



**FACTORS INFLUENCING UPTAKE OF SOCIAL HEALTH INSURANCE IN KENYA:
A CASE OF NYERI COUNTY.**

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ABSTRACT

A good health financing system raises fund for health, in ways that ensure people can use needed services and are protected from financial catastrophe which are associated with having to pay for them. Many high-income countries that are progressing towards, or have already achieved, universal coverage have relied heavily on general taxation, social health insurance or a mix of both. In many low- and middle income countries striving towards universal coverage, a pluralistic health financing system typically evolves whereby a mix of health insurance and risk-protection schemes are targeted at distinct socio-economic groups. The study's main objective is to assess the factors that influence uptake of social health insurance in Nyeri County, Kenya. While the specific objectives are; to determine individual characteristics influencing the uptake of health insurance Nyeri County, Kenya; to examine the scheme related factors affecting the uptake of health insurance uptake in Nyeri County, Kenya; to establish Health facilities factors affecting the uptake of social health insurance in Nyeri County, Kenya; to determine the information dissemination strategies underlying uptake of health insurance in Nyeri County, Kenya. This study adopted a descriptive cross section study design with a mix method approach of both qualitative and quantitative methods. The study was executed in the three level four hospitals and one level five hospital in Nyeri County. The research used semi-structured survey questionnaires and Key Informant Interviews as the main research tools. Questionnaires used contained both closed ended and open ended question. Sample was drawn from purposively selected health facilities and the sample size was 177 after systematic sampling of patients on discharge. Descriptive statistics was used to summarize the data. Independent samples t-test was used to compare means of continuous independent factors by uptake. Chi-square was used to compare proportions of categorical independent factors and uptake. Significance of this study is the knowledge that was generated on ways to improve social and insurance uptake, a move towards financial risks protection. There was significant association of both income and level of education with uptake of SHI on individual characteristics. Those with occupation 128(74.6%) and education level of secondary school 87(51.2%) were the majority with an uptake of HI 104(61.2%). This is in line with state-dependent utility theory. On Health Providers Factors, majority of former insurance members 18(41.9%) indicated they would be willing to rejoin SHI scheme if they were guaranteed availability of drugs. Quality of care had a significant association with access to SHI at a P value = 0.018. In insurance scheme related factors, provider involvement in care improvement was significant with all the heads of facility 4(100%) in agreement that CBHIF was the only scheme which regularly monitored the services provided to their clients. This may partly explain why majority of the enrolled to a scheme respondent were CBHIF 61(35.9%). On the other hand, confidence in scheme and uptake of SHI had an association with the respondents who had no cover 66(38.8%) citing inability to afford premiums 14(22.4%) followed by non confidence in scheme 13(20%). Lastly, information strategy on insurance showed that the majority of the respondents 167 (98%) were aware of insurance schemes through radio 40(38.2%) with majority of the respondents 39(37.6%) having information on benefits.

Key Words: Social Health Insurance, Users, Out of pocket, Information, Health Providers
Introduction

According to World Health Organization (WHO 2000), health system consists of all the organizations, institutions, resources and people whose primary purpose is to improve health. There are six building blocks, in Health system, which contribute to the strengthening of health systems in different ways. These are *leadership/governance, health information systems, health workforce, medical products and technologies, service delivery and financing*. Strengthening health systems thus means addressing key constraints in any of these building blocks. This study concentrated on health financing pillar. Further, WHO (2000) states that a good health financing system raises fund for health, in ways that ensure people can use needed services and are protected from financial catastrophe which are associated with having to pay for them. WHO, estimates that 100 million people in a year are impoverished by payment for healthcare in the world. This has promoted interest in investigating alternative health care financing systems such as social health insurance and community based health insurance.

In view of this, World Health Assembly resolution (WHA 2005) called on all member states to plan the transition to universal coverage of their citizens. As of now, it remains an international attention on health insurance on addressing challenges related to Universal Health Coverage (UHC) (World Health Organization/HealthTeamManagement 2004). Many high-income countries that are progressing towards, or have already achieved, universal coverage have relied heavily on general taxation, social health insurance or a mix of both (Carrin et al 2008, Wagstaff 2010). However, in many low- and middle income countries striving towards universal coverage, a pluralistic health financing system typically evolves whereby a mix of health insurance and risk-protection schemes are targeted at distinct socio-economic groups. The two most common schemes are social health insurance for formal sector workers and general tax finance for the poor and vulnerable, as this latter group is generally accepted as the responsibility of the government. The non-poor informal sector, which generally comprises a substantial share of the population in low- and middle-income countries, is much more difficult to reach and is often the last to be covered. This is because these workers are often difficult to identify, do not have formal employer-employee relationships that are conducive to collecting contributions, and may have irregular incomes that lead to defaults on contributions. Historically, health care in Kenya is financed through the government budget, revolving drug funds and user fees were adopted in the 1990s to secure access to essential medicines and increase revenues to the health sector (Murakami, Phommasack, Oula, Sinxomphou, 2001).

A user fee exemption policy was put in place, but was not operationalised due to lack of clear criteria for identifying the poor, and lack of financial support to providers for exempted patients (Patcharanarumol and Tangcharoensathien, 2009). Thus, the burden of financing falls largely on households, with out-of-pocket payments accounting for 61% of overall health spending in 2010 (World Development Index, WDI 2010). Government spending on health as a percentage of total health expenditures is much lower than other countries in the region (33% compared with 75% in Thailand) (WDI 2010) and accounts for less than 1% of Gross Domestic Product (GDP) (Powell-Jackson and Lindelow 2010). The crucial concept in health financing policy towards universal coverage (WHO 2005) is that of a society risk pooling. Moreover, McIntyre et al 2008, adds that this aspect appears to be ignored in many policy prescriptions for low income countries. They further observed that in sufficiency of resources needed to finance healthcare remains a key reason for promoting user fees and out of pocket payments. Therefore, a policy question needed to be addressed which was; whether the factors that influence people's behavior, both in promoting and protecting health and use of healthcare services may assist or hinder

developing countries achieve UHC. World Health Assembly resolution (WHA) of 2005 noted that given the failures of user fees, increased reliance on prepayment mechanisms was critical to achieving UHC. This study seeks to pinpoint the factors that determine uptake of social health insurance, a move towards financial protection in the Nyeri County.

Statement of the Problem

The high cost of health care limits access to the services for many Kenyans, given that 56 per cent of the population lives below the poverty line (on less than one dollar a day) among whom 30 per cent live in absolute poverty Kenya National Health Accounts (KNHA 2012/2013). This Second Report on Poverty in Kenya reveals that 40 per cent of the poor did not seek medical care when they fell sick, mainly due to inability to meet the cost of medical care, while 2.5 per cent were constrained by distance to a health facility. A major issue of concern noted was that over a third of all the health expenditures were borne by households in 2012/2013. This amounts to approx. Ksh.80billion out of pocket paid. The report indicated that the health ministry's goal in future should therefore be, to initiate a process on how to reduce households OOP expenditures and mobilize domestic resources to fund healthcare. Unaffordability, therefore, remains a key challenge facing the poor against access to health care. According to Chuma and Okungu (2011) the health sector reforms that have hitherto taken place (including introduction of NHIF, free health services, cost-sharing, exemptions and waivers, etc.) are all largely aimed at addressing affordability and access to health care services, especially among the poor.

In Nyeri County, the County Health Management Team (CHMT) observed that in 2015, the number of those using health care facilities had increased. However, the numbers of those waived for lack of enough money had also increased by more than average the percentage of the previous two years of 2013 and 2014. The number of those accessing health facilities in Nyeri County and were insured by a Social Health Insurance remained almost level, as evidenced by the amount of reimbursement by the schemes, in the past three years. This situation has brought out the problem of significant amount of resources, running up to a million shillings per quota, allocated to Health Sector in the County, to be used up in cost recovery of waivers. These are the same resources required to strategically invest in health care infrastructure and human resource so as to improve on access and coverage of health care in the County. Given that the crucial concept in mobilizing health resources, and hence attaining universal coverage, is a society that risk pools (McIntyre et al 2008), the study will seek to pin point factors that determine uptake of Social Health Insurance in Nyeri County. The first objective, in this study, adopts the concept that scaling up of SHI enrollment would promote health care financing and hence UHC. Individual factors need to be investigated to identify the problem behind the stagnated enrollment in SHI in Nyeri County. In the second objective, enrollment to NHIF is mandatory to employees in both formal and informal sectors as a way of promoting equitable financing. Despite that, enrollment is still stagnated. An assessment is required of which factors might influence uptake for successful running of social insurance scheme. Hence examination of insurance scheme related factors affecting enrollment. Third objective is to investigate whether the social health financed health services are accessible according to need hence encouraging enrollment to a financing scheme. The objective established health provider's factors affecting uptake of SHI. Lastly, the fourth objective focused on awareness of the population on existence and benefits of SHI. Therefore, a need to determine information availability on SHI arises. Thus, this study seeks to examine the determinants of uptake of SHI, a move towards financial protection, in Nyeri County, Kenya.

Purpose of the study

The aim of this study was to assess the factors that affect the uptake of Social Health Insurance, a case of Nyeri County, Kenya.

LITERATURE REVIEW

Individual and uptake of social health insurance

State-dependent utility theory suggests that consumers' utility level and tastes are influenced by their state, such as health or income level. Households with reliable income are in a good position to afford (paying premium) or may have better understanding of the benefits of being insured. Literature on poverty also suggests that poor have liquidity constraints that cause them to remain uninsured even when they may be better off with insurance (Panda, *et al.*, 2013). Yip and Berman, (2003) approach this issue by evaluating the extent by which reliability household of income affects health insurance uptake among consumers. The main objective of the authors was to evaluate whether universal coverage for health care is influenced by household income disparities among consumers.

Income

Income is the most important social and economic determinant of health, since the level of income determines overall living conditions, psychological functioning and influences health related behavior such as food security, housing, participation in cultural and educational activities, which leads to effects to one's health and lessens the ability to live a fulfilling life (Auger and Alix, 2009). In recent and past studies; house hold income in both developed and developing countries has a positive association with the probability of buying health insurance where income significantly determines the amount of health insurance purchased (Osei-Akoto and Adamba, 2011). One of the major barriers of access to health for marginalized sections of society in many countries is financial constraints. Approximately 1.3 billion poor worldwide have no access to health services because they cannot afford to pay at the time they need it (Dror andPreker, 2002) which leads to those who have to use the services to suffer financial hardship and impoverishment since they have to pay (WHO, 2010). A study by Xu *et al.*, (2003) determined that around 5 % of Latin American households spend 40% of non-subsistence income on medical care each year while those for households in India paying for hospitalization, 40% fall into poverty due to healthcare spending. The activities in the informal sector are linked with inadequate income maintenance and income generating activities that in turn reinforces poverty conditions.

Educational level

Various studies by (Cude, 2005; Huston, 2010; Lusardi, 2008; National Association of Insurance Commissioners, 2010; and Tennyson, 2011) suggested that health insurance is a complex financial product for consumers. Consumers with documented low-to-moderate levels of health insurance literacy are challenged in making health insurance purchases due to little knowledge and understanding of universal health care and they should be helped understand and use health insurance. Rifat, *et al.* (2013) points out that health transformation program in Turkey rapidly expanded health insurance coverage and access to health-care services for all citizens, especially the poorest population groups, to achieve universal health coverage. Knaul, *et al.* (2012) argues that Mexico has advanced significantly in the quest for universal coverage as a result of the 2003 health reform that legislated the System of Social Protection in Health (SSPH) and Constitutional reform implemented in 1983. Therefore, for social health insurance uptake to improve, reforms which include health insurance literacy in the health systems of a country has to be undertaken.

Household size

Thornton *et al.*, (2010) finds that in Nicaragua, both the health status of household members (specifically, whether the head of household is chronically ill), and the probability of future health events occurring (e.g. the number of children in the household) are significantly and positively associated with uptake of health insurance. In the Rwandan Project Study, large households with more than five members had a greater probability to enroll in the health insurance cover schemes than others (Schneider and Diop, 2001). The explanation given is that contributions were kept flat, irrespective of household size up to seven members. Msuya *et al.* (2004) and Bendig and Arun (2011) find that uptake of micro insurance is positively related to household income and size. This is consistent with rational decision making behavior of the households since the amount of contribution is independent of the family size.

Knowledge and uptake of social health insurance

Bawa (2011) concluded that health insurance was not a new concept in India as people were getting aware about it from the radios, television, newspapers, agents, friends etc. but the awareness had not improved the level of subscription since as a result 19.4% of the respondents were being covered by any form of health insurance while the a large proportion of the population was still financing health care expenditure without health insurance. A study by Bhageerathy *et al.* (2009) in India found out that in order to gain and retain members in the informal sector, the national health scheme required to rebrand and target indicators such as socio economic status which was found to have a significant impact on the level of awareness and attitude of respondents towards health insurance which influenced the amount of premium payable. There may be a challenge in differentiating between awareness and knowledge of health insurance amongst the informal sector as a study in Ghana by Danso (2005) demonstrated. Awareness on health insurance scheme was at 92.5% but knowledge on the scheme was generally low.

Health Providers factors

Proximity to safety-net hospitals or clinics increases access presumably improves health outcomes. Communities that have high capacity hospitals or Clinics have better access to care than Communities with low capacity and the chances of enrolling for health insurance by individuals or households are greater than the communities with low capacities of such facilities (Borbjerg and Hadley, 2007). Therefore it is clear that availability of health care facilities increases the chances of more people taking up health insurance cover. Other organizational factors are discussed below.

Perceived quality of care

Availability of quality health care facilities and services among health care providers affects the uptake of the cover among citizens of any particular country. According to the study done by Gobah and Liang (2011) majority of the insured indicated receiving good quality of service but unavailability of essential drugs and long waiting time respectively were the major reasons stated for the low quality of service received. From the perspective of the non-insured, quality of healthcare delivery in the district is rated as low. Waiting time, cost of treatment, quality of drugs, availability of drugs at the facility were rated as 'worse than before' while privacy during examination and treatment and availability of laboratory services at the facility were rated as 'same as before' (Gobah and Liang, 2011). This implied that lack of quality health care facilities and services in health care Centre's is a factor that affects uptake of health insurance cover.

Preference of Out Of Pocket

The mode of contribution to NHIF is usually the worker's salary where the contribution by those in the informal sector is a flat rate (JNL, 2011). In terms of premium collection, the challenge faced by many African countries in implementing the social health security scheme is coming up with modalities for collecting contributions from the large proportion of the population working in the informal sector unlike those in the formal sector whose premiums are collected through payroll deduction (McIntyre, 2007). Assessing incomes and collecting income taxes from workers employed in the informal sector is also challenging (Collins et al., 1996). In sub-Saharan Africa studies show that those employed in the formal sector are more likely to have health insurance compared to those in the informal sector (Mathauer, 2008; Kiriga, 2006; Kimani, 2004). This was attributed to factors such as low and non-regular income, insecure employment and factors associated with the insurance premiums that are not in synch with people's preference (Kimani, 2010).

Scheme related factors

The uptake of health insurance cover among consumers has been found to be affected by insurance scheme related factors. In one study on supply-side barriers related to schemes' design and management (for example, lack of clarity among scheme staff regarding the scheme's rules and processes, and requirements that claimants submit documents to prove the validity of their claims) to accessing benefits in a community-based insurance scheme which affect take-up decision in the scheme (Sinha et al., 2010).

Citizen involvement in package design

A major challenge has been integration of the expanding informal sector and inclusion of the poor into the scheme (Mathauer et al., 2008). Another challenge is that health insurance is mostly restricted to urban sites, where the private formal sector is concentrated, thus not improving geographical access (Jacobs, et al., 2012). NHIF coverage in Kenya is limited to inpatient care while outpatient and preventive services are currently excluded. Even though the NHIF Act confers the fund with the mandate to cover in-and-outpatient care, coverage extension to non-hospital health benefits has not yet been implemented. This fact is likely to be a reason for informal sector workers being reluctant to enroll since they might consider that an inpatient cover alone might not be sufficient for their health care needs. It is such concerns that might necessitate change in the policy framework of the NHIF (Muiya, 2013).

Provider involvement in care improvement

Institutional factors such as the technical arrangements made by the scheme management also influence people's perception about the benefit of the scheme. Many health insurance operate within weakly defined legal and political systems, and are based on mutual, non-written agreements that are monitored and enforced by members. Some health insurance members often lack the technical capacities to manage an insurance scheme and negotiate with providers for better care (Panda et al., 2013). This usually affects the uptake of health insurance cover.

Confidence in scheme

The schemes' design and management (for example, lack of clarity among scheme staff regarding the scheme's rules and processes, and requirements that claimants submit documents to prove the validity of their claims) has been found to affect take-up decision in the scheme (Sinha et al., 2005). The technical arrangements made by the scheme management have also shown to influence people's perception of personal benefits. One example is the unit of enrolment. In a WHO Study (Carrin, 2003) almost half of the schemes surveyed had the family as the unit of membership, a measure introduced to avoid the problem of adverse selection.

Workers in the transport industry in Kenya have successfully pooled resources though they have non-regular incomes. Mathauer *et al.* (2008) proposes that “self-employed and informal sector worker i.e. all persons who are not formal sector employees, can join the scheme on a voluntary basis. This can however not guarantee remittances to the scheme. Mathauer *et al.* (2008) however this indicate that informal sector is often organized in large regional or national associations, such as taxi or former cooperatives. The various groups are formed to influence people’s perception of personal benefits but accountability issues affects take up of the scheme.

Information strategy on healthcare insurance

Results from a study by Sanusi *et al.*, (2009) in Nigeria indicated that 87% of the respondents were aware of the national health insurance and about 83% were registered in the scheme. Factors such as employment level were significantly associated with awareness while gender, income level, family size, marital status and education level were not significant factors influencing awareness of the respondents about the scheme.

Source of information

The most critical barrier to NHIF enrollment was found out by (Mathauer 2008) to be lack of knowledge of informal sector workers on its enrollment options and procedures. Communication and marketing strategies by the scheme has mostly been employed in targeting those in the formal sector as NHIF has always been viewed as a statutory deduction with no immediate benefits by many contributors leading to possible underutilization by those in this sector. Bawa (2011) concluded that health insurance was not a new concept in India as people were getting aware about it from the radios, television, newspapers, agents, friends etc. but the awareness had not improved the level of subscription since as a result 19.4% of the respondents were being covered by any form of health insurance while the a large proportion of the population was still financing health care expenditure without health insurance. A study by Bhageerathy *et al.*, (2009) in India found out that in order to gain and retain members in the informal sector, the national health scheme required to rebrand and target indicators such as socio economic status which was found to have a significant impact on the level of awareness and attitude of respondents towards health insurance which influenced the amount of premium payable.

Information on Benefits

The benefit package of the National Health Insurance Scheme (NHIS) in Ghana consists of basic health care services, including outpatient consultations, essential drugs, inpatient care and shared accommodation, maternity care (normal and caesarean delivery), eye care, dental care, and emergency care. About 95% of the diseases in Ghana are covered under the NHIS. However, some services classified to be unnecessary or very expensive are on the exclusion list. Among these are; cosmetic surgery, drugs not listed on the NHIS drugs list (including antiretroviral drugs), assisted reproduction, organ transplantation, and private inpatient accommodation. Exclusion of these expensive health care services has been found to influence enrollments of consumers into the scheme (Dalinjong and Laar, 2012).

Theoretical Framework

Conventional health insurance theory

This theory was developed by Pauly (1968) who stipulated that economists viewed moral hazard negatively since the additional health care spending generated by insurance represented a welfare loss to society. This is because insurance reduces the price of health care to zero leading to consumers purchasing more health care than they would have at normal price, revealing that the value of this care to consumers is less than the market price even though the additional care is still costly to the producer. The theory provided an apparent policy solution to this moral hazard

by imposing coinsurance payments, deductibles and capitations to increase the price of medical care to insured customers and reduce the inefficient expenditures. The managed health care system we have now is a product of this theory (Besley, 1991). In this study, conventional theory will address accessibility and affordability in uptake of social health insurance.

Expected Utility Theory

The Expected Utility Theory (Louise, 1954) was used to inform the study variables in this study. Expected utility theory suggests that choices are coherently and consistently made by weighing outcomes (gains or losses) of actions (alternatives) by their probabilities (with payoffs assumed to be independent of probabilities). The alternative which has the maximum utility is selected (Einhorn and Hogarth, 1981). Expected utility theory is based on three fundamental tenets about the processes that occur during decisions made under risk and uncertainty: Linearity in assigning of decision weights to alternatives, Judgment in reference to a fixed asset position (Kahneman and Tversky, 1979). Based on these assumptions, expected utility theory predicts that the better alternative will always be chosen (Kahneman and Tversky, 1984).

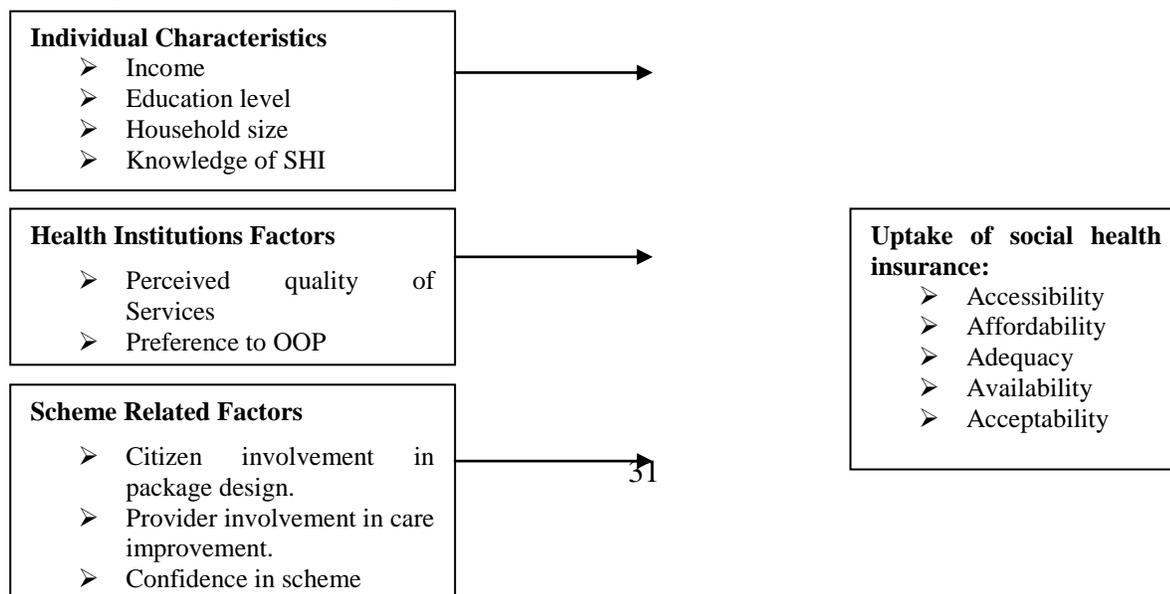
The theory can be applied in this study since health insurance enrollment by consumers is made by weighing outcomes (gains or losses) of enrolling to the scheme and the alternative which has the maximum utility is selected (Einhorn and Hogarth, 1981). Expected utility theory does not allow for influences on choice due to characteristics of the context of the decision (Kahneman and Tversky, 1979). The other limitation of the theory, as Simon (1955) found, is that decision makers cannot simplify their choices cognitively whenever possible, satisfying rather than maximizing. The theory informs adequacy and availability variables.

The Diffusion theory

This theory was advanced by Lionberger (1960) which asserted that people process and accept information by going through five stages which is not done impulsively. The stages include; awareness stage where the individual is exposed to the idea but lacks knowledge of its benefit; the interest stage is when the idea arouses the individual who assess the possibility of using it; evaluation stage where the individual must consider whether the idea is potentially useful and of benefit to him; trial stage is when the individual tries out the idea on himself and others in order to conclude how he can benefit; adoption stage which represents final acceptance of the idea and using it consistently based on continuous satisfaction. Variable informed by this theory is acceptability.

Conceptual Framework

Independent Variables **Dependent Variable**



Research Gap

Information Strategy on Healthcare Insurance

- Source of Information
- Info on benefits

Research Gap

The Kenya National Health Accounts 2012/2013 indicated the need to reduce OOP and mobilize domestic resources to fund healthcare. Unfortunately, as much as there is a national campaign to communicate the benefit packages of social health insurance, the uptake remains constant. The question therefore remains, what are the determining factors of social health insurance uptake in Kenya. Few publications are available which concern social health insurance uptake. The uptake of SHI and CBHI in Kenya is slow and the focus is to increase enrollment in the health insurance scheme with aim of achieving financial protection. It's therefore important to carry out more research and identify the particular factors that act as enhancers or barriers to the uptake of SHI and address them accordingly, as this will lead to reduced out of pocket expenditure on healthcare, appropriate utilization of health services and improved health status among the population in Nyeri County and rest of Kenya.

Research Methodology

Research Design

This study adopted descriptive cross section study design with a mix method approach of both qualitative and quantitative methods. Descriptive research was used to obtain information about the current status of the health care financing variables from discharged patients who were systematically sampled. The aim was to gather data without manipulating the research context, where the researcher had no control over the variables (Mugenda 2008).

Target Population

The study was executed in the three level four hospitals and one level five hospital in Nyeri County. The target population is the Nyeri county residents in particular inpatients who incur more bills for hospitalization and unlike outpatients, waiving was only reported in inpatients. Moreover, the only services for pay public Hospitals are Sub-County and County Referral Hospitals. This is as per Government directives of 2013. For convenience purposes, only four constituencies with level 4 and 5 hospitals were studied. These are Mathira with a population of 153,369, Nyeri town 122,896, Othaya 90,028 and Mukurwe-ini 86,482. Total population targeted is 452,775 out of 714,627 projected in 2016. The labor force in the county is 420,429 who are presumed to be adults and can contribute to a health insurance scheme. The study also targeted 4 facilities in charges or hospital heads in Nyeri County as second respondents, and third category was the 2 representatives of the HI, one each from NHIF and CBHIF affiliated scheme.

Sample Size determination

The study used Fischer et al, 1999, the formula $N = Z^2 psq/d^2$

- N = desired sample size (when target is greater than 10,000)
- Z= standard deviation of required confidence level.(Standard value 1.96)

- P= Proportion in target population estimated to have characteristics being measured.
- Q=1-p
- d= level of statistical significance (0.05)

Estimates are $(452,775/714,627)100=64\%$ was used as recommended by Fischer et al.

The sample size was $N= (1.96)^2(0.64) (1-0.64)/0.05^2 =354$. Sample for first respondents

Using systematic sampling procedure of under one over one, to ensure randomness, the final sample size was $354/2 = 177$ respondents. The study purposively selected 6 key informants, one head in each of the four facilities and one head in each of the two schemes.

Sample Size and Sampling frame

Hospital	Bed Capacity	Ratio	Respondents
Nyeri Level 5	323	0.44*177	78
Karatina Sub-County	216	0.29*177	51
Mukurwe-ini Sub-County	138	0.19*177	34
Othaya Sub-County	59	0.08*177	14
TOTAL	736	1	177

The 177 respondent's subjects representing Nyeri resident's, are inpatients that were discharged at the time of the study. They were sampled using systematic sampling method as presented in the Table 3.1 Six key informants were purposively sampled, as the second and third respondents, i.e. 4 facility in charges, 1 social and 1 community health scheme representatives, who were purposively sampled.

Data Collection Tools

A structured interview administered questionnaire was administered to the 177 respondents; the use of questionnaire is considered appropriate since the data was generated from primary source. Structured questionnaire was used to collect the individual factors, in discharged patients with or without a cover. The section dealt with; type of insurance coverage, health facility factors and effects of knowledge/awareness towards enrolment to SHI. On organizational factors, all 4 facilities in charges were targeted as second respondents. They were all purposively sampled for interview schedule or key informant interview. These questions were developed in English and translated into Kikuyu language orally. Questionnaires used contained both closed ended and open ended questions. The data required for this study was obtained from primary source using structured questionnaires. Interview schedule was administered to the 6 key informants, four heads one each from selected health facility and two heads of schemes one each from the two schemes as the third respondents.

Instrumentation

A questionnaire method was used in data collection for the first respondents. The Key Informant Interview schedule was conducted to the second and third respondents i.e. the Head of facilities and scheme managers respectively. The preferred instruments in this study were the questions with expected responses that will measure separate variables. A distinction was made between structured open-ended, respondents formulate own answer and closed-ended questions, where respondent pick an answer. To achieve the optimal response rates, questions were general to specific, factual to behavioral and least sensitive to most sensitive. The questionnaires and key informant interviews was administered through self-administration and face-to-face respectively.

For self-administration the respondent had to be literate. The two instruments for the two different categories of respondents were utilized in data collection.

Data analysis and presentation

According to Kothari (1999) and Mugenda and Mugenda (1999), this step is essential in scientific and social science research in ensuring that all relevant data are captured for making comparison and analysis. Questionnaires were checked for completeness, coded and entered into Microsoft Access database. It will later be exported to Statistical Package for Social Sciences (SPSS) v 22 for analysis. Descriptive statistics were used to summarize the data. Independent samples t-test was used to compare means of continuous independent factors by uptake. All results were considered significant at $\alpha=0.05$. Qualitative data was analyzed as they emerge from the study. The analyzed data is presented in form of graphs, pie charts and tables for easy interpretation. It further presented in brief themes and tables which was made available to stakeholders involved in this study.

RESULTS AND DISCUSSION

HEALTH PROVIDERS' FACTORS

Patients perceived quality of care and uptake of SHI

Patients with SHI 104(61.2%) majority expressed satisfaction with services 78 (74.7%). For those who expressed dissatisfaction 26(25.3%), majority 9(34.6%) cited bad attitude of health workers and 8(30.8%) cited long waiting times. In addition, for the former members to a SHI scheme who had no current cover, the most cited reason for non-renewed was 13(29.2%) being lack of satisfaction with health facility allocated with 12(25%) being poor quality of services. However, majority 18(14.9%) indicated that they would be willing to rejoin a SHI scheme if they were guaranteed availability of drugs. This had a significant association with access to SHI at P value =0.018.

Preference of health provider to OOP

Patients who were former members and failed to renew membership minority cited 5(10.4%) facility did not recognize their HI cards. In addition, reasons for non-renewal of membership, with facility of health (preferring **OOP**) not recognizing HI card among them, had a P value =0.699. This implies it had no significant association with uptake of SHI.

Furthermore, key informants or head of facility, alleged support of all insurance schemes as opposed to preferring to out of pocket pay.

INSURANCE SCHEME RELATED FACTOR

Citizen involvement in package design and update of SHI

All the 104(100%) patient respondents enrolled to either NHIF or CBHIF alleged to have never been involved in any insurance scheme meeting. This meant citizen non-involvement in package design. The P value for citizens being involved in package design therefore is 0.0 in this study.

Provider involvement in care improvement and uptake of SHI

The 4(100%) Head of departments were in agreement that CBHIF was the only scheme which regularly monitored the services provided to their clients. These were in line with the study by Panda et al (2013) that indicated that some health insurance lacked technical capacities to negotiate with providers for better care, of which affected uptake of health insurance cover.

Confidence in scheme and uptake of SHI

Patients who had no cover 66(88.8%), majority cited inability to afford premium 14(22.4%) followed by non-confidence in schemes 13(20%) for the respondents who had cover

104(61%) cited reasons of joining scheme as default of employment 58(55.8%) followed by confidence in scheme 26(25%).

Source of information and uptake of SHI

Majority of respondents 167(98%) were aware of insurance schemes. Insured respondents, majority had heard it over the radio 40(38.2%) followed by those who heard it from the health facility 16(15.9%)

However the P value=0.770 for the source of schemes info had no significant association with access to SHI.

This is in line with study by Bawa (2011) concluded that awareness had not improved the level of subscription in India despite info from radio, television, agents and newspapers.

Information on benefits and uptake of SHI

Majority of the respondents 39(37.6%) expected the benefits of availability of drugs while the least, 21(20%) didn't know the benefits. There was no significant association between information on benefits and uptake of SHI P value = 0.544. These outcomes can be associated with the study by Danso (2005) in Ghana where awareness on health insurance was at a 2.5% but knowledge on the scheme was generally low.

Views from Health Provider Heads and Scheme Managers

The views elicited in the qualitative investigations related to individuals participation in schemes and health provision decisions, health organization, scheme related factors and information dissemination factors affecting uptake of Social Health Insurance. Health provider heads seemed not to have a clear direction on how individuals participate in health provision decisions, with one of them indicating that it was not necessary to involve individuals. Exemption for poor individuals is present in all facilities in form of Government Guideline. The challenge remained how to identify the poor as the Guideline was subject to misuse, said another of the Health Provider Head. Scheme managers, on the other hand, felt that they had individuals and community support as the enrolment to both NHIF and CBHIF was growing though marginally. In NHIF, the community is not involved in running the scheme as opposed to CBHIF, where an active board exists with five members coming from the community.

Health Organization factors on privileges accorded to health insurance scheme card holders elicited mixed responses among the heads. In two facilities, a separate consultation room is reserved to card holders while in the other two; no privilege's to card holders. The reason being shortage of staff and hence the complain of more time taken by card holders since they are required to visit the NHIF office in the facility, sought for supply officers signature before ending up in the administrators office for authentication. Otherwise, all health facilities supported all health insurance schemes in provision of adequate healthcare. All Heads were experiencing challenges in reimbursement of claims from NHIF which was slow and inadequate. This problem had hampered the delivery of quality services as some of the medical supplies suppliers decline to support the hospitals courtesy of delayed reimbursements. In response these claims, NHIF manager attributed the delay in reimbursements to clerical errors on claims by health providers and lack of enough staff to handle the cases. Otherwise, reimbursement is done in 14-21 days in absence of system failure. In CBHIF, reimbursement is done in monthly bases after a medical audit. As for both schemes, quality audit and surveillance is done quarterly to ensure quality services to their clients in hospitals.

In Schemes related factors, the facility heads felt it was neither their mandate to assist community in participating in decision of HI, nor development of health packages. They were all in agreement that CBHIF was the only scheme which regularly monitored the services provided

to their clients. Scheme management position was that though facilities are not involved in decision making in HI or package development, they usually use facilities feedback reports for decision making. In turn, they send quarterly reports to the providers for managerial use and accountability purpose. For the CBHIF, annual general meetings are held and providers are looped in for inputs. The CBHIF are supervised by an umbrella body called *Afyayetu*, together with Insurance Regulatory Agency.

Information dissemination strategies on Health Insurance adopted by the providers are the health education to in and out patients. Daily rounds to wards by NHIF point men to identify those admitted and enrolled to the scheme whilst recruiting new members. In CBHIF, recruitment is done from door to door mostly in rural areas and during meetings of different economic associations like dairy farmers association.

Opinion of the NHIF management on raising the prevalence rate of Social Health Insurance was that the County and National Government can support the needy by either subsidizing or complimenting the premiums of the needy. The informant felt that the package was adequate and so were the premiums as the cost of servicing the package is high. The informant in the CBHIF observed that their package was not adequate since it only paid a maximum of twenty thousand shillings for those admitted and none to outpatients. Despite that, enrolment continues as the community fully owns it. Health facility Heads felt that NHIF rates be subsidized for the private sector especially low income earners. The NHIF scheme should reduce on the penalties on late payments of premiums. Another opinion was to devolve human resource from NHIF headquarters to work station so as they can learn the challenges of providers first hand and assist improve the scheme and facility services. Lastly, NHIF can influence scheme enrolment, based economic association e.g. Tea leaves farmers levy, coffee planters levy, dairy farmers, jua kali sector and matatu Sacco levies. The premiums should differ on economic ability and a further complementation of the premium levy by the County Government.

Summary

The main objective of the study was to assess the uptake of Social Health Insurance, a move towards financial risk protection, a case of Nyeri County, Kenya. First, respondents with formal occupation and educated to secondary school level seemed to be more likely to take up SHI. Another note is that majority in SHI were as a result of employment of which formal employment enforces compulsory enrolment to NHIF, meaning, were it not for the compulsory nature of enrollment to NHIF, enrolment would have been lower. According to the CBHIF scheme managers, the same compulsory enrolment is practiced by CBHIF in some informal sector especially the tea farmers. Approximately a third of the respondents were private formal workers [29.4%] compared to those tied at 20% as Government work/civil servant and Trader/Businessman/woman while 11.8% indicated that they were farmers either large scale or subsistence. On their sources of money for pay registration premium, it was established that half of the respondents indicated they relied on salaries compared to 38.8% who cited sale of farm produce while 12.9% used their income from casual labor wages. On the Health Insurance membership status, a quarter were registered with NHIF, a third were registered with CBHIF while slightly less than a third had former membership with NHIF/CBHIF as opposed to mere 10.6% (18) who had never considered signing up or being covered with any form of health insurance. This indicates that about 89.4% (104) of all respondents have been or are active enrollees to HI with more than half accounting for NHIF former and current members. Despite of majority of the patient respondents having an income, Affordability and Accessibility of NHIF is rivaled by an alternative low cost HI which is CBHIF in Nyeri County.

On the satisfaction level, of health facility services, among the patient respondents in NHIF/CBHIF, majority were satisfied while a quarter were not; of whom a third attributed their dissatisfaction to Bad attitude of health workers, 27.9% cited waiting period while 20.9% indicated Refused drugs because the scheme owes facility. Among those members who had discontinued their membership with the NHIF, the study sought reasons for nonrenewal of membership, a third indicated that it was due to poor quality of care, a third were not satisfied with health facility while a quarter found it difficult in accessing services. Probing further on the reasons that may lead to rejoin the H.I. scheme, 41.9% indicated that drugs availability while 34.9% cited improved facility staff attitude as opposed to 23.3% indicated closeness of the facility to them. Further, assessing reason for none of family members being enrolled to H.I, slightly more than half indicated that recently learned about H.I., 22.4% indicated not aware of health insurance while 19.4% indicated unaffordable premiums. On enrolment to Health Insurance scheme, first the study sought to enquire reasons for none enrollment in H.I. Scheme. Forty six percent 46.5% indicated it was due to Poor quality of care, 24.1% cited don't trust providers, while 19.4% said that they never heard about H.I. Scheme. The study also assessed the reasons that may prompt enrolment to Health Insurance Scheme among the respondents. About 55.3% of the respondents cited was based on the improvement of facility staff attitude, 27.1% indicated availability of drugs. Generally, NHIF was perceived as adequate by those who are members already, however, former members feel they may rejoin scheme if facility staff attitude improve including drugs availability.

It was found that a third cited that they had confidence in the scheme, 16.5% indicated that they were satisfied with the services and that premiums were affordable while 12.5% noted that the benefit package was adequate. Further determining the reasons for not have joined the scheme, 22.4% indicated that they 'No confidence in schemes', compared to 20% who indicated Inadequate benefit package while 15.3% indicated premium collection time inappropriate and premiums unaffordable. Assessing the benefits they expected from the schemes, 37.6% indicated they expected Availability of drugs, 23.5% indicated Free health care in times of need while 18.8% indicated that they expected prompt treatment and services. Lastly, assessing their opinions on NHIF or CBHIF, 45.3% indicated that Members should be free to go to any facility OPD while 44.1% indicated that Insured clients spend more time in facility compared to in served. Amere 10.6% indicated that benefit package was not broad enough. On Health membership status, registered NHIF members majority were from urban area compared to a third from rural area. Respondents on CBHIF majority were from rural area with 6% coming from the urban area. Former NHIF member's majority came from urban area with 39% coming from the rural area. Those respondents who had never enrolled in any HI were 18 out of 170, and even so, none of them complained of unavailable scheme in their area. All patient respondents alleged to have never been involved in any insurance scheme meetings. However, all Heads of Health facilities were in agreement that CBHIF was the only scheme which regularly monitored services provided to their clients. Therefore, as much as availability of SHI in Nyeri County is considered good, citizen involvement in package design is lacking.

Assessing if the respondents had ever heard or were aware of either NHIF/CBHIF, majority indicated they were, as opposed to a 1.8% who cited 'no'. Assessing the type of knowledge the respondents had on the HI, slightly less than half indicated had on the prepayment of Health Care compared to a third who indicated they thought that HI constituted paying health tax to government while 15.9% said that HI was all about free health by government. In spite of good knowledge on SHI, acceptability was low with 24.7% enrolled to NHIF.

Among those who had discontinued their SHI membership from any of the providers, the study probed their reasons and it was established that 14.7% of all respondents had lost their jobs compared to 10% who thought that the Premiums were unaffordable while 3.5% indicated that it was due to Inaccessible insurance office for assistance. Further assessing if they were willing to join a prepay scheme for financial social health protection, slightly less than half of the respondents indicated that 48.2% were willing compared to 50% who either didn't know or were not willing to join. This may be attributed to cost of maintaining premiums. Affordability of SHI to former members and non enrolled respondents remains fair.

On information dissemination strategy on insurance, the major source of information was the radio followed by health facility sources. The information on benefits was, majority expected availability of drugs while the least, 20% did not know the benefits. However, there was no statistical significance between information strategy on insurance and uptake of the same.

Conclusions

It was found that the employed and those in businesses as traders were more likely to be insured. The results of the interviews, revealed that lack of money and high premiums are the main barriers to people joining the SHI. These findings are consistent with a previous study; where house hold income in both developed and developing countries has a positive association with the probability of buying health insurance where income significantly determines the amount of health insurance purchased (Osei-Akoto&Adamba, 2011). The study also noted that rural households are either accessing low cost health care financing, CBHIF, or are unable to pay and access health care at all. NHIF is compulsory, and in practice it is only the formal Sector workers' contributions that are compulsorily deducted premiums for the NHIF. While informal Sector workers are required to pay a premium, it is difficult to enforce the compulsory nature of the scheme for this group. The challenge remains as to how to persuade the large informal sector to join the SHI. However, some health provider heads are calling for the inclusion of the poor by complimenting the little they contribute to CBHIF, by the County Government, to ensure absolute health finance protection. Therefore, it was worthy to explore and evaluate the factors influencing enrolment in the SHI.

The perceived long waiting time, unavailable drugs including staff attitudes, was also predominantly chosen as a concern among respondents both insured and non-insured visiting the health facilities under study. It is to be hoped that these issues will be given the attention needed by the County Government of Nyeri to ensure not only the survival of the scheme but its expansion to the uninsured.

In the insurance scheme factors, though majority of SHI members felt that services offered were worth money invested in the scheme, no member has ever been involved or participated in any schemes meetings. Majority of those insured by either scheme are there by either default of employment or premiums being affordable. Major reasons chosen that may attract joining of the health insurance scheme were affordability of premiums and accountability of the scheme. Other suggestions from a health provider head was that the penalties for late premiums, by SHI, be reduced or embrace premium collection flexibility. The penalties are said to make many insured individuals default. Information dissemination strategy seemed to work well as almost all respondents were aware of SHI. Their major source of information was over the radios, with the second group learning about through health facilities while being attended to. Health insurance agents were mostly for CBHIF, unlike SHI where no respondent mentioned about an agent for the scheme.

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