion. Further, frequent morbidity (N=56, 30.1%) cited re-admission as having depleted their productive and financial assets.

5.3 Discussions

In the first objective to determine the effects of social-demographic characteristics on post discharge stay in KNH. The study found no demographic characteristic associated with post discharge stay although a positive trend between household income and hospital bills. This presented as health shocks where hospital bills surpassed average household incomes. Further, there was descriptive variation presented by a low income-low class population as possible groups who fell into health shocks and unable to leave the hospital. The post discharge group largely falls in the informal sector category where self selection is the norm for health insurance and it's also related to other household characteristics. Two groups emerged from the study that requires concerted effort by health stakeholders to cushion them from health burden. These are the uninsured and willing to pay for health insurance and the impoverished poor. KNH has pricing cues where it charged higher fees than normal public health facilities to encourage use of low tier referral facilities; majority of the patients still by-passed the facilities.

The second objective sought to establish the influence of health insurance status on post discharge patients at KNH. From the study, 95.2% of respondents had no NHIF while 90.3% of the hospital bills would be fully covered by NHIF. Further, 75.8% of respondents were willing to pay (WTP) for NHIF at present premium rate of Kshs 160 per month. Peoples WTP is an important factor decision makers should consider because consumer responses to prices will influence services utilization patterns (Russell 2005). These results attribute low penetration of health insurance to the informal sector where possible reasons of non-enrolment can be mitigated upon by policy makers to increase coverage of health insurance.

Systematic failures within the health systems should be addressed to weigh in on supply and demand side within health financing and social risk protection. Further, CBHI schemes as an alternative initiative in the community settings should also be considered as a form of pre-payment and pooling risks. Patients suffer health shocks and hospitals are left with credit bills

whose recovery is uncertain and remote in the absence of health insurance. This is echoed by narratives from KNH staff where a credit bill of Kshs 1.8 billion is outstanding in its accounting books since 2004. Further, KNH is a major NHIF consumer with weekly rebates exceeding Kshs 5 million per week from insured patients (KNH 2012). Many studies have shown majority of health care services in developing countries are financed through out of pocket payments (Kruk et al; leive and Xu 2008). In this study, of the 50.5% respondents who were able to raise admission deposits, the deposits were raised through personal means i.e. wages, sale of assets and loans from kinship and friends. Awareness and education is programs aimed at enhancing risk perceptions and motivating behavioural consequences are needed to mitigate health shocks.

The third objective sought to examine the influence of social support on post discharge stay in KNH. In this study, respondents who had social support were able to get instrumental aid in form of deposits though not significantly enough to cover health shocks. Of the 50.5% respondents who were able to raise admission deposits, majority obtained them through personal means and this corresponds with other studies on out of pocket payments (OOP) on health care (Mwambu et al 1995, Russell 2005) where financial and emotional claims were made on ones social network when faced with a health shocks such a bill payment. Apparently, the poor have been reported to have weak social support and lack of it in some cases (Jaques et al 2005). In this study, social exclusion reported after illness was related to stigma, poverty and avoidance of claims by kin or social networks. In other cases, patients preferred to stay in the hospital after discharge in order to escape from destitution. In this situation, evaluation by hospital staff should target and identify cases where exclusion occurs and discharge from the hospital expedited to save the hospital unnecessary costs in holding the patients.

The fourth objective sought to establish the influence of nature of illness on post discharge stay. The study found no clinical characteristic associated with post discharge stay although it was associated with pre-discharge length of stay and hospital bill. Ill health, whether acute or chronic got patients into health shocks especially where mitigation of health risks was lacking (Russell 2004). Notably, in this study 95.2% of respondents had no health insurance, they were from low income groups and their ability to leave hospital was compromised leaving that decision at the discretion of KNH management.

5.4 Conclusion

The purpose of the study was to investigate factors contributing to Post Discharge Stay at Kenyatta National Hospital, Nairobi. The household characteristics of the respondents determined ability to pay for major health out of pocket payments (OOP) and the predictive behaviour towards risk perception and acquisition of health insurance. The results revealed two post discharge groups with distinctive characteristics. The low income group with low risk aversion and were willing to pay an agreed pre-payment premium and the impoverished poor. Social support provided by networks was not sufficient to influence post discharge stay for the low income earners though it was essential in providing emotional and instrumental aid. Pre-payment schemes for mature minors, the aged and invalids should be encouraged within their social support networks and care givers to mitigate against sudden health shocks. Health insurance and pre-payments schemes should be considered as integral as a health financing option and new approaches to enhance low penetration of health insurance adopted. Appropriate social protection to particular poor groups is required to cushion them from health shocks and enhance sustainable health programmes. The reasons for non registration to NHIF were linked up to causes which can be mitigated with education and awareness. Failure to see rationale to insure needs to be addressed by all stakeholders to strengthen health financing for public hospitals.

5.5 Recommendations

Drawing from the findings of the study and conclusions made, a series of recommendations were pointed out.

I. Recommendation to health stakeholders and policy makers.

1. Government and health stakeholders to improve and strengthen the countries referral system to ease stress and decongestion on KNH and upper tier hospitals.
2. Education to improve critical awareness on health insurance products and encourage behaviours leading to financial risk perceptions the same way people perceives medical risks. National Hospital Insurance Fund (NHIF) to price rates per day, monthly and yearly to net more informal sector workers with fluctuating incomes and shifting occupations.
3. Government to facilitate set up of an indigent kitty/medical aid for the impoverished vulnerable people (orphans, destitute, windows and street families) in the society who are unable to register with pre-payment health schemes.
4. Medical awareness programs on the need for financial risk protection against illness to all subgroups in the population.

II. Recommendation to Kenyatta National Hospital

1. KNH to develop and sound direct and targeting methods for identifying indigent patients for assistance and avoid unnecessary bureaucracies which make the facility incur more expenditure hosting discharged indigent patients.
2. KNH to open up and seek partnerships with community based health and private insurance companies in order to rope in more options for patients not covered with NHIF.

3. Linkages and networking with social protection agencies like homes for the aged and orphanages is required to free up the hospital of abandoned patients and children in need of care.
4. KNH to encourage acquisition of pre-payment schemes for elective and non emergency overnight admissions in the hospital.

5.6 Suggestions for further study

The following topics were suggested for further study

1. Since health insurance is relatively alien to the informal sector, the risks and benefits on how to design Micro-insurance that meets the needs of the poor should be done.
2. Since the study was done in KNH and had no control group, studies to match the uninsured and the insured households with similar characteristics should be pursued to compare their economic outcomes.
3. Finally, without a valid control group for the insured the study was largely descriptive than casual. Therefore, other researchers should use other methods how household characteristics influence self selection in health insurance.

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APPENDIX I: PATIENT QUESTIONNAIRE

Date of interview _ / _ / _

Name of interviewer.....

INSTRUCTIONS

Fill in one questionnaire for each patient/client interviewed. Read the options to the respondents only if instructed to probe using options where necessary but do not influence clients response.

NB: For children interview the accompanying parent/guardian.

A: Social-demographic

1. What is your current Age
2. Indicate your gender: Male [1] Female [2]
3. Marital status: Married [1] Single [2] Divorced/Separated [3] Widowed [4]
4. What is the highest level of education?

Level	Code		
None	[1]	Secondary	[3]
Primary	[2]	Middle level college	[4]
University	[5]	Other	[6]

5. If client is not the head of the household ask, what is the highest level of education attended by the head of household?

Level	Code		
None	[1]	Middle level college	[4]
Primary	[2]	University	[5]
Secondary	[3]	Other	[6]

6. No. of dependants? None [1] 1-3 [2] 4-6 [3] 7- 9 [4] 10- 12 [5] more than 10 [6]
7. (a) Residence, if you live within Nairobi indicate estate.....
- (b) If residence outside Nairobi, Indicate County.....
8. Residence type.

Owned [1] Rental [2] Sub tenancy [3] Rent free [4] Squatters no rent [5] Homeless [6]

9. Were you referred to this facility? Yes [1] No [2]

If yes which health facility referred you? Government [1] Private [2] Missionary [3]

OCCUPATION/INCOME

I would like to ask you some questions about employment and income of your household.

10. What is your current occupation (use codes in list below)

- | | | | |
|------------------------|-----|---------------------------------|-----|
| Unemployed | [1] | Self-employed (business trader) | [5] |
| Farming | [2] | Student | [6] |
| Wage/salary employment | [3] | other (specify) | [7] |
| Casual | [4] | | |

11. If clients not head of household ask, what is the current occupation of the head of household?

- | | | | |
|------------------------|-----|---------------------------------|-----|
| Unemployed | [1] | Casual | [4] |
| Farming | [2] | Self-employed (business trader) | [5] |
| Wage/salary employment | [3] | Other (specify) | [6] |

12. What is the average monthly income for the household in Kshs.

- Below 3,000 [1] 3000 – 7,000 [2] 7,000 – 15,000 [3] 15,000- 30,000 [4] 30,000-60,000 [5]
Over 60,000 [6]

B HEATH INSURANCE

I would like to ask you general questions on Health Insurance.

13. Are you registered with NHIF Yes.....[1] No.....[2]

If No, explain/give reason.....

14. Would you be willing to pay Kshs 160 per month for NHIF for your household

Yes.....[1] NO.....[2]

If No, What might be the reason?

15. a) Are registered with any other community based health insurance Yes.....[1] NO.....[2]

b) If Yes, Name it.....

C SOCIAL SUPPORT

16. I would like to ask you some questions concerning your social support

Do you have visitors in the hospital? Yes..... [1] No..... [2]

If yes code as below (Tick all that applies)

Relatives [1] Friends [2] Well wishers [3] All [4]

17. a) Have you been excluded by relatives/friends after you fell ill? Yes..... [1] No..... [2]

b) If Yes, why

18. Do you have any social welfare group membership? Yes..... [1] No..... [2]

19. Do you have a bank account? Yes [1] NO [2]

20. Do you have a mobile phone? Yes [1] NO [2]

21. How much is your Hospital Bill in Kshs?

Please tick in the codes below

- | | | |
|------------------------------|--------------------------------|---------------------------------|
| 1 Below – 20,000 [1] | 5 80,001 -100,000 [5] | 9 160,001- 180,000 [9] |
| 2 20,001- 40,000 [2] | 6 100,001 - 120,000 [6] | 10 180,001- 200,000 [10] |
| 3 40,001 – 60,000 [3] | 7 120,001 – 140,000 [7] | 11 Over 200,000 [11] |
| 4 60,001 – 80,000 [4] | 8 140,001 – 160,000 [8] | |

22. (b) Date of Admission (D.O.A) _/ _ / _ Date of Discharge (D.OD) _ / _ / _

No of days
<input type="text"/>

23. Bed charges

24. a) Did you pay deposit on/after admission? Yes.....[1] No.....[2]

b) If yes, how much? Kshs

25. How was the deposit raised?

Wages [1] sale of productive assets [2] Relatives [3] Neighbours/friends [4]

Claims on patrons [5] Loans [6] Gifts/Charity [7]

D NATURE OF ILLNESS

26. Indicate medical unit. Orthopaedics [1] Maternity [2] Paediatrics [3]

27. How long have you been sick? Less than six months [1] More than six months [2]

(a) Have you ever been admitted again? Yes..... [1] No..... [2]

(b) If yes, how many times in the last 2 years?

Thank you very much for your assistance in answering these questions' would like to ensure that all your answers will be treated in confidence.

APPENDIX II: INFORMED CONSENT EXPLANATION AND FORM FOR THE PARTICIPANT

I, **Gabriel Githaiga Maina**, am a Masters student in the department of extra mural studies pursuing a degree programme in Project Planning and Management. As part of the programme, I am supposed to carry out a study. My research topic is.

FACTORS CONTRIBUTING TO POST DISCHARGE STAY AT KENYATTA NATIONAL HOSPITAL

The purpose of this study is to determine factors which contribute to post discharge stay at Kenyatta National Hospital .It has been observed that many patients are unable to leave the hospital after discharge and there this study aims at identifying those factors that influence post discharge stay. In order to achieve the objectives of the study, I need some information from persons like you. You may not directly benefit from this study, but results of this study will be communicated to policy makers so that they can implement mitigating measures thus the reduction of post discharge stay after clinical discharge.

There are no major risks for participating in the study. The only risk you may undergo is that some of the questions are personal. If during the process of interviewing, you opt to discontinue, you are free to do so without any penalty. The responses you provide will be kept confidential and anonymous. Your name will not appear in the questionnaire. You will just be assigned a code and data collected in this study is for education purposes. You will be required to remain with one copy of the consent form.

For any problems or questions related to the study, you can contact me on the No. 0724307999 or the secretary of KNH/UON- ERC (tel 2726300 or P.O.Box 20723- 00202, Nairobi)

CONSENT FORM FOR THE PARTICIPANT

I, (CODE. No name please).....,have been explained the purposes of this study, risks involved and benefits for participating in the study and I hereby :

- * agree to participate in this study
- * don't agree to participate in this study

SIGNATURES

Participant

Date.....

Researcher

Date.....

APPENDIX III: HEALTHCARE STAFF QUESTIONNAIRE

Serial No.....

Date of Interview.....

Name of Interviewer.....

- | | |
|----------------------------|------|
| 1. What is your occupation | Code |
| Assistant Chief Nurse | [1] |
| Administrative officer | [2] |
| Social Worker | [3] |
| Other (Specify)_____ | [4] |
2. What mechanisms do you have in place to ensure that patients unable to pay their hospital bills are discharged from the hospital
-
3. How does the public obtain such information
4. What criteria is used to determine those patients eligible for the mechanisms.....
-
5. Does the hospital have guidelines to be followed to be followed when assessing the patients to determine eligibility? Yes-1 No- 2 Not Sure - 3 Don't Know – 4
6. If guidelines please verify.....
-
7. In Your opinion, what can be done to reduce post discharge stay in the hospital.....
-
-
-

APPENDIX IV: HEALTHCARE STAFF REQUEST FORM

I, **Gabriel Githaiga Maina**, am a Masters student in the department of extra mural studies pursuing a degree programme in Project Planning and Management .As part of the programme; I am supposed to carry out a study. My research topic is.

FACTORS CONTRIBUTING TO POST DISCHARGE STAY AT KENYATTA NATIONAL HOSPITAL

The purpose of this study is to determine factors which contribute to post discharge stay at Kenyatta National Hospital .It has been observed that many patients are unable to leave the hospital after discharge and this study aims at identifying those factors that influence post discharge stay. In order to achieve the objectives of the study, I need some information from resource persons like you.

The responses you provide will be kept confidential and anonymous. Your name will not appear in the questionnaire. You will just be assigned a code and data collected in this study is for education purposes.

Kindly answer all the questions in this questionnaire. Your cooperation will be highly appreciated.

Yours Sincerely

Gabriel Githaiga Maina

Mobile No 0724307999/0705546056

APPENDIX V: GUIDE FOR KEY INFORMANT INTERVIEW

Introduction (Orally)

I, **Gabriel Githaiga Maina**, am a Post graduate student in the department of extra mural studies pursuing a degree programme in Project Planning and Management .As part of the programme; I am supposed to carry out a study. My research topic is.

FACTORS CONTRIBUTING TO POST DISCHARGE STAY AT KENYATTA NATIONAL HOSPITAL

The purpose of this study is to deepen our understanding of the magnitude of post discharge stay of patients and discuss the factors that influence post discharge stay at KNH.

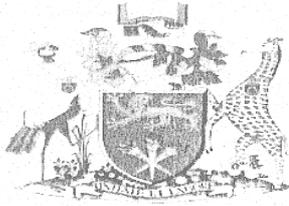
Post discharge stay

- Is it a problem for KNH? Reasons for responses. (Examples if any)
- Who in the population do you think is affected? Why do you think so?
- How many cases do you get daily? Weekly? Monthly?
- What are the policies for discharged patients in the hospital?
- Which systems are in place for releasing stranded discharged patients?
- What can be done to reduce post discharge stay at KNH?

CONCLUSION

I WOULD LIKE TO TAKE THIS OPPORTUNITY TO THANK YOU VERY MUCH FOR ACCEPTING TO PARTICIPATE IN THIS STUDY.

Ethics and Research Committee Approval



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1st November 2011

Gabriel Gitthaiga Maina
Reg. No.L50/76754/09
Dept. of Extra-Mural Studies
University of Nairobi

Dear Gabriel

Research Proposal: "Factors contributing to Post Discharge stay at Kenyatta National Hospital, Nairobi" (P243/06/2011)

This is to inform you that the KNH/UON-Ethics & Research Committee has reviewed and approved your above revised research proposal. The approval periods are 1st November 2011 to 21st October 2012.

You will be required to request for a renewal of the approval if you intend to continue with the study beyond the deadline given. Clearance for export of biological specimens must also be obtained from KNH/UON-Ethics & Research Committee for each batch.

On behalf of the Committee, I wish you a fruitful research and look forward to receiving a summary of the research findings upon completion of the study.

This information will form part of the data base that will be consulted in future when processing related research study so as to minimize chances of study duplication.

Yours sincerely

A handwritten signature in black ink, appearing to read 'A. N. Guantai'.

PROF A N GUANTAI
SECRETARY, KNH/UON-ERC

c.c. The Deputy Director CS, KNH
The Principal, College of Health Science, UON
The HOD, Medical Records, KNH
Supervisor: Ann Ngugi, Dept.of Extra Mural Studies, UON

"PROTECT TO DISCOVER"