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The influence of Medical Insurance Affiliation on Health Care Equity in Makueni County, Kenya

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Abstract**:** *The objective of this study was to determine the influence of medical insurance affiliation on health care equity in Makueni County, Kenya. The study was based on system theory. It applied cross-sectional survey and phenomenological research designs. Qualitative and quantitative approaches were used. Yamane (1967) formula was used to get the sample size of 400 health care consumers. Purposive sampling technique was used to get the health care managers, officials, health care workers and administrators. To recruit the 400 universal health care consumers, proportionate stratified random sampling technique was used to get the respondents from the three selected sub-counties (Kaiti, Kilome and Makueni). Structured and unstructured Questionnaires were used to collect data using face to face method. Interviews were conducted with the county health department officials and health care workers in public health care facilities. Study results revealed that majority of health care consumers had medical insurance. It was revealed that UHC was depleted before the end of the financial year consequently affecting delivery of medical goods and services. UHC has reduced out of pocket medical payments at the house-hold level. It was recommended that there was a need to utilize medical insurance schemes in a more equitable manner.*

Key terms: Universal health coverage, Medical affiliation, health care equity and medical out of pocket payments

1. Introduction

Universal health care coverage (UHC) gives hundreds of millions of people–particularly those in the most vulnerable situations–hope for better health and poverty prevention. Universal coverage is firmly based on the 1948 constitution of the World Health Organization (WHO) declaring health a fundamental human right and on the Health for All agenda as set out in the 1978 declaration of Alma-Ata: One, a solid, effective, well-run health system; two, a health services funding system; three, access to critical medicines and technologies; and finally, sufficient capacity for well-trained, motivated health workers (WHO, 2010). The World Health Organization proposed that countries spend at least 5% of their total annual GDP on health care; by 2015/16 (CMS NHI Committee members, 2018).

Taiwan and South Korea have implemented a single payer model with a government-run health insurance system that not only handles the funding, but also the collection of claims, performance control, and fee negotiation and provider payment. Taiwan implemented a new supplementary financing scheme in January 2013 that added a two percent premium on six additional sources of non-payroll income .This reform significantly improved the NHI's financial status, turning it from a large deficit status to one with a solid surplus (Cheng, 2015). For today's single payer social health insurance schemes, National Health Insurance (NHI) in Taiwan stands out as an example of a well-functioning system achieving equity and social harmony, good cost control, and administrative efficiency. Taiwan's NHI incorporates a government-administered universal health insurance system with a largely private delivery system, accounting for 52.2% of Taiwan's total national health expenditure of 6.6% of GDP (2013) (Ministry of Health and Welfare, Taiwan, 2014).

Amado, et al (2012) confirmed that in 2015/16 South Africa spent about 8.9 percent on health, well above most middle-income countries. It continues to have a high disease burden and poor health outcomes. Only 4.3% of GDP is spent on the public sector of 8.9% of GDP, which funds about 84% of the population. There is an unfair distribution of human resources within each sector between the public and private healthcare sectors. Through introducing the NHI in South Africa, the UHC aim seeks to address the challenges with the overall goal of maintaining the right to health for all rich and poor people. It is of paramount importance to ensure that all South African people and legal residents have access to

promotional, preventive, curative, rehabilitative and palliative healthcare services that are of sufficient quality and accessible without placing the population at risk of financial hardship (Amado, et al, 2012c).

Zikusooka, Kwesiga, Lagony and Abewe (2014) confirmed that, in 2012, in Uganda, total health expenditure accounted for 8.0% of the country's GDP. This was a significant commitment of the country's resources available to the health sector. It was, however, still below the global average of 9.2%. The Uganda government's task of ensuring adequate coverage is encapsulated by government spending per capita on health that was about $26 (in terms of purchasing power parity). Given that overall household consumption was a significant share of GDP (83%) in 2012, high out - of-pocket payments were also likely to have had a significant impact on the health of households. (Net medical consultation, 2012).

Kenya is yet to make a formal UHC policy statement that is enshrined in law. The current 2014–2030 Kenya Health Policy is the most detailed policy document addressing some aspects of UHC. The policy objective is "to achieve universal coverage of critical services that contribute positively to achieving policy goals" provides all Kenyans with a documented commitment to achieving UHC. To turn the NHIF of the state into a mandatory social health insurance is the most relevant approach in relation to UHC. The goal of these proposed amendments was to move the current health funding structures to pre-payment schemes, minimize reliance on out - of-pocket payment, and attract more funds through membership contributions into the health sector (Obare, Brolan and Hill, 2014).

In Makueni County, Universal health care coverage programme was initiated in 2013. This programme was conceptualized from devolution in the constitution promulgated in 2010 and Kenya's 2030 agenda. According to the County executive, the programme (Makueni Care) works in the public health care institutions within the county. The objective of *Makueni Care* is the implementation of the best healthcare package possible, given the county-level resource constraints. Under the programme, each household pays Sh500 per year to access treatment in any county health facility at no additional charge (Government of Kenya, 2018).

All Makueni residents and non-residents who have lived in the area for six months are eligible for the UHC programme. 33.7% of the annual budget goes to the healthcare program in Makueni County. The county has expanded health care facilities from 109 to 232 significantly reducing the distance of 9 km that people had to travel in order to reach the closest health facility. The program had a total of 72,000 households in April 2018, up from a total of 25,000 in 2016. The county has hired more healthcare workers from 977 in 2013/14 to 1,462 (2018) since the system was developed to accommodate the influx of patients from other counties. Healthcare workers, including specialist doctors, medical officers, dentists, nurses, and clinical officers, have been certified in different healthcare disciplines (Standard News Paper, April 5, 2018). Although the concept of Universal Health Coverage has been highly discussed and publicized in the county, there exist various challenges towards full realization.

1.1Statement of the problem

The attainment of Universal Healthcare is key for the realization of a healthy nation. Medical affiliation is purposely to take care of health uncertainties. Before the realization of UHC in Makueni County, most of the residents depended on out of pocket payments for health care services. A number of medical affiliations are currently available including National health insurance fund (NHIF), Makueni Care and other privately sponsored medical covers. The vulnerable populations are however unable to afford the private and the NHIF covers due to socioeconomic constraints. Poverty index of the County is high and the residents still feel that the cost of acquiring Makueni Care is too high for the majority. Some residents are however hesitant to register for Makueni Care due to the limited benefits such as drug shortages, human capital, and unplanned referrals among others. This continues to risk the health care consumers who depend on out of pocket payments for their health care services and consequently affecting their house hold income. In a situation where the peoples' house hold income is negatively affected by medical out of pocket payments, there may be high cases of morbidity and mortality hence County underdevelopment. There are few studies that have been done to assess the influence of medical insurance affiliation on health care equity in Makueni County. It is therefore against this background that this study was conducted. The objective of this study was to determine the influence of medical insurance affiliation on health care equity in Makueni County, Kenya

1.2Study hypothesis

This study was guided by the following hypothesis which was tested to measure the significant level of relationship.

$H_0$1: There is no significant relationship between medical insurance affiliation and healthcare equity in Makueni County.

H_a1: There is significant relationship between medical insurance affiliation and healthcare equity in Makueni County

1.3Significance of the study

Findings of this study shall be beneficial to informing individuals, communities and the state towards the realization of Universal Healthcare by enrolment in medical insurance schemes. The findings are also speculated to be useful in policy formulation and

amendment, especially the healthcare policy, and this is geared towards the betterment of the healthcare sector in Makueni County and the entire country. The study shall inform key decisions by both the private and the public sector in terms of healthcare financing.

1.4 Conceptual Framework

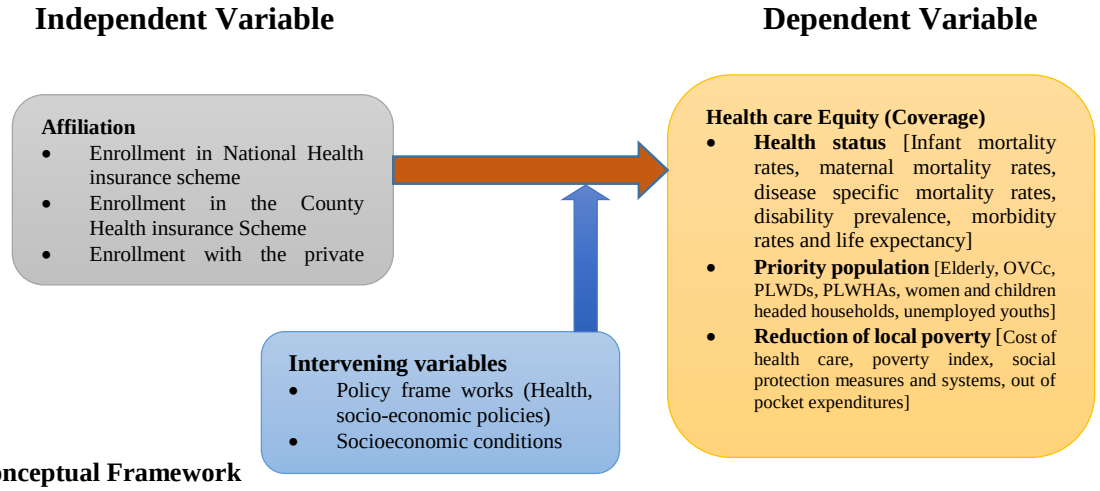

Figure 1: Conceptual Framework

2. Literature Review

2.1 Theoretical review

The system theory on Universal Health care and equality

Three individuals contributed to the approaches that underpin social systems theory: Parsons (1902–1979); Buckley (1922–2006) and Luhmann (1927–1998). The influential structural-functional theory of society by Parsons was originally based on cybernetic-derived process theories and believed that all structures and subsystems of components could be decomposed. He compared the functions and roles of the system to the arrangement of the organs and functions of the human body (Sawyer, 2005).

The theory, from a social organizations point of view is interested in understanding what goes on in institution in order to improve their effectiveness and efficiency. It argued that a system is a set of interrelated components surrounded by a boundary that absorbs and transforms inputs from other systems into outputs that serve a function in other systems. Though many schemes catering for health care financing in Makueni County exists, there is lack of clear guidelines on how coordination with other stakeholders for efficiency.

The strength of systems theory on Universal health care and equity is depicted by the fact that delivery of effective and efficient health care services is determined by the role different organs inside and outside an organization play. All the players responsible for universal health care in Makueni County contribute individually towards UHC and equity in a sustainable manner. Currently, this role has been assumed by the political arm of the County. Health care workers, the citizens and other stakeholders have minor role to play towards equitable UHC in Makueni County. However, it is not realistic to bring different stakeholders for a common cause like UHC that affects the social, economic, political and environmental components in which different groups benefit. Despite the weakness and strengths of this theory, complementary approach was applied to demonstrate its use.

2.2 Empirical review

Medical insurance affiliation and health care equity

In health care financing, shifting financing into mandatory and more inclusive prepayment schemes spreads risk and financial burden in a fair and efficient way. Population health insurance coverage may bring about health care equity especially due to the uncertainties associated with ill health. Health care insurance may be delivered through many channels including mandatory public contributions, private sector, community health insurance and out of pocket financing. Today, 29 million people in the United States are uninsured and there are still significant gaps in access along financial, gender and racial lines. Although most Americans agree that further reform is needed, the proper direction for reform especially following the 2016 presidential election is highly contentious (Gaffney and McCormick, 2017).

Arokiasamy and Goli (2013) argue that India's provision of health care and health funding is marked by too little government spending on health, inadequate health insurance coverage, decreasing use of public health care, compared with the highest levels of private out - of-pocket health spending worldwide. However, a number of previous studies on health funding and use of health care in India have shown that poor and impoverished households have been forced to spend a

much larger proportion of their meager income on health care compared to households that are socio-economically better off. The burden of healthcare, especially inpatient care, was overwhelmingly high for the poor and vulnerable.

A study carried out in Ghana by Fidelia (2018) on Examining equity in health insurance coverage: An evaluation of the National Health Insurance Scheme in Ghana found that, in 2008, more than 60% of Ghanaians aged 15–59 years were not covered by the NHIS with marginally more females (38.9%) than males (29.7%). In the richest income quintile and urban residents, exposure was the strongest among highly educated professionals, those from households. Especially concentrated among the weak was the lack of coverage. Universal coverage under the NHIS with a marked exclusion of the vulnerable is far from being achieved. To order to enroll the poor under the NHIS, concerted action is needed.

In Rwanda, a study carried out by Collins, Saya and Kunda (2016) on the *"Impact of Community-Based Health Insurance (CBHI) on Access to Care and Equity in Rwanda"* confirmed that, CBHI's national roll-out extended coverage from less than 7% of the target CBHI population in 2003 to 74% in 2013. The growth in coverage and the high number of covered households reflect the progress. Findings from the Rwandan literature review (UR-CMHS-SPH, 2013) revealed that insured persons in Rwanda were much more likely to use modern health care in particular, that children whose mothers had any type of health insurance were twice as likely to use modern health services as other mothers in the event of cough or fever, and that women covered by health insurance were 1.6 times more likely to use modern health services than other mothers in the event of cough or fever. However, if necessary, children were more likely to use medical care compared to 2005 in 2008. Collins, Saya and Kunda (2016) further found that the equality of outpatient use across the population, the Enquête Intégrale sur les Conditions de Vie des ménages / Enquête Intégrale sur les Conditions de Vie des ménages / Enquête Intégrale sur les Conditions de Vie des ménages (EICV) trend analysis showed that the situation in 2000 was highly unfair, with 10% of outpatient visits used by the poorest quintile and 40% used by the poorest quintile.

In Kenya, Health care financing through insurance cover is done by the private and public sector. The Private sector invests in health insurance as a business while the government of Kenya has human based approach. In order to achieve one of the government's pillars in its development agenda, Universal Health Coverage (UHC), the government has introduced health care financing through the Social health insurance – National Hospital Insurance Fund (NHIF). To achieve this, the government of Kenya has come up with several programmes including the following:- Health Insurance project for Elderly People and Persons with Severe Disabilities (PWSDs); Health Insurance Subsidy Programme (HISP) for the orphans and the poor; Free Maternity care (Linda Mama Project); Elimination of user fees in public primary health care facilities; Informal Sector Health Insurance Coverage and Formal Sector Medical Insurance (Medical Insurance Cover for Civil Servants Retirees). (KIPPRA, 2018).

In Makueni County, literature review on health insurance cover is still limited, but the picture is not different from what is happening at the National level. The Kenya institute for public policy research and analysis (KIPPRA ,2018) on "achieving universal healthcare coverage: lessons to consider" narrates that, Makueni County residents, through Makueni Care, have been enjoying health cover throughout the year for a subsidized price of Ksh. 500 per family. The system piggybacks the free primary healthcare policy of the national government and the national coverage offered by NHIF. The campaign began with a pilot program offering free treatment to people over the age of 65. The County Government has invested in expanding services, including an additional 113 hospitals and health centers, and within five years has more than doubled the number of health facilities. These developments have reduced the average distance to a health facility from 9km to 5km. In 2013, compared with 38 doctors; the county now has 160 physicians. Nevertheless, this could divert resources from primary and preventive care to people seeking medical care for minor complaints. Moreover, the influx of people from neighboring counties could put pressure on county resources (KIPPRA, 2018).

3. Methodology

The study applied cross-sectional survey and phenomenological designs. Both qualitative and quantitative techniques were employed to measure the extent to which the independent variable affects the dependent variables in Makueni County Health systems. To complement this, phenomenological design was used to collect qualitative data for the study**.** According to the CIDP (2013), the total projected population in 2017 was 1,002,979 out of 488,378 are male and 514,601 females. The Yamane (1967) formula was used to get the sample size of 400 health care consumers. Purposive sampling technique was used to sample the health care managers and officials in the county health care facilities and county health department respectively. To get the 400 universal health care consumers, proportionate stratified random sampling technique was used to get respondents from the three selected sub-counties. As stipulated by Mugenda and Mugenda (2003) a population of less than 10,000 can be sampled using 10-30% of the total. In this case, any number above one is a good representative of the six sub-counties. The study therefore used three Sub-counties to ensure proper representation. Randomly, the Sub Counties selected were: Kaiti, Kilome and Makueni Sub-Counties. Both structured and unstructured Questionnaires were used to collect data from the beneficiaries of UHC using face to face method. Interviews were conducted with the county health

department officials and the health care workers in public health care facilities. Descriptive and inferential statistics were used in quantitative data analysis. Quantitative data was presented in tables and diagrams while Qualitative data was summarized thematically, then coded using unique identities and analyzed using verbatim. Autonomy and informed consent ethical consideration were observed during the study.

4. Results and Discussion

Table 1: Medical Insurance affiliation and health care equity

	Number issued	Returned	Return rate%
Consumers	400	399	99.8
Health care workers &	68	68	100.0

As depicted in table 1, the response rate for health care consumers was 399(99.8%) while the response rate key informants (health workers and administrators) was 68(100%).This was due to high willingness of the study respondents to participate in the study as well as adequate study period allocated.

The socio-demographic characteristics of the study respondents were determined. Key variables applied were gender; Sub County, age bracket and house hold income. The researcher sought to determine the study respondent's gender. Gathered and analyzed data was presented in table 2.

Table 2: Gender distribution

Gender	Healthcare Consumers		Healthcare workers and administrators	
	Frequency	Percent %	Frequency	Percent%
Male	159	39.8	33	48.5
Female	240	60.2	35	51.5
Total	**399**	**100.0**	**68**	**100.0**

Findings displayed in table 2 above shows that 159(39.8%) of the health care consumers were male while the rest 240(60.2%) were female. This implied that majority of the health care consumers who were available and willing to participate in the study were of the female gender. On healthcare workers and administrators, 33(48.5%) were male while 35(51.5%) were female. Even though there was very little margin between the number of male and female health care workers and administrators, the researcher assumed that Makueni county government had achieved gender equity in provision job positions in the Health department.

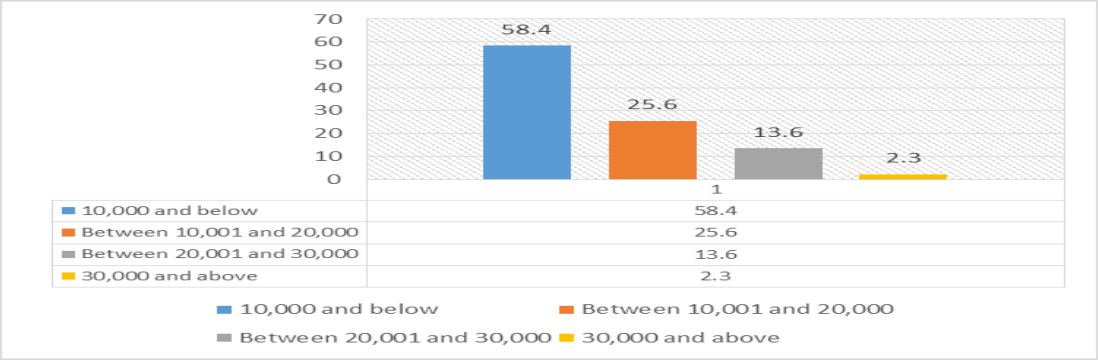

Figure 2: Health care Consumers' Household income level (Kenya shillings)

The researcher sought to examine house hold income level. Findings in figure 2 above indicated that majority 233(58.4%) of the health consumers' income level was below ksh. 10,000, another group 102(25.6%) earned between ksh.10, 001 and ksh. 20,000, further, 55(13.8%) of the health care consumers earned between ksh 20,001 and ksh 30,000 while only 9(2.3%) earned ksh.30, 000 and above. This implied that majority 335(84%) of health consumers in Makueni County earns ksh. 20,000 and below with very few 64(16.1%) earning

above ksh. 20,000.This implied that Universal Health care would be very important since accessibility and affordability among its consumers would be realized. These findings were presented in figure 4 below. World Bank's report (2018) ascertained that, almost half of the world's population - 3.4 billion people still struggles to meet basic needs. Further, World Bank affirmed that, living on less than $3.20 per day reflects poverty lines in lower-middle-income countries. In Makueni County case, majority of the county residents live by less than 3.3 USD per day.

The study respondents were asked to state their sub county and gathered and analyzed data in this regard was analyzed and presented in table 3.

Table 3: Sub-County of residence

Sub County	HC consumers		HC workers and Administrators	
	Frequency	**Percent**	**Frequency**	**Percent**
Kaiti	100	25.1	33	48.5
Makueni	200	50.1	25	36.8
Kilome	99	24.8	10	14.7
Total	**399**	**100.0**	**68**	**100.0**

Findings in table 3 reveal that 100(25.1%) of the health care consumers were from Kaiti sub county, 200(50.1%) were from Makueni sub county while 99(24.8%) where from Kilome sub county. On health care workers and administrators, 33(48.5%) were from Kaiti sub county, 25(36.8%) wee from Makueni sub county while 10(14.7%). This implied that citizens from different areas of the county were well represented. Notably, the sample size was directly proportionate to the sub county population. This was considered to be a very good representation able to provide quality findings about medical insurance affiliation on health care equity in Makueni County.

The researcher sought to find out the respondents' level of education. The data was analyzed and represented in tables 4 and 5 below:

Table 4: HC Consumers' Level of Education

	Frequency	Percent
No Formal Education	27	6.8
Primary level	135	33.8
Secondary level	164	41.1
Tertiary level	73	18.3
Total	399	100.0

Findings depict that 27(6.8%) of the healthcare consumers had no formal education, 135(33.8%) attained primary level of education, 164(41.1%) had secondary education while 73(18.3%) attained tertiary level of education. This implied that there was good transition from primary school to secondary school but minimal transition from secondary to colleges. This could be attributed to the high poverty levels in the county. Formal education was assumed to influence health literacy level in the county.

The health care workers study respondents were asked to state their level of education

Table 5: Health Care Workers and Administrators Education level

	Frequency	Percent
Diploma	47	69.1
Bachelor's degree	18	26.5
Masters	2	2.9
Others	1	1.5
Total	68	100.0

Findings displayed in table 5 above show that 47(69.1%) of the healthcare workers and administrators attained a diploma, 18(26.5%) had a bachelor's degree while 2(2.9%) had attained master's degree. This implied that the healthcare workers and administrators were well qualified to perform their duties.

The researcher sought to examine whether residents of Makueni County had subscribed medical insurance scheme. Findings were displayed in table 8.

Table 6: Subscription to medical insurance scheme

	Frequency	Percent
Yes	315	78.9
No	84	21.1
Total	399	100.0

Findings from table 6 above shows that 315(78.9%) of the respondents had medical insurance scheme while 84(21.1%) had no medical insurance scheme. This implied that majority of residents in Makueni county had medical insurance scheme affiliation while the rest did not have it yet. These findings concurred with Makueni Governor who ascertained that, with the launch of Makueni Care health scheme, in October 1, 2016, about 62.3% of the county population had pre-paid access to health services and are covered under the county scheme.

Table 7: If yes which insurance cover

	Frequency	Percent
Makueni Health Care Insurance Scheme	220	55.1
National Hospital Insurance Fund(NHIF)	95	23.8
Health Insurance project for Elderly people and persons with severe disabilities	1	.3
A "No"response	83	20.8
Total	399	100.0

Out of those who had agreed to have the medical insurance, the researcher did further investigation in order to understand which type of insurance scheme the health care consumers had enrolled to. As revealed in Table 7 above, 220(55.1%) of the health care consumers had Makueni health care insurance scheme, 95(23.8%) had National Hospital Insurance Fund (NHIF) while only 1(0.3%) were enrolled for elderly people and persons with severe disabilities insurance scheme. This implied that most of the health care consumers in Makueni County had sub scribed to Makueni Health Insurance Scheme. The researcher assumed that the high number of residents with Makueni Health Insurance Scheme affiliation was as result of friendliness and affordability of the insurance schemes.

Respondents were asked to state whether enrolment to insurance scheme was voluntary in the county. From the findings, 313 (78.4%) of health consumers agreed while 86(21.5%) disagreed. This implied that majority of the health care consumers believed that enrolment to health insurance scheme was voluntary but not mandatory. However, Carrin, Waelkens, & Criel, (2005) argues that Voluntary enrolment is likely to bring about selection bias and/or poor economies of scale. One of the Heath care consumer (HCC4) who agreed with this finding stated that;

"*The registration of Universal Health Care medical scheme is voluntary. You are not forced. Only those wants will register and if you don't want you stay but when you go to clinic you will buy medicine since you don't have the insurance." (Health care consumer HCC4, 16th August 2019).*

Table 8: Is the enrolment to Makueni health insurance scheme voluntary

	Frequency	Percent
Yes	313	78.4
No	86	21.5
Total	399	100.0

Respondents who had claimed to have had insurance schemes were asked whether they still incur out of pocket payments. Findings were presented in table 9 below.

Table 9: Out of pocket payment for those who affiliated with medical schemes

Responses	**Frequency**	**Percent**
Yes	150	37.6
No	165	41.4
No response	84	21.0
Total	**399**	**100.0**

Findings in table 9 show that 165(41.4%) of the health care consumers who were affiliated with medical schemes stated that they had never done out of pocket payment while 150(37.6%) of the health consumers had done out of pocket payments since the inception of Makueni care. This implied that a greater number (41.4%) of health care consumers who are already affiliated with medical insurance scheme in Makueni County do not incur out of pocket payments but instead the insurance scheme caters for everything while another fairly big group (37.6%) pays out of pocket in order to get treatment. Medical affiliation has therefore helped households to take care of their income as explained by KR2 from Kaiti Sub-County below.

> *"Before Makueni Care, we could discharge a patient but they could stay in hospital for more than three weeks because they did not have the money to settle the bill. When you find out, they say they had four goats; they are looking for market to sell them. This is always painful that a person has a child and this is the father in hospital and the mother has to sacrifice those goats instead of paying school fees, she has to pay for the husband's hospital bill so the child will not go to school that term but will stay at home. In Makueni, we have always tried to wave the medical bill. Currently, with UHC, the residents enjoy. Even with a headache it's so beautiful, they know they will go to that hospital and say they have a headache nipatie Panadol ndio hii card. It's just like a pass, and when they come with the headache we examine them and even it may be a complicated disease. May be they have a tumor in the brain; you are able to pick early enough because now they are freely coming to hospital without fear of the cost." (KR 2 Kaiti Sub-County. 22nd August, 2019)*

The above findings are in line with the sediments of Gathara (2018) that Makueni residents can access free primary healthcare at dispensaries and health centers courtesy of the national government, free treatment, including inpatient care and ambulatory services, at the 13 level 4 hospitals within the county paid for by the county government, and, if they're subscribed to NHIF, free care at referral facilities outside the county.

The researcher sought to understand the reasons why health seekers used to pay out of pocket when they already had the medical insurance scheme.

Table 10: Why do out of pocket payment when already enrolled to a medical insurance scheme

	Frequency	Percent
No medication thus we buy from other places	111	27.8
No qualified staff thus you are referred to other places	2	.5
For quicker services	16	4.0
Unacceptable in other facilities	9	2.3
Long distances to the facilities where the cards are accepted	2	.5
Paying for imaging services	1	.3
Total	399	100.0

From the findings, 111 (27.8%) of the respondents cited lack of medicine at the respective health centers, 2(0.5%) claimed lack of medical professional at some health centers, 16(4%) stated to be paying out of pocket to the health care provider on duty in order to get quicker services, 2(0.5%) stated that out pocket was used to pay for long distance transport to centers where the insurance cards could be accepted while 1(0.3%) claimed out pocket was used to pay for emerging services. This showed that the greatest reason (27.8%) for out of pocket payment amongst health seekers in Makueni County was as a result of lack of medicines at the health center hence making the consumer to buy in other places. Notably, some of the health seekers (4%) bribed the health workers in order to be favored and get services quicker than their sick counterparts. In an interview with one of the Health care consumers (HCC 20), the following was narrated in relation to compensation;

> *"…they send money later after I have paid the bill for my victims. There is no office that I have never entered in that county referral hospital. I have even gone to the governor Kivutha's office even the finance. I can show you the papers I have them. The money was sent in April which was already late. All these problems were brought by the lack of transport to ferry the burnt victims from that place." (Health care consumer HCC20, 19th August 2019).*

The researcher sought to determine the most preferred medical insurance cover in Makueni County. Findings were displayed in table 11 below.

Table 11: The most preferred medical insurance cover (n=68)-health care workers

	Frequency	Percent
Makueni Health Care Insurance Scheme	47	69.1%
National Hospital Insurance Fund(NHIF)	8	11.7%
Free Maternity care(Linda Mama Project)	6	8.8%
Health Insurance project for Elderly people and persons with severe disabilities	3	4.4%
Health Insurance Subsidy Programme (HISP) for the orphans and the poor	2	2.9%
Elimination of user fees in public primary health care facilities	1	1.5%
Private medical insurance scheme	1	1.5%
Total	68	100.0

Results displayed in table 11 found Makueni Health Care Insurance cover 47(69.1%) as the most popular type of medical insurance cover amongst the health care workers and administrators respondents followed by National Hospital Insurance Fund (NHIF) 8(11.7%) then Free Maternity Care (Linda Mama project) 6(8.8%). Health Insurance Subsidy Program (HISP) for orphans and vulnerable was 2 (2.9%). Among the least preferred medical insurance was Private medical insurance scheme and Elimination of user fees in public primary health care facilities 1(1.5%). This implied that Makueni Health Care Insurance Scheme was the most preferred insurance cover in the county. The researcher assumed this was due to easy accessibility and affordability of the medical insurance cover.

Health care consumers, health workers and administrators were asked to state the benefits of the health insurance scheme in Makueni county, Findings were analyzed and presented in figure 3.

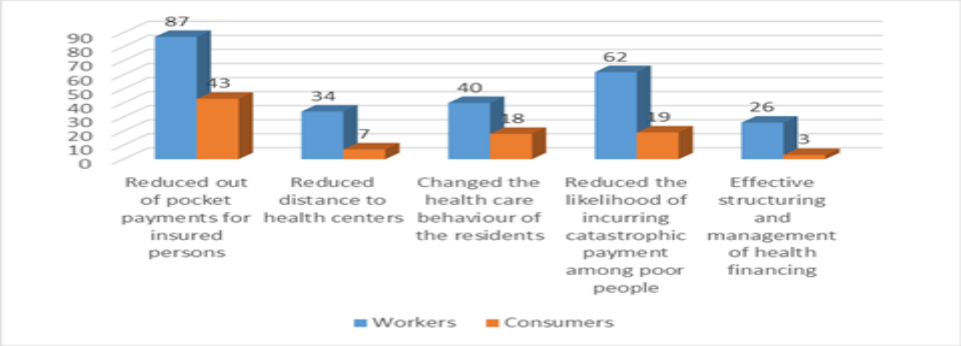

Figure 3: Benefits of Health Insurance Scheme in Makueni County

Figure 3 revealed that 59(87%) of health care workers and administrators and 170(43%) of the health care consumers stated that health insurance scheme in Makueni county had reduced out of pocket payment for insurance holder. This implied that most of both health consumers and health service providers reduced out of pocket payments as the major benefits realized by the respondents. Therefore, the researcher assumed that these findings were true since majority of both the groups (the consumers and health service providers) were in agreement that the insurance scheme had reduced out of pocket payments**.**

Further, the researcher wanted to determine the challenges experienced be health consumers in the process of health insurance scheme utilization in Makueni County.

Table 12: Challenge experienced in the utilization of health insurance scheme -Those who responded "Yes" to having medical insurance scheme

	Frequency	**Percent**
Bureaucratic process(long process)	124	31.1
Unavailability of medication	106	26.6
Unacceptance of the scheme in some health facilities	36	9.0
Inadequate information on where to seek services	29	7.3
Lack of flexibility of some institutions on the utilization of the scheme	56	14.0
Total	351	88

Findings displayed in table 14 shows that 124(31.1%) of the respondents stated that long bureaucratic process was the greatest challenge experienced by the health care seekers in the process of utilizing the Insurance scheme, 106(26.6%) stated un availability of medication at respective centers as another challenge forcing them to seek health care elsewhere. This implied that long processes which the health seeker is supposed to follow in order to use the insurance scheme and lack of medicines had been some of the challenges of having health insurance affiliation. The researcher assumed that these findings of long bureaucratic process were to a very big extend related to the finding in above which found that some health seekers used some out of pocket money to bribe health providers in order to get services faster. Moreover, Long Bureaucratic process emerged as a great insurance challenge because for admitted patients whose admission dates has ended over the weekend, they cannot go home and they have to wait for weekdays when the personnel who is supposed to approve the insurance document is available. This finding concurred with Johnston, and Canadian Press Poll, (2012) who argued that currently, wait times for elective care, inequitable access to health services in both the public and private systems, and the urgent need to address health disparities for Indigenous Canadians threaten health care equity and solidarity.

Health care worker (KR3) from one of the dispensaries agreed with these findings and said that;

> *"UHC for me is just a basic drug provision exercise. I am always here and I can see what's happening here. UHC is just for basic drugs and nothing more such as paracetamol but if a patient has high blood pressure and other diseases I can't help them at all. No water, power etc, the building was built but no services to run it. It's just the building and the name. High blood pressure patients come here but I only refer them to kilungu sub-county hospital in Nunguni. I am not allowed to have hypertensive drugs here. Sometimes it's hard because I refer a patient who is already badly off and the even say that they have no fare to get to the hospital due to high poverty levels in this area. When they get to the hospitals they are asked to buy the drugs from chemists outside the hospital and it's hard because majority of the patients are poor and they can't afford the drugs." (Health care worker KR 3, 16th August 2019)*

H_O1: There is no significant relationship between medical insurance affiliation and Out of pocket payments for healthcare services

Do you have a medical insurance scheme? * If you have Health Insurance Scheme do you still incur out of pocket payment? Cross tabulation

Table 13: Relationships insurance affiliation and out of pocket payments

Do you have a medical insurance scheme?			If you have Health insurance Scheme do you still incur out of pocket payment?		Total
			Yes	No	
	Yes	Count	154	161	315
		Expected Count	153.1	161.9	315.0
		% within Do you have a medical insurance scheme?	48.9%	51.1%	100.0%
	No	Count	2	4	6
		Expected Count	2.9	3.1	6.0
		% within Do you have a medical insurance scheme?	33.3%	66.7%	100.0%
Total		Count	156	165	321
		Expected Count	156.0	165.0	321.0
		% within Do you have a medical insurance scheme?	48.6%	51.4%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.570[a]	1	.450		
Continuity Correction[b]	.118	1	.732		
Likelihood Ratio	.583	1	.445		
Fisher's Exact Test				.685	.369
Linear-by-Linear Association	.569	1	.451		
N of Valid Cases	321				

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.92.

b. Computed only for a 2x2 table

Since the p value (0.45) is greater than alpha (0.05) we fail to reject the null hypothesis and conclude that there is no significant relationship between medical insurance affiliation and out of pocket payments for health care services.

$H_0$2: There is no significant relationship between medical insurance affiliation and challenges to utilization of Makueni health insurance scheme

What challenge do you experience in the utilization of Makueni health insurance scheme? * Do you have a medical insurance scheme? Cross tabulation

Table 14: Challenges experienced in utilization of health insurance

What challenge do you experience in the utilization of Makueni health insurance scheme?		Do you have a medical insurance scheme?		Total
		Yes	No	
Bureaucratic process(long process)	Count	116	8	124
	Expected Count	106.8	17.2	124.0
	% within What challenge do you experience in the utilization of Makueni health insurance scheme?	93.5%	6.5%	100.0%
Unavailability of medication	Count	83	23	106
	Expected Count	91.3	14.7	106.0
	% within What challenge do you experience in the utilization of Makueni health insurance scheme?	78.3%	21.7%	100.0%
Unacceptance of the scheme in some health facilities	Count	31	5	36
	Expected Count	31.0	5.0	36.0
	% within What challenge do you experience in the utilization of Makueni health insurance scheme?	86.1%	13.9%	100.0%
Inadequate information on where to seek services	Count	21	8	29
	Expected Count	25.0	4.0	29.0
	% within What challenge do you experience in the utilization of Makueni health insurance scheme?	72.4%	27.6%	100.0%
Lack of flexibility of some institutions on the utilization of the scheme	Count	53	3	56
	Expected Count	48.2	7.8	56.0
	% within What challenge do you experience in the utilization of Makueni health insurance scheme?	94.6%	5.4%	100.0%
Other	Count	6	3	9
	Expected Count	7.8	1.3	9.0
	% within What challenge do you experience in the utilization of Makueni health insurance scheme?	66.7%	33.3%	100.0%
Total	Count	310	50	360
	Expected Count	310.0	50.0	360.0
	% within What challenge do you experience in the utilization of Makueni health insurance scheme?	86.1%	13.9%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.943[a]	5	.001
Likelihood Ratio	21.875	5	.001
Linear-by-Linear Association	.960	1	.327
N of Valid Cases	360		

a. 2 cells (16.7%) have expected count less than 5. The minimum expected count is 1.25.

Since P value (0.001) is less than alpha (0.05), we reject the null hypothesis in favor of the alternative and conclude that there is a significant relationship between medical insurance affiliation and challenges in utilization of Makueni health insurance scheme.

5. Conclusion and Recommendations

5.1 Conclusions

It was concluded that majority of health care consumers in Makueni County had medical insurance. Notably, most of those who were already affiliated with medical insurance scheme were not paying out of pocket but instead the insurance catered for everything. Makueni Health Care Insurance Scheme was the most preferred insurance cover by the county residents. The Major challenges experienced by insurance users were long

bureaucratic process and lack medicines at health centers.

5.2 Recommendations

a. Although awareness to medical insurance cover has been done in Makueni County, awareness on its significance, use, and role in universal care in times of uncertainty have not been adequately addressed; to the health care workers, policy makers and administrators, this should be prioritized.
b. Policy makers are recommended to come up with policies which can equip health centers with enough resources i.e. human resource, medicines and finance in order to increase affordability and accessibility.
c. Health care consumers are encouraged to use the county insurance scheme and pay on time for health care service efficiency.

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