Determinants of Uptake of National Hospital Insurance Fund Primary Care Health Services by Health Facilities in Nakuru Town, Kenya

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Abstract

Introduction: There is a growing international consensus on the importance of providing social protection by governments and international bodies against extreme poverty, disease, inequality, and vulnerability that could be barriers to the achievement of the Sustainable Development Goals. Of great importance is financing of healthcare services, specifically the National Health Insurance Fund primary care. Despite the provision of accessible and adequate health services being the primary goal of financing healthcare, the uptake of the primary care services scheme among service providers is still low. This paper analysis the level of uptake of National Hospital Insurance Fund (NHIF) primary care scheme amongst service providers in Nakuru Town. Specifically: It explains the influence of knowledge of service providers about the scheme on the uptake of NHIF primary care scheme. **Methods:** The study adopted a cross-sectional research design targeting 120 service providers from 60 health facilities that are accredited by National Hospital Insurance Fund (NHIF) within the scope of NHIF Nakuru branch. A random sample of 96 service providers was drawn from 48 health facilities. Data was collected using a structured questionnaire and an in-depth guide. Quantitative data was analyzed using descriptive and inferential statistics with the aid of SPSS version 21.0. **Results:** The study findings indicated that there was a significant positive correlation between the knowledge of the service providers and uptake of the scheme ($r = 0.552,\ p = 0.00 < \alpha = 0.01$). **Conclusions:** The study recommended need for the government and particularly the ministry of health to increase the level of knowledge and awareness among the general public about the membership and benefits of the scheme. Need for stakeholders to come up with mechanisms of addressing the various barriers affecting uptake of the scheme. A similar study be conducted in more health facilities in both rural and urban settings to relate the results of this study with all settings. Need for a study targeting the general public and other stakeholders to have a holistic understanding of the perception of all the critical stakeholders.

Key words: National Hospital Insurance Fund, Membership Contract, Primary Care Health Services, Social protection, Social injustice, Nakuru Town, Kenya

Introduction

There is a growing international consensus on the importance of providing social protection in health to the whole population to reduce their burden from extreme poverty, inequality, and vulnerability that could barriers of the achievement of development targets such as the Sustainable Development Goals (SDGs). The social protection in health entails putting in place risk management mechanisms that will compensate for incomplete or missing insurance, until a time that private insurance can engage in a more prominent role in that society. The persistence of extreme poverty, inequality, and vulnerability are perceived to be indicators of social injustice and structural inequality (Kawabata, 2002). The national health expenditure for many countries has risen with the burden of communicable diseases, leading to intensified demand for quality and affordable health services towards realization of universal health care.

According to National Social Protection Policy (NSPP, 2009), social protection entails policies and actions which enhance the capacity and opportunities for the poor and vulnerable to improve their livelihoods and welfare. The concept of health insurance was first conceptualized in United States of America and was develop from the existing accident insurance (Abour, 2012). There was the introduction of sickness coverage that entailed giving services on a prepaid basis from 2012 (Wellum, 2014).

In the SSA countries, there has been the evolution of healthcare leading to current systems that demonstrate a lot of fragmentation and complexity (McIntyre, Garshong, Mtei, et al., 2008). Recently, there is the tendency of many developing countries, for instance Ghana and Nigeria, to move towards a new or expanded role for various forms of Social Health Insurance (SHI) as they seek the universal health care, which the WHO champions (WHO, 2010). The main aim is the reduction of the overdependence of Out of Pocket (OOP) payments.

Health care financing is a major challenge for most African countries including Kenya. In Kenya, the government contributes 41% of the total health expenditure while 30% of the expenditure is contributed by households OOP (Ministry of Health GoK, 2015). The OOP mode of healthcare payment leads households into poverty as 6-10% of the households spend catastrophically on health (Xu, Evans, Carrin, Aguilar-Rivera, et al. 2007). It is worth noting that there has been a rise in the insurance coverage in the last decade accounting to 20% of Kenyans reported to have health insurance cover compared to about 10% that was covered in 2006.

Everyone should have access to health services they need without being forced into poverty when paying for them (WHO, 2013). Good health is necessary for well-being of every person. Even billionaires cannot enjoy life when their health is poor. Good health is also required for economic and social development (WHO, 2000). Workers have to be healthy to work and children have to be healthy to attend school and perform well, yet most developing nations has

achieved very little in regards to their populations' health. Equally, poor health has another critical impact: it causes poverty, in that large health expenditures can bankrupt families. Studies show that health expenditures are a primary cause of impoverishment (Fu, 1999). In May 2005, the World Health Assembly passed a policy resolution for the World Health Organization (WHO) whereby WHO would use SHI as the strategy for mobilizing more resources for health, pooling risk, providing more equitable access to health care for the poor, and delivering better quality health care (WHO, 2005a).

In move towards this, the National Hospital Insurance Fund (NHIF) was established under Cap 255 of the Laws of Kenya in 1966 as a department in the Ministry of Health to provide health insurance exclusively for those in the formal employment (Kenya Law, 2016). The Kenyan constitution emphasizes on the right to quality and affordable health services for all (Kenya law, Constitution of Kenya, 2016). However, the OOP payment to finance healthcare usually leads to inequitable and mostly catastrophic situations for most citizens, majority of who live below the poverty line. NHIF primary care offers basic minimum services that consist of diagnostic services, treatment of minor illness and pharmaceutical services as well as maternal and child health services (NHIF, 2016). According the NHIF Nakuru Branch, 109 (69.78%) hospitals out of the 156 accredited hospitals do not uptake the NHIF primary care. Despite the government's efforts, the uptake of the NHIF primary care in both public and private health facilities, which is only 30.22%, which has not been convincing.

This study sought to assess the factors that influence health facilities to provide primary care health services under the NHIF in Nakuru Town. Specifically, the study sought to assess the influence of knowledge of the service providers and the uptake of NHIF primary care health services in Nakuru Town.

Methods

Research Design

The study adopted a cross-sectional survey with a mixed method of data collection. The study was carried out in in Nakuru Town in Kenya. Both public and private hospitals were targeted for the study.

Study sample

The study targeted hospital administrators and finance officers in the selected hospitals. The hospital administrators gave information concerning their hospital as an NHIF primary care service provider while the finance officers who shed more light on the operations of the hospital in the financing of the services delivered to patients through the NHIF primary care. The researcher also targeted the NHIF officials as the study's key informants. All the 60 hospitals

that are accredited by NHIF in Nakuru Town were included in the study (NHIF, Nakuru Branch; 2017)

Sampling Techniques

The study involved multi-stage sampling techniques for different organizations and category of respondents (Babbie & Mouton, 2001). Hospitals were stratified categorically into three strata namely private, public and mission. Proportionate sampling was used to identify the number of hospitals to be selected in every stratum. For every selected hospital, the Administrator and the finance officers were selected purposively since they are best suited to give responses on NHIF primary care uptake in term of policies and financing respectively. The key informants (KI) that included the NHIF officials in charge of the primary care was sampled purposively. The sample size was 96 respondents from the various health facilities in Nakuru Town and one KII from the NHIF office.

Research Instruments

Data was collected from the selected hospital administrators and finance officers using a semi-structured questionnaire. The closed questions were mainly marked on a five-point Likert Scale format. In the Likert Scale, 5 will be the high end while 1 will be the low end. Open ended questions were to allow the respondents to express their opinions freely. An key informant interview guide was used to collect data from the Key informant. The questionnaire was pre-tested in four hospitals (two public and two private) in Naivasha Town which is homogenous to Nakuru in terms of population composition since both owns are cosmopolitan and are renowned for healthcare provision. In all cases, the Cronbach's alpha was above the accepted levels of 0.8. This implies that the questionnaire is reliable (Drost, 2012).

Data Analysis

Quantitative data was analyzed using SPSS version 21. Descriptive analysis entailed percentages, frequencies, mean and standard deviation to describe the basic characteristics of the population and inferential statistics involved the use of correlation coefficient to test non causal relationship and multiple regression to determine the nature of the causal relationship between the variables. The following regression model was used.

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

Ethical Considerations

The researcher sought an ethical approval from the Science, Ethic and Research Committee of the Kenya Methodist University and a research permit from the National Commission for Science, Technology and Innovation and the Nakuru County Health Office. Informed consent was sought from all participants and all information collected was keep in confidence.

Results

Demographic Characteristics of the Respondents

Out of the targeted 120 service providers from 60 health facilities in the study area, only 96 service providers from 48 health facilities responded to the study questionnaire. The demographic characteristics included age, gender, academic qualifications, position in the hospitals, number of years worked in the health facility, and the type of hospital studied **(See Table 1)**.

Table 1: Demographic Characteristics of the Respondents (n = 96)

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

Majority of the respondents 59(59.4%) were male, nearly half 44(45.8%) were aged 25-34 and 46(47.9%) had an academic degree. The respondents also varied in the number of years that they had worked in their current health facilities. Majority of the respondents 70(72.9%) had worked in their facilities for more than 3 years, while the remaining 26 (27.1%) had less than 3 years in the current stations. This suggests adequate work experience and enough period to reflect on the

application of NHIF scheme in the health facilities. From the 96 respondents, 50 (52.1%) were administrator while 46 (47.9%) were finance officers. The two groups are very critical in the implementation and operationalization of the NHIF scheme. From the type of health facilities, most 47(49.0%) were private health facilities, 32(32.2%) were public health facilities, and 18 (18.8%) were mission health facilities.

Uptake of NHIF Primary care

The study sought to assess the uptake of NHIF primary care health scheme within the scope of NHIF Nakuru Town Branch. It was triggered by slow pace at which health service providers have embraced the use of NHIF services for primary care services. Specifically, we assessed the application procedures, the compliance with requirements of NHIF primary care, and uptake in service delivery.

Majority of the respondents 84(87.5%) of indicated that their health facilities had applied for NHIF contracting and their facilities were assessed to establish eligibility for NHIF primary care scheme. While 12(12.5%) did not apply for NHIF outpatient accreditation. This translates to 42 health facilities in Nakuru town that had applied for NHIF accreditation. Among those who had applied (42 health facilities) for NHIF primary care health service accreditation, 78(69.0%) of respondents reported that the accreditation process was approved, which translates to 29 health facilities in Nakuru Town. The remaining 13 health facilities did not meet the requirements for eligibility for NHIF primary care. This suggest that NHIF primary care had conditions that a health facility must fulfill for it to be eligible for contracting.

Provision of Basic Primary Care Services Under NHIF Primary Care Scheme

The study went further to establish the level of uptake of the primary care health services by the health providers. The 58 service providers from 29 accredited facilities were asked to rate the level of provision of NHIF primary care for various basic primary care services. The level of provision of NHIF primary care was assessed from six basic primary health care services expected in any health facility in line with the NHIF Act (2016) which states that the minimum basic services should consist of diagnostic services, treatment of minor illness and pharmaceutical services as well as maternal and child health services. This study targeted six basic primary health care services including general consultations, pharmaceutical, laboratory, maternity, optical and dental services.

The respondents assessed and measured the extent of provision of six primary health services on a five-point likert scale on a scale of 1, indicating very low level of provision, to 5, indicating very high level of provision of NHIF for a specific primary care service. The scale included 1= very low – VL, 2 = low - L, 3 = average – A, 4 = high - H and 5 = very high – VH. The overall level of primary care was obtained by summing up the individual scores of each service to form

an uptake of NHIF primary care index score for each respondent. The higher the score, the higher the level of uptake of NHIF primary care. **Table 2** summarizes the results.

Table 2: Provision of Primary Health Services under the NHIF Primary Care Scheme *(n = 58)*

Type of Health Service	Response (%)					Mean	Std Dev.
	Very Low	Low	Average	High	Very High		
Maternity	0.0	5.2	0.0	55.2	39.7	4.29	0.726
Laboratory	0.0	1.7	0.0	69.0	29.3	4.26	0.548
Pharmaceutical services	0.0	5.2	0.0	58.6	36.2	4.26	0.715
General consultations	0.0	5.2	3.4	60.3	31.0	4.17	0.729
Dental	0.0	10.3	3.4	55.2	31.0	4.07	0.878
Optical	3.4	8.6	3.4	55.2	29.3	3.98	1.000

Results show that all the 29 health facilities were providing NHIF services in their basic primary care services with a mean score of between 3.98 and 4.29. NHIF primary care health services were provided more in maternity, laboratory and pharmaceutical services followed by general consultations, dental and optical services.

From the above level of uptake of NHIF primary care, the study went further to establish the quality of the services rendered by NHIF to hospitals in terms of timeliness, adequacy of the funds and integrity. The 58 respondents from the 29 health facilities that were NHIF accredited rated quality of the services of NHIF on the basis of four indicators including timeliness, adequacy of the funds and integrity. They rated the extent to which NHIF achieved timeliness, adequacy of the funds and integrity in its service delivery on a five-point likert scale on a scale of 1, indicating very low quality, to 5, indicating very high quality services of NHIF. The scale included 1= very low (VL), 2 = low (L), 3 = average (A), 4 = high (H) and 5 = very high (VH). The higher the score, the higher was the level of quality of service of NHIF primary care. Table 3 summarizes their results.

The respondents rated that three indicators above average (3.00), with a mean score of between 3.90 and 3.95. NHIF services were timely, with adequate funds and implements by staff with integrity. This suggests that accredited health facilities had implemented NHIF well leading to better results in terms of quality services.

Table 3: Quality of Services by NHIF Primary Care Health Services *(n = 58)*

Service	Response (%)					Mean	Std. Dev.
	Very Low	Low	Average	High	Very High		
Timeliness	0.0	10.3	6.9	60.3	22.4	3.95	0.847
Adequacy of funds	0.0	12.1	6.9	56.9	24.1	3.93	0.896
NHIF staff implement PC with integrity	0.0	8.6	13.8	56.9	20.7	3.90	0.837

Knowledge of NHIF Primary Care

The study sought to determine the influence of knowledge of the service providers on their mandate on the uptake of NHIF primary care scheme in Nakuru Town **(See Table 4)**.

Table 4: Knowledge of NHIF Primary Care Health Services ***(n = 96)***

Statement	Response (%)					Mean	Std Dev.
	Very Low	Low	Average	High	Very High		
Awareness of the various aspects of NHIF primary care							
Contribution by the employer to the scheme	1.0	1.0	5.2	64.5	28.1	4.18	0.665
Contribution by members to the scheme	1.0	4.2	3.1	62.5	29.2	4.15	0.754
Beneficiaries of the scheme (age, relationship to the contributor).	2.1	4.2	1.0	72.9	19.8	4.04	0.753
Benefits package of the scheme	2.1	6.2	2.1	67.7	21.9	4.01	0.827
Requirements of the service providers to implement the scheme.	2.1	6.3	2.1	70.8	18.8	3.98	0.808
Funding mechanisms of the scheme.	2.1	6.3	2.1	71.9	17.7	3.97	0.801
NHIF primary care knowledge creation initiatives							
Staff often sensitized on NHIF services	7.3	0.0	5.2	54.2	33.3	4.06	1.024
Informative posters displayed for customers within the facility on NHIF services	7.3	5.2	8.3	58.3	20.8	3.80	1.062
Mechanism by NHIF for health providers and clients to give their feedback.	9.4	3.1	10.4	57.4	19.8	3.75	1.105
Community outreaches to sensitize citizens on NHIF benefits	9.4	5.2	13.5	51.0	20.8	3.69	1.145

The level of knowledge was assessed from two dimensions including level of awareness of the various aspects of NHIF primary care scheme and the NHIF primary care knowledge creation initiatives. The results show that most respondents were more aware of the various aspects of NHIF primary care. This is indicated by them rating all the six aspects of NHIF primary care above average (3.00), with a mean score of between 3.97 and 4.18. They were aware of the contribution by the employer and member to the scheme, beneficiaries of the scheme, the benefits package of the scheme, requirements of the service providers to implement the scheme, and the funding mechanisms of the scheme. This suggests that the service providers had adequate knowledge of the NHIF primary care scheme and therefore expected to be more aware of its merits and demerits and mode of operation and implementation.

To test the null hypothesis which stated that, "there is no significant relationship between knowledge of the service providers and uptake of NHIF primary care health services in Nakuru Town", the researchers used the Pearson's Correlation Co-efficient (r) and chi-square test to test whether this hypothesis was significant or not. Table 5 shows a correlation coefficient matrix of knowledge of NHIF primary care and uptake of NHIF primary care.

Table 5: Correlation of Knowledge and Uptake of NHIF Primary Care

		Knowledge of NHIF	Uptake of NHIF
Knowledge of NHIF	Pearson Correlation	1	.552**
	Sig. (2-tailed)		.001
	N	96	58
Uptake of NHIF	Pearson Correlation	.552**	1
	Sig. (2-tailed)	.000	
	N	58	58

** Correlation is significant at the 0.01 level (2-tailed)

The results indicate that there was a significant positive relationship between the level of knowledge of NHIF primary care and level of uptake of the NHIF primary care ($r = 0.552$, $P < .001$). The positive correlation between the two variables suggests the higher the level of knowledge of NHIF primary care, the higher will the expected level of uptake of NHIF primary care, and vice versa. Since $P < 0.001$), the null hypothesis one was rejects and concluded that there is a significant relationship between knowledge of the service providers and uptake of NHIF primary care in Nakuru Town.

Discussion

There has been the establishment of healthcare financing policies globally that are championed by WHO; adoption of social health insurance (SHI) in both developed and developing countries; National Health Insurance Scheme (NHIS) in Nigeria, Ghana, Rwanda, and Tanzania (Wellum, 2014); NHIF enacted in Kenya through an act of parliament number 8 of 1999. Furthermore, WHO formulated the Primary care encompasses the health financing systems that have three inter-related functions, whose main aim was the achievement of the Universal Coverage (UC) (Dambisya & Ichoku, 2012; Biswas, et al., 2009; Kruk, et al., 2010; WHO (2000). The features of the healthcare facilities who are the service providers are also considered to be vital in the success of NHIF primary care implementation. These features basically indicate the service providers' capability and comprise of; Technology, considered to have many benefits, facilities (hospitals and clinics), personnel (number of nurses and physicians) among other resources that create the capacity to provide health services (MedPAC, 2007).

The researcher also reviewed literature in attempt to establish the importance of the service providers understanding of their mandate and roles in the implementation of NHIF primary care. It is important to note that a hospital as the primary healthcare service provider should be a complex institution who apart from rendering purely medical functions, is also its responsibility to provide shelter, heat, food and other services to its patients and staff. The complexity of the roles sometimes leads to clash among several competing forces as well as unlimited challenges, for instance culture, despite the health professions operating on the basis of achieving quality healthcare (Teisberg, 2006).

The process of care may be examined from multiple perspectives: the sequence of services received over time, the relationship of health services to a specific patient complaint or diagnosis, and the numbers and types of services received over time or for a specific health problem. Health care providers should interact with patients in a process that is anchored on quality service delivery characterized by patient's safety protection, timely access to healthcare, diagnosis and treatments provision consistently with scientific evidence as well as delivering the services in the best professional practice, healthcare should be patient centered, efficient provision of services as well as healthcare provided equitably (Sochalski and Aiken, 1999).

The literature reviews some of the benefits to the population as well as by the service providers attributed to the implementation of NHIF primary care. The establishment of financing healthcare is beneficial in that it entails sharing the risk among the population and avoiding catastrophic health-care expenditure and impoverishment of individuals as a result of seeking care. There is also high accessibility of healthcare services and most importantly managing the cost of health services, health insurance also influences health care seeking behaviour among citizens as well as preventing delays, self-treatment and use of alternative forms of care which is

detrimental to the citizens (Fidler, 1993). In Kenya, the NHIF primary care is key ingredient in accelerating the attainment of the country's development blue print, the Vision 2030 as it champions for solidarity, where income and risk cross-subsidization which plays a major role in upholding responsibility, ensuring that the health system puts people first and that health care providers offer quality services and promote efficiency; equity, where all Kenyans are guaranteed of access to a basic package of health services according to their need (GoK, 2010).

However, the implementation of the NHIF primary healthcare uptake and implementations does not happen without challenges. As for the case of SSA countries (Nigeria, Ghana and Tanzania), implementation of healthcare financing policies, that is the UHC, is mulled with a wide range of constraints; over dependence pressure on government-provided health facilities dwindling funding of health care among others (McIntyre et al., 2008). There is also a lacuna in the law exposing the citizens to discrimination since persons who have no access, or have inadequate access, to social security cannot make any claim or demand for social security as a matter of right and the State and other actors have no enforceable legal duty to provide that right (Mendoza, 1990). Both the service providers and recipients manifest inadequate capabilities and training. The uptake is also affected by numerous uncontrollable external environmental constraints that culminate into delays or deviations in the implementation (Shaw and Griffin, 2007).

The respondents rated all the four NHIF primary care knowledge creation initiatives above average (3.00), with a mean score of between 3.69 and 4.06. This suggests that the respondents were more aware of the available knowledge creation initiatives aimed at sensitizing service providers and targeted consumers about the scheme. They were aware of the staff sensitization about NHIF services, informative posters displayed for customers within the facility, mechanism by NHIF for health providers and clients to give their feedback, and community outreaches to sensitize citizens on NHIF benefits. This suggests that the government had put in place adequate mechanisms to create awareness among the providers and clients about the NHIF primary care scheme. This could be attributed to the vigorous campaign by the Ministry of Health and other stakeholders about social service scheme in the country. Such service providers are expected to high uptake of the scheme in their facilities. These findings support previous studies such as Sochalski and Aiken (1999) explaining the need for forums that create room for the interaction between the health care providers and patients.

Conclusion

Based on the summary findings, the study concludes that NHIF primary care scheme is an important social insurance scheme aimed at bringing equity in access to basic medical services. NHIF primary care scheme is effective in addressing basic primary care needs leading to high level of utilization. Service providers had adequate knowledge of NHIF primary care services in

terms of what it entails and how it is supposed to be operationalized. NHIF primary care scheme has numerous benefits to the patients and the health facilities in general which is indicated by the positive perception of the service providers and also the high level of utilization by the beneficiaries.

Service providers' knowledge plays a great role in determining acceptance of the scheme and successful implementation by the health institutions without which the scheme will not achieve its objective of increasing access to care to the population. The Government and all stakeholders should ensure levels of awareness are enhanced to all healthcare providers if we have to achieve more participation by health facilities. There was no competing interest when this research was carried out and the author funded the research entirely.

Competing Interests

The author(s) declare no potential conflict of interest with respect to the research and publication of this article.

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