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THE ROLE OF HEALTH CARE AFFORDABILITY AND EQUITY IN MAKUENI COUNTY, KENYA

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Abstract: *The objective of this study was to investigate the role of health care affordability on health care equity in Makueni County, Kenya. The study was based on theory of inverse care law. The study applied cross-sectional survey and phenomenological research designs. Qualitative and quantitative techniques were used to design data collection methods. 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 workers and administrators. To sample the 400 universal health care consumers, proportionate stratified random sampling technique was used to get respondents from the three selected sub-counties (Kaiti, Kilome and Makueni Sub-Counties). Both structured and und unstructured Questionnaires were used to collect data from the beneficiaries of Universal Health Care using face to face method. Interviews were conducted with the county health department officials and the health care workers in public health care facilities. Findings from the study showed that the cost of health care services affected its distribution in the County. Policy makers were recommended to come up with policies which can equip health centers with enough resources i.e. human resource, supplies and capital in order to increase affordability and accessibility of health care.*

Key terms: *Universal Health Care, affordability and health-care equity*

1.1 Study background

The World Health Report 2010 provides the definition of Universal Health Care (UHC) as a goal where all people have access to needed health services and do not suffer financial hardship paying for those services. WHO in its conceptual framework presents three broad dimensions of UHC: population coverage, service coverage, and financial coverage. These imply three reinforcing strategic choices for countries to advance toward UHC: ensuring the availability of a comprehensive benefit package, selection of priority populations, and subsidizing the cost of care (WHO, 2010). International Labor Organization (ILO) explains that "universal coverage of social health protection requires that all residents in a country can access health care in an equitable manner; an essential benefit package of adequate quality if in equal need" (Scheil-Adlung and Florence, 2011). Cheng (2015) on universal health coverage overview and lessons in Asia, clarifies that, UHC for a country may be defined as access, on equal terms, for all citizens to a specified package of the highest quality health care that country can afford without any citizens suffering financial hardship as a result. It does not preclude citizens from purchasing – with their own funds—additional, elective services such as cosmetic surgery, orthodontics, private hospital rooms, among others.

On December 12, 2012, the United Nations General Assembly passed a landmark resolution on Universal Health Coverage (UHC) in response to calls from a growing number of countries around the world for comprehensive health reforms towards universal health coverage. UHC became a key global health objective, and both the World Bank and WHO have urged nations to prioritize it to achieve sustainable development and global security. The global movement towards UHC has continued to gain momentum, culminating in the launch of the first-ever "Universal Health Coverage Day" on 12 December 2014, an effort sponsored by a global coalition whose members include the Rockefeller Foundation, the WHO, the World Bank, and more than 500 organizations from around the globe. The coalition's main objective was to "stress the importance of universal access to health services for saving lives, ending extreme poverty, building resilience against the health effects of climate change and ending deadly epidemics such as Ebola." (Cheng, 2015b)

The health goal (SDG 3) comprises 13 targets, including four listed as "means-of implementation" targets. Each target has one or two proposed indicators, with the exception of SDG Target 3.3: "By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, waterborne diseases and other communicable disease" which has five indicators; and SDG Target 3.9: "By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination" which has three. With a total of 26 indicators, the health goal has the largest number of proposed indicators of all the 17 SDGs (WHO, 2016).

Socioeconomic development in Malaysia, over the past few decades, has brought about significant improvement in the general health status of the population. This has been partly due to sustained investment into social infrastructure such as schools and health facilities throughout the land. In particular, the country's public healthcare system has been gradually improved upon. The modern public healthcare system has wide geographical coverage and provides comprehensive care at minimal fees to the country's citizens. As a result, Malaysia can lay claim to have achieved universal health coverage (UHC), the ultimate health system goal and one of the forerunning contenders for a global development health goal post-2015 (Wan, Hairi, Jenn, Kamarulzaman,

2016). Malaysia's public health system is financed mainly through general revenue and taxation collected by the federal government, while the private sector is funded principally through out-of-pocket payments from patients and some private health insurance. Spending on health reached 4.6% of GDP in 2009 with the majority from public spending, reaching 56% of total health expenditure (THE) in 2009. The main sources of THE in 2008 were the Ministry of Health (42%), followed by household out-of-pocket expenditure at nearly 34%. The Ministry of Health funds public facilities through line item budgets and patients pay private physicians and private hospitals on a fee-for-service basis (WHO, 2012).

Botswana has recognized the interplay between health and development and has aligned her strategies to the "Health in the 2030 Agenda for Sustainable Development" through the 11th National Development Plan and the Vision 2036. The Country has exceeded the Abuja target of 15% of government funds spent on health, and have a low out-of-pocket spending, which accounts for 4% of total health expenditure, one of the lowest globally. This shows that the Government of Botswana provides strong financial protection for its population. Botswana has experienced a steady increase in private sector funding from 21% to 28%, as a share of total health expenditure, which reflects public-private collaboration in improving access to health care. The Country has put in place facilities across the country and to date, over 90% of Batswana live within 5 km of health facilities (GOB, 2018).

In Kenya, with support of various stakeholders, the government has over the years since independence in 1963 initiated policy reforms and strategies earmarked towards universal health coverage. Some of these are outlined in various policy documents including Kenya Health Policy Framework (KHPF 1994–2010), Health Sector Strategic Plans, Vision 2030 (operationalized through the medium term expenditure framework of 2008-2012), the Constitution 2010, and finally, the Health Bill of 2015. Notably, the government recognized a high quality of life as a key pillar towards accelerating Kenya's intentions of being a globally competitive and prosperous nation (GoK, 2008). Further the government provides a legal framework for ensuring a health care delivery system that is driven by the people while bridging the gap on geographical access by providing for a devolved system of governance (GoK, 2010). These initiatives can be argued are aimed towards universal health coverage for the populace in the country. In the draft Health Bill of 2015, the government has declared access to reproductive health and emergency medical treatment as a right by all persons (Oketch and Lelegwe, 2015).

In Makueni County, Universal health care coverage programme was initiated in the year 2013. This programme was conceptualized from devolution in the constitution promulgated in the year 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).

1.2 Statement of the problem

Democratically elected systems have the moral responsibility to deliver social services to their citizens for social functioning. Delivery of universal health care programme implemented by the county government of Makueni has of late gained prominence and the County is currently referred

as the model for Universal health care services in the Country. From a universal healthcare coverage perspective, the cost of healthcare should be a priority. In the case of Makueni County, still, the healthcare consumers' income is affected to some extend by the cost of healthcare. The distance, in accessing healthcare services remains a challenge to a number of residents. There is no adequate supply of medical goods and services due to limited resources. If this state of affairs continues in the county, universal health care services will continue to face a major setback in the model county. There is insufficient published work on how health care affordability has influenced health care equity in Makueni County and therefore there is a need for a research to determine the role of healthcare affordability on healthcare equity in Makueni County, Kenya.

1.3 Study objectives

The objective of this study was to investigate the role of health care affordability on health care equity in Makueni County.

Study hypothesis

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

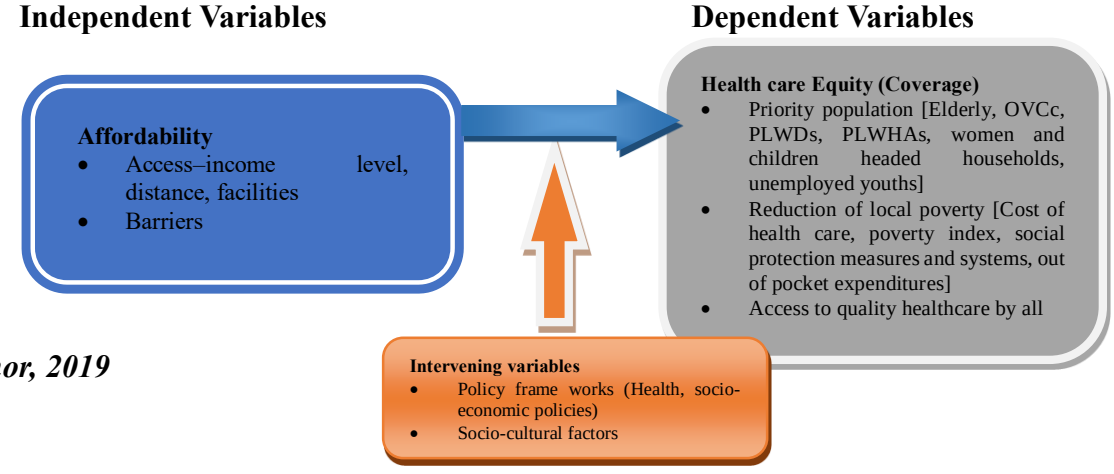
$H_0$1: There is no significant relationship between healthcare affordability and equity in Makueni County.
H_a1: There is a significant relationship between healthcare affordability and equity in Makueni County.

1.4 Significance of the study

After carrying out this study, the findings are intended to benefit individuals, communities and organizations at different levels. These findings would help people working with health care in devolved systems in Kenya. The findings would also be of importance to communities and groups experiencing health care disparities to achieve equitable distribution of quality health care as a basic human right. These findings may be useful to social workers working in health care and health needs assessment programmes. The findings would also be important to both National and County governments in universal healthcare realization of overall sustainable development.

1.5 Conceptual frame work

Figure 1: Conceptual framework



Source: Author, 2019

1.6 Literature review

Theoretical review

The inverse care law

The goal of universal health coverage is to "ensure that all people obtain the health services they need without suffering financial hardship when paying for them." There are many connections between this goal and the state's legal obligation to realize the human right to health. Tudor Hart's inverse care law, set out in an article in The Lancet in 1971, states that the availability of good medical care tends to vary inversely with the need of the population served (Nambiar and Mander, 2016). Turdor in his analysis on the United Kingdom's health care system argued that the state must play a role in ensuring the health and well-being of those excluded by a range of larger social and market forces. The availability of good medical care tends to vary inversely with the need for it in the population served. This inverse care law operates more completely where medical care is most exposed to market forces, and less so where such exposure is reduced. The above study carried out compared the rates of mortality and morbidity in Great Britain among different social classes and concluded that socially lower groups had higher death rates and therefore sicker or less likely to secure treatment than other classes. The availability of universal free-on-demand, comprehensive services would appear to be a crucial factor in reducing class inequalities in the use of medical care services.

According to the inverse care law, a just and rational distribution of health care resources in medical care, should show parallel social, income, political, religious and geographical differences, or at least a uniform distribution. The common experience was described by Titmuss in 1968 that, the higher income groups know how to make better use of the service; they tend to receive more specialist attention; occupy more of the beds in better equipped and staffed hospitals; receive more elective surgery; have better maternal care, and are more likely to get psychiatric help and psychotherapy than low-income groups particularly the unskilled. As well as the middle classes expecting and demanding more from the health service, they are also likely to have the best GPs, according to the same study; Hart concludes this to show that doctors must be able to choose where they work (and thereby likely to be better) tend to opt to work in more affluent areas, making it unlikely to 'distribute the doctors with highest morale to the places where that morale is most needed' (Hart, 1971). Hart notes that the problem of GP recruitment to poorer areas is worsened by the overrepresentation of 'professional families' in medical students (Hart, 1971) as they would lack the loyalty to disadvantaged areas that a 'working class' doctor might have.The 'morale' of the doctors in disadvantaged areas is then further weakened by the stress caused by expanding lists, (Hart observes that alcoholism 'is an evident if unrecorded occupational hazard among those doctors'), presumably also affecting the quality of their work (Hart, 1971).

The strength of this theory is that, it appreciates the determinants of health care equity in Universal Health Care system. In this study, key components of universal health care including financial protection, insurance cover, affordability, availability and quality affect equitable distribution of Universal health care among the residents of Makueni County. It is assumed that, this market related forces determine the health care seeking behavior and therefore consumption of the available health care services among the priority population groups. This study however shall examine a multiple of factors that determine universal health care delivery among the residents of

Makueni County from individual, family, community and institutional levels. Due to the shortcomings realized in the application of the inverse care law, the systems theory complements the theoretical relationship on Universal health care and equity.

Empirical review

Health care affordability and equity in Makueni County

Universal Health Coverage (UHC) is defined as providing access to needed health services without incurring financial hardships for the whole population and is receiving renewed attention at both global and national levels. UHC is a response to this, providing the assurance that the health services people need are available, affordable and of good quality (Xu, Evans, Carrin, Aguilar-Rivera, Musgrove and Evans, 2007).

In the current debate about health care affordability in the United States, the distinctions among health care costs, health insurance costs, and out-of-pocket expenses are often blurred. These costs are related: health insurance premiums rise as the cost of care itself rises; premiums often decrease as the required level of out-of-pocket cost-sharing (through deductibles, co-payments, and coinsurance) increases. These costs are very different from each other and are experienced differently, at different times, by individuals and families. Although premiums are paid regardless of the immediate need for health care, the impact of cost-sharing is felt when people seek to use care. While few people could afford to pay for the entire range of health care expenses directly, their willingness to pay for insurance might vary with the level of financial risk they are willing to incur, and the assets they wish to protect. A fundamental precept of insurance is to transform uncertain risk into a predictable premium. These distinctions are important for determining who is vulnerable to an increasing cost burden of care or coverage, where the problems reside, and which policies might make a difference (Pennsylvania University, 2018). From the above review, it can be noted that, USA health care discriminates the low and middle income earners as opposed to Makueni where the vulnerable are targeted.

A study carried out in South Africa by Stellenberg in 2015 on accessibility, affordability and use of health services in an urban area in South Africa revealed that, majority of the respondents used the state health facilities. The most commonly-used facilities were (comprehensive healthcare centre) CHCs (n = 200; 56.7%), followed by private doctor (n = 198; 56.1%) and state hospitals (n = 165; 46.7%). CHCs were used by respondents of all socioeconomic levels: further analysis indicated that CHCs were used by 30 (24.4%) respondents from the upper–middle socioeconomic level, 90 (67.7%) from the lower socioeconomic level (formal housing) 80 (82.5%) from the lower socioeconomic level (informal housing). Only 79 (22.4%) of the respondents indicated that they used private hospitals. Private medical care was expensive and many of the respondents could not afford to use these services. Only 73 (20.7%) of the respondents had medical aid funds that allowed them to use a health service of their choice.

Over half of all health financing in Tanzania comes from donor funds and OOPS—approximately 36 percent of total health expenditure (THE) is from donor funding, while OOPS constitutes 23 percent. Donor funding also makes up a majority of the government's contribution to health, or general government health expenditure (GGHE). This raises sustainability concerns regarding the ability of the Tanzanian government to contribute if any donors withdraw their contributions. Out-of-pocket payments for health account for approximately 2 percent of Tanzanian's incomes. Additionally, 1 percent of Tanzanians become impoverished because of these payments. This lack of coverage is especially problematic because it demonstrates that the cost sharing element of the

risk pooling scheme does not provide sufficient financial protection (PAI, 2018).

In Kenya, statistics show that service utilization was lower in both government and in private health facilities after the implementation of cost sharing. Demand for health services in government health facilities fell by around 33% compared to a drop of 17% in nongovernment facilities. However, Kenya has yet to establish a formal policy declaration on UHC that is entrenched in legislation. The current Kenya Health Policy 2012–2030 is the most detailed policy document that addresses certain aspects of UHC (Ministry of Health, Kenya, 2013). The policy objective "to attain universal coverage of critical services that positively contribute to the realization of policy goals" provides a documented commitment to achievement of UHC for all Kenyans. Similarly, the country has undertaken various strategies to facilitate improved access to affordable health services and address the high disease burden (Ministry of Medical Services (MOMS) and Ministry of Public Health and Sanitation (MOPHS), 2012). The most significant strategies in relation to UHC are the two attempts to transform the country's NHIF into a compulsory social health insurance. The objective of these proposed amendments was to shift the current health financing arrangements to prepayment mechanisms, reducing the dependence on out of pocket payment and mobilizing more funds into the health sector through membership contributions.

Makueni County has been on the limelight in relation to delivery of UHC in Kenya. However, there is scanty literature in support of this. Much of what is written is what the County has done towards delivery of UHC. According Makueni County Government, 2018, about 62.3 percent of the county population has pre-paid access to health services and are covered under the county scheme. This excludes those over 65 years who are covered free of charge without paying annual Ksh500 charge per household. In addition, since October 2014, Makueni has been offering its one million residents free healthcare across all its public facilities, including county and sub-county hospitals. Thus, for an annual subscription of KSh500 per household, which covers parents and all their children under the age of 18 years (or up to 24 years in case of students

1.7 Research methodology

The study applied cross-sectional survey and phenomenological designs. Mixed method was employed to measure the extent to which the independent variable affect the dependent variable in Makueni County Health systems. To complement its effort, 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 female. Purposive sampling techniques was used to sample the health care managers and officials in the county health care facilities and county health department respectively. To sample the 400 universal health care consumers, proportionate stratified random sampling technique was used to get respondents from the three selected sub-counties. The Yamane (1967) formula was used to get the sample size of 400 health care consumers. There are six sub-counties in Makueni County. 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 the research analysis to infer from the sample data study population generalization for the quantitative data. 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.

1.8: Study findings

Medical insurance affiliation and health care equity

Table 1: Response rate

	Number issued	rned	rn rate%
Consumers	400	99	99.8
Health care workers & administrators	68	68	100.0

Source: Field data, 2019

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

	Healthcare Consumers		Healthcare workers and administrators	
Gender	**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**

Source: Field data, 2019

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 healthy 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.

Respondents were asked to indicate their age bracket, gathered data was analyzed and presented in table 3.

Table 3: Age bracket (Years)

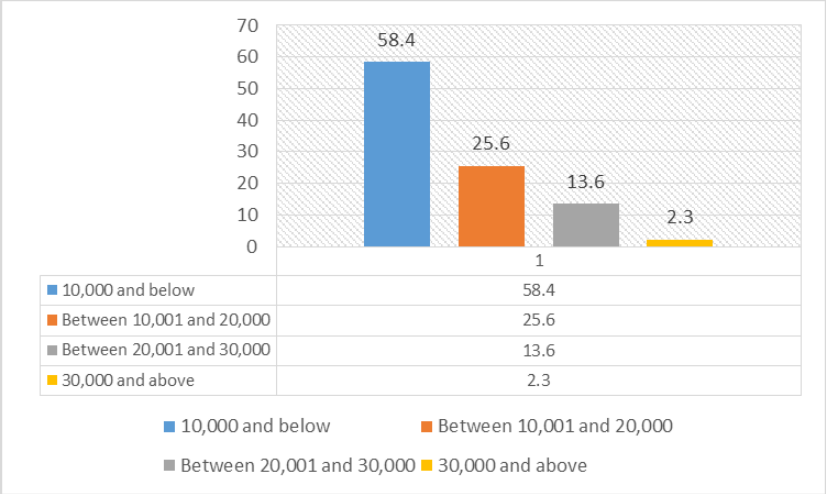
Age bracket	HC consumers		HC workers and Administrators	
	Frequency	Percent	Frequency	Percent
Below 20 years	9	2.3	-	-
20-29 years	79	19.8	25	36.8
30-39 years	124	31.1	26	38.2
40-49 years	72	18.0	11	16.2
50-59 years	61	15.3	6	8.8
Above 60 years	54	13.5	-	-
Total	**399**	**100.0**	**68**	**100.0**

Source: Field data, 2019

Results displayed in table 3 shows that all the age bracket categories of the Health care consumers participated in the study with the majority group 275(68.9%) being aged 20-49 years. Only 9(2.3%) were below 20 years and 54(13.5%) were above 60 years of age. This implied that majority of the Heath care consumers were mature enough to understand medical insurance affiliation on health care equity in Makueni County. Further findings showed that majority of the Heath care workers and administrators 51(75%) were aged 20- 39 years. Only 17(25%) of the respondents were aged 40-59 years. This implied that Makueni health department mostly employed human resource aged 20-39 years. Therefore, Makueni health care department had human resource strong enough to implement the department policies. Notably, there was no health care worker and administrator aged above 60 years, the researcher assumed that some aged respondents were not comfortable with giving their real age.

The researcher sought to examine house hold income level. Findings in figure 4 below 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.

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



Source: Field data, 2019

The study respondents were asked to state their sub county and gathered and analyzed data in this regard was analyzed and presented in table 4 below.

Figure 4: 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**

Source: Field data, 2019

Findings in table 4 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 5 and 6 below.

Table 5: 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

Source: Field data, 2019

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 6: 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

Source: Field data, 2019

Findings displayed in table 6 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 masters degree. This implied that the healthcare workers and administrators were well qualified to perform their duties.

Health care workers and administrators were asked whether health care services were affordable among all social classes in Makueni County.

Table 7: Health Care Workers and administrators: Do you think health care services are affordable to all social classes in Makueni County?

	Frequency	Percent
Yes	36	52.9
No	32	47.1
Total	68	100.0

Source: Field data, 2019

Findings in table 7 above show that 36 (52.9%) agreed while 32(47.1%) disagreed. This implied that most of the health worker and administrators felt that services were affordable across all

social classes.

Table 8: HC Workers and administrators: If yes why?

	Frequency	Percent
All the services offered are not paid for	36	52.9
A "No" Response	32	47.1
Total	68	100.0

Source: Field data, 2019

Moreover, the researcher wanted to investigate further on the reasons why health care workers and administrators thought services are affordable to every member in the county, all the respondents who had agreed services to be affordable 36(52.9%) stated that it was because health services were offered for free among Makueni County Citizens. The researcher assumed that health services in Makueni County were affordable to most of the residents. Centrally to the above quantitative results from health care workers, qualitative views of the health care consumers were not affordable to all residents as stated by a health care consumer from Makueni sub county (HCC20) below:-

> *"...I was very surprised and disappointed that I cannot even get the UHC medical insurance card. The UHC cards were brought here the other day but people did not register because the cards are very expensive and people can't afford. I could not renew my UHC card because it's expensive for me. I suggest that they reduce the cost of the registration fee from five hundred shillings so that we can afford." (Health care consumer HCC20, 19th August 2019).*

The above findings were in line with the assertions of Cunningham, Hanley, Morgan (2011) who argued that despite systems of free universal coverage, there was greater inequity, measured in terms of waiting times and receipt of procedures, for interventions which were non-urgent or elective, or for which there was a lack of clearly defined treatment protocols. Studies from lower middle income countries (LMICs) explored the impact of equitable UHC on access to a basic package of essential services and health outcomes for the entire population, most commonly disaggregated by geographical area, socio-economic status and gender.

Table 9: HC Workers and administrators: If no,why?

	Frequency	Percent
Services are not free you pay out of pocket	4	5.9
They are not enough	9	13.2
Poor infrastructure and capital	5	7.4
High poverty levels	14	20.6
Total	32	47.1
A "No" response	36	52.9
Total	68	100.0

Source: Field data, 2019

Among those who disagreed that healthcare services were not affordable in the county 14(20.6%) stated it was because of high poverty level in the locality, 9(13.2%) stated that there were no enough resources, 5(7.4%) stated poor infrastructure and capital while 4(5.9%) indicated services

are not free because they also pays out of pocket for some services. This implied that the greatest number of health workers 14(20.6%) believed that high poverty level was the key reason why health services were not affordable in Makueni County. This shows that high levels of poverty in the county may have contributed to unaffordability of healthcare services especially among the poor residents.

Table 10: If you are not a member of any health insurance, state why

	Frequency	Percent
Financial challenges	48	12.0
Preference for out of pocket payment	28	7.0
I don't know about any health insurance scheme	10	2.5
Other	16	4.0
System	297	74.4
Total	399	100.0

Source: Field data, 2019

Some of the reasons for not having health care insurance as stated the respondents were financial challenges 48(12%), others 28(7%) preferred out of pocket payments while another small group 10(2.5%) said they were not aware of any health insurance scheme. For other reasons (lack of enough time, not interested, among others), 16 (4%) responded. Response from a key respondent [KR 1 (A person living with disability from Makueni sub-county)] explained the following in relation to UHC registration and utilization in Makueni County (Makueni care)

"Universal health coverage has never helped me at all instead I use the NHIF card. The major barrier to access healthcare services through universal health coverage (makueni care) even if you have the card is that even if one has the card, a patient is always advised to buy drugs from pharmacies outside the hospital. People don't see the need to get the UHC card but rather prefer to get medical services from the dispensaries other than the county referral hospital. The quality of treatment is not good. There is a big problem with the doctors at the county referral hospital because there is a college for doctors and patients are given the student doctors to treat them. The student doctors do not know how to fully diagnose diseases and most patients end up dying. When the patient gets worse and is showing signs of death, then the doctors come running but it's too late since the patient is already dead. The doctors have formed a group where they own their private clinics. For example if a patient needs an x-ray they will be referred to a place outside the hospital to pay seven thousand shillings. A patient with a dental problem such as tooth extraction you will be referred to a clinic outside and when you reach the clinic, you find the same the dentist who referred you at the referral hospital. The medical items that the dentist said they lack at the referral hospital are available now at this clinic. For example the dentist at the county referral hospital may have told you that there is no Anesthesia but once you get to the private clinic you find it has anesthesia. This is irritating to me" (KR 1 Makueni Sub-County, 8th August, 2019).

Another Health care consumer from Makueni Sub County had the following in relation to Makueni care registration

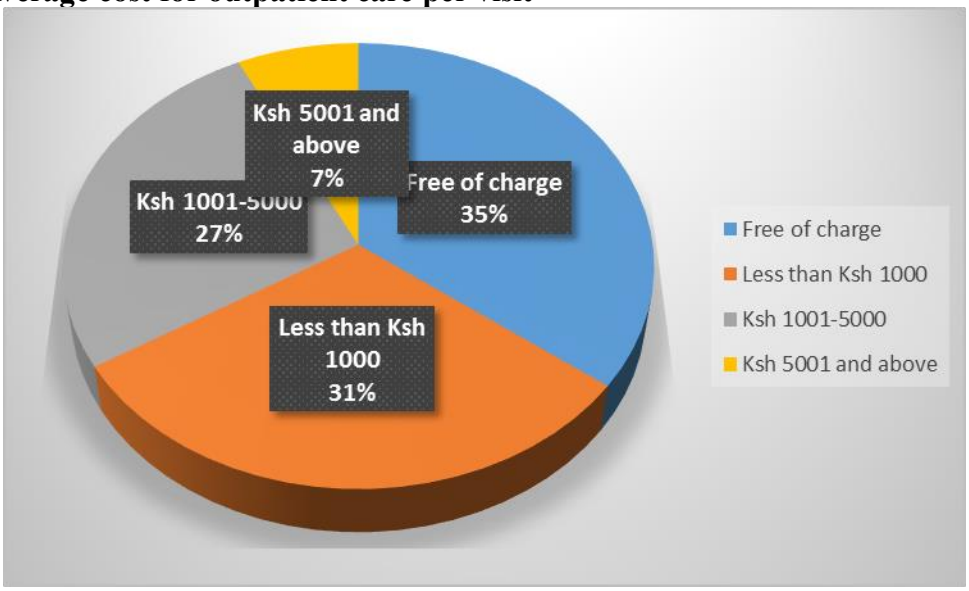
"The registration of Universal Health Care medical scheme is voluntary. You are not forced but when you go for doctors consultation you are asked to buy medication..if you tell this to others they say they cannot register for the scheme because it's not of any help to them…." (KR 2 Makueni Sub-County, 8th August, 2019).

The above findings implied that this experience may discourage to some extend the registration and affiliation to Makueni Care scheme. Whereas these reasons were given by the respondents in relation lack of medical insurance affiliation, awareness on the significance of enrollment to a medical insurance scheme plays a major role. The above findings concur with the works of Stellenberg (2015) on the utilization and accessibility of health care services. Using the Chi-square test (χ^2), the statistical association between accessibility to health services and the use of health services was found to be significant ($p =< 0.01$). The association between socioeconomic level and accessibility of health services

was also found to be significant ($p = < 0.01$). Additional analysis indicated that 26 (32.5%) of the respondents from the upper-middle socioeconomic level, 66 (49.6%) from the lower socioeconomic level (formal housing) and 44 (45.4%) from the lower socioeconomic level (informal housing) found their health services to be inaccessible. Amongst those respondents who were employed, 78 (51.5%) found their health services to be inaccessible and 97 (48.5%) of the unemployed individuals responded likewise (Stellenberg, 2015).

Respondents were asked to state the average cost of outpatient care in the County. Findings were summarized and presented in figure 2.

Figure 2: Average cost for outpatient care per visit



Source: Field data, 2019

As revealed in figure 2 above, 24(35.3%) of the respondents stated that the average cost for outpatient care per cost was free of charge, 21(30.9%) believed that it was less than 1,000 Kenya shillings, 18(26.5%) indicated the average outpatient care cost to be between 1001- 5,000 Kenya shillings while a small group 5(7.3%) believed that the average cost for outpatient care to be over ksh. 5001.This implied that majority 45(66.2%) of the respondents believed that average health care for outpatient in Makueni County would cost either less than ksh 1000 or free of charge. Therefore, health care services were affordable amongst members of Makueni County. Although the cost seems affordable to a number of respondents, the reality on the effectiveness and the quality of the healthcare services may not have been achieved as narrated by the following Key respondent from Kilome Sub-County:-

> *"UHC for me is just basic drug provision. I am always here and I can see what's happening here. UHC is just for basic drugs and nothing more such as paracetamol. 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. The patients come here with the sheets to collect the hypertensive drugs but we can't give them because we don't stock them. They then have to go to Sultan Hamud sub-county hospital and even there the drugs are limited in stock. Sometimes it's hard because I refer a patient who is already badly off and they 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".

He further narrates….

"I feel very bad because am here to work but if I find that I don't meet my objective per day I feel very bad as a doctor. When the patients come here and I am unable to offer drugs I feel very bad because these are my neighbors, I live with them here and they take care of me. If they come and I can't help them I feel incompetent. It's really hard to convince them that there are no drugs but they know about UHC…it's terrible. I don't support UHC even if you go to tell the governor or whoever but I am not against the idea. As of now they have not convinced me to support it. Some of the challenges I face here include lack of drugs. Majority of the patients are advised by the doctors to go buy medicines from other chemists or hospitals. This is also a disadvantage especially to those ailing from complicated diseases which need special attention like diabetic patients who are at times unable to get or purchase prescribed drugs. Only the buildings are adequate and not the facilities. The distances from the dispensary to the sub-county hospital is long and costly to the residents who are poor. The waiting time for the patients depends on the emergency or kind of sickness. The number of patients coming to hospital has increased but if you are human enough you don't mess the patient with treatment because we have drug resistance which would affect them in future. For instance, if a patient comes here and says that she/he has STI, it's treated with a regimen of drugs so if you give the patient one drug, the patient will have complications later. I tell them that I can't treat them because I don't have the drugs since I should start with step one going upwards. If you give such a patient one drug, you are simply messing them up. Before UHC, there was money, things were available. There was even STI injections and medicine we could treat the patients properly. A patient can now come here with for example amoeba, then you give panadol then tell them to go drink a lot of water with salt because you don't have Metronidazole drug..You are simply messing this patient since you have not given the correct drugs but the patient goes home thinking that they have come to hospital and got one drug free of charge"

The above findings concur with the works of Fox and Reich (2016) That health care reforms for universal health care coverage is affected by four variables including the political interests, institutions, ideas, and ideology.

Respondents were asked to state the known barriers to access health care services in their wards. The findings were analyzed and presented are in table 11 below.

Table 11: HC Consumers: Are there known barriers to access health care services in your ward?

	Frequency	Percent
Cultural	6	1.5
Infrastructure	97	24.3
Distance	148	37.1
Language	6	1.5
Legal	4	1.0
Financial/income	102	25.6
Discrimination	15	3.8
Other	21	5.3
Total	399	100.0

Source: Field data, 2019

The findings show that 148(37.1%) distance to the health facilities as the major barrier to access health care services, 102(25.6%) stated that financial income was a barrier while 97(24.3%) argued that infrastructure was a barrier. Others 15(3.8%) sited discrimination as a barrier, 6(1.5%) stated that there were cultural barriers while 4(1%) picked legal issues as a barrier to access of health care services in their wards. These findings demonstrate that distance to the health facilities in the wards is the major barrier to access of health care services in Makueni County. The following verbatim from a health care consumer from Kaiti Sub-county confirms that distance is a major barrier to health care access:-

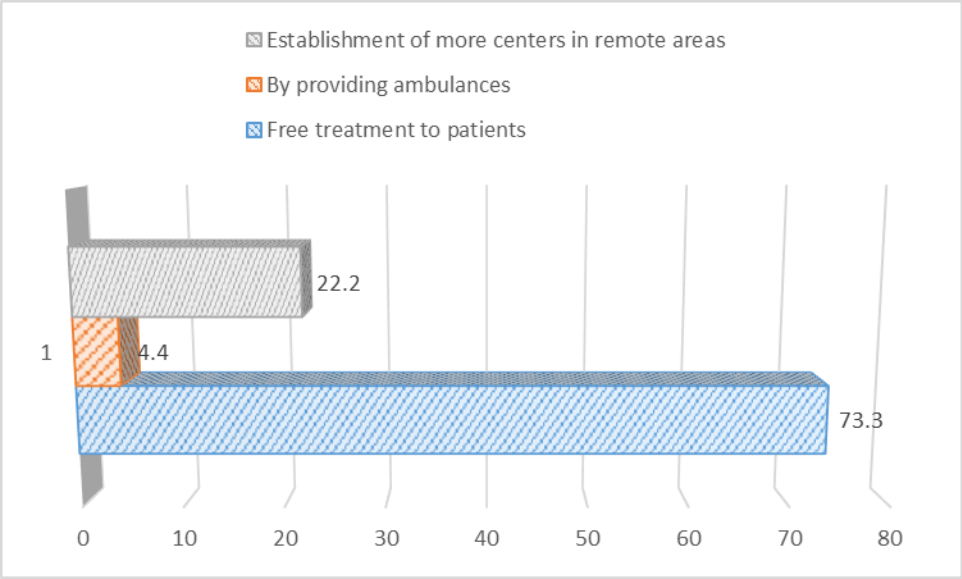
> *"I feel that the charge for UHC registration is too high. Registration to universal healthcare should be free to be affordable by every individual especially the poor. UHC should cover for all the services as required by the patients. My wife died ten years ago due to lack of good infrastructure at the nearby health facility. She died on the way to the county referral hospital since it's far away. I think the government has tried in establishing health care facilities in remote areas which in one way or the other has saved lives as well as healthcare services" (HCC 23. 18th August, 2019).*

The above findings concurs with the works of Gesami (2000) that distance between competing health facilities, emerges as a major determinant of demand for health services: demand for medical care is greater in facilities that are clustered together than in those that are far apart. This is perhaps because proximity among facilities enhances quality via competition and/or via the sharing of medical expertise. Proximity also increases households' knowledge about the available health services.

The researcher sought to investigate whether Universal health care had been successful in Makueni County, gathered and analyzed data was presented in table 12 below.

The researcher sought to investigate how the county government had done to ensure affordable health care through the universal health plan in Makueni County. Findings were presented in figure 3 below.

Figure 3: Ways in which the county government ensures affordable health care



Source: Field data, 2019

Findings displayed in figure 3 above show that 33(73.3%) of the respondents indicated that Makueni county government provided affordable health care through provision of free treatment to county residents, 10(22.2%) of the stated establishment of more centers in remote areas while only 2(4.4) stated provision of ambulances as one of the ways in which the county government had facilitated healthcare affordability amongst its people. This implied that the county government of Makueni had facilitated health care affordability in many ways.

Respondents were asked questions on insurance coverage (Health care financing) in relation to their household income. Findings were analyzed and presented in table 12, 13 and 14 below.

Table 12: Do you have health insurance cover?

	Frequency	Percent
Yes	315	78.9
No	84	21.1
Total	399	100.0

Source: Field data, 2019

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.

Respondents were asked to respond to what extent did out of pocket payment affect their household income. Findings were analyzed and presented in table 13 below. All the respondents

including those who had enrolled for medical insurance medical scheme explained that, they still incurred some cost of health care through out of pocket payment.

Table 13: To what extend does out of pocket payments affect your household income?

	Frequency	Percent
Not at all	13	3.3
Slightly	30	7.5
Moderately	37	9.3
Significantly	41	10.3
A "No" response	278	69.7
Total	399	100.0

Source: Field data, 2019

Those who did not incur any cost were 13 (3.3%), those who incurred slight cost were 30 (7.5%), those whose response was moderate were 37 (9.3%), those who said the cost was significant were 41 (10.3%) and those who never responded were 278 (69.7%).

Respondents were asked which specific areas were affected by out of pocket payments. Table 14 below shows the findings.

Table 14: If out of pocket has affected your household income, which specific areas?

	Frequency	Percent
Education of children	39	9.8
House hold development	40	10.0
House hold assets	19	4.8
Career disruption for care	8	2.0
Debt burden	10	2.5
Other	7	1.8
A "No" response	276	69.2
Total	399	100.0

Source: Field data, 2019

From the above results, For those whose education of children were affected were 39 (9.8%), effects on house hold development were 40 (10%), house hold assets were 19 (4.8%), career disruption for care were 8 (2%), debt burden were 10 (2.5%) while the rest 7(1.8%) had other areas affected by out of pocket payments.

The following hypothesis was tested and results presented as shown below.

$H_0 1$: **There is no significant relationship between Health care affordability and barriers to Healtth Care services**

Are there known barriers to access health care services in your ward? * Afford Crosstabulation

Are there known barriers to access health care services in your ward?		Afford					Total
		SD	D	N	A	SA	
Cultural	Count	0	2	2	2	0	6
	Expected Count	.0	.3	1.8	3.2	.6	6.0
	% within Barriers to access health care services in your ward?	0.0%	33.3%	33.3%	33.3%	0.0%	100.0%
Infrastructure	Count	0	5	20	57	15	97
	Expected Count	.7	4.1	29.7	52.3	10.2	97.0
	% within Barriers to access health care services in your ward?	0.0%	5.2%	20.6%	58.8%	15.5%	100.0%
Distance	Count	2	3	44	81	18	148
	Expected Count	1.1	6.3	45.3	79.7	15.6	148.0
	% within Barriers to access health care services in your ward?	1.4%	2.0%	29.7%	54.7%	12.2%	100.0%
Language	Count	1	0	3	1	1	6
	Expected Count	.0	.3	1.8	3.2	.6	6.0
	% within Barriers to access health care services in your ward?	16.7%	0.0%	50.0%	16.7%	16.7%	100.0%
Legal	Count	0	0	0	3	1	4
	Expected Count	.0	.2	1.2	2.2	.4	4.0
	% within Barriers to access health care services in your ward?	0.0%	0.0%	0.0%	75.0%	25.0%	100.0%
Financial/income	Count	0	6	37	57	2	102
	Expected Count	.8	4.3	31.2	55.0	10.7	102.0
	% within Barriers to access health care services in your ward?	0.0%	5.9%	36.3%	55.9%	2.0%	100.0%
Discrimination	Count	0	0	8	5	2	15
	Expected Count	.1	.6	4.6	8.1	1.6	15.0
	% within Barriers to access health care services in your ward?	0.0%	0.0%	53.3%	33.3%	13.3%	100.0%
Other	Count	0	1	8	9	3	21
	Expected Count	.2	.9	6.4	11.3	2.2	21.0
	% within Barriers to access health care services in your ward?	0.0%	4.8%	38.1%	42.9%	14.3%	100.0%
Total	Count	3	17	122	215	42	399
	Expected Count	3.0	17.0	122.0	215.0	42.0	399.0
	% within Barriers to access health care services in your ward?	0.8%	4.3%	30.6%	53.9%	10.5%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	63.743[a]	28	.000
Likelihood Ratio	49.225	28	.008
Linear-by-Linear Association	4.417	1	.036
N of Valid Cases	399		

a. 27 cells (67.5%) have expected count less than 5. The minimum expected count is .03.

Since P value (0.000) is less than alpha(0.05), we reject the null hypotheses in favor of the alternative and conclude that there is a significant relationship between health care affordability and barriers to health care services.

1.9 Study conclusions

After carrying out this study, it was concluded that health services were affordable and accessible to majority of residents, Makueni County. It was also concluded that majority of Makueni residents had been receiving health services for free or less than ksh 1,000 for those who had medical insurance. The county government of Makueni had facilitated health care affordability in myriad ways the major one being provision of free health care services. Makueni County had under provided health care workers and this affected the quality of services offered as well as time spent by health consumer to see health care worker.

1.10. Recommendations

a. 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.
b. Health Practitioners were recommended to provide service equally amongst all the health consumers regardless of the social classes
c. Health care consumers were recommended to all use the county insurance scheme and pay on time so that the county can acquire health care resources at lower cost due to economy of scale.

References

Ahuja, R. (2004), 'Health insurance for the poor', *Economic and Political Weekly* **34**(28): 3171-3178.

Ali, L, et al (2012) *Promoting access to high quality primary health care services in Sudan*. Available from: https://www.researchgate.net/publication /229072353_

Promoting_access_to_high_quality_primary_health_care_services_in_Sudan [accessed Apr 18 2019].

Amado, A,. et al (2012) National health insurance: A lofty ideal in need of cautious planned implementation. South African Journal of Bioethics and Law, [S.l.], v. 5, n. 1, p. 4-10, jun. 2012. ISSN 1999-7639

Ankerl, G. (1980) *Towards a Social Contract on a Worldwide Scale: Solidarity contracts. Research series*. Geneva: International Institute for Labour Studies [Pamphlet], 1980, ISBN 92-9014-165-4article/17/232/full/

Arokiasamy, P & Goli, S. (2013) Health insurance and health care in India: a supply-demand perspective. Accessed on 10th March, 2019 from http://mpra.ub.uni-muenchen.de/51103/

County Government of Makueni (2018) Performance contract between the governor of Makueni county and the executive committee member department of health services. For the period from 1st July 2018 to 30th June, 2019

Cunningham, M, Hanley, E, Morgan, G. (2011): Income inequities in end-of-life health care spending in British Columbia, Canada: a cross-sectional analysis, 2004–2006. Int J Equity Health 2011, 10:12

Dixon J, Tenkorang EY, Luginaah I. (2013) Ghana's National Health Insurance Scheme: a national level investigation of members' perceptions of service provision. BMC Int Health Hum Rights. .

Ellis, R., M. Alam and I. Gupta (2000), 'Health Insurance in India: prognosis & prospectus', *Economic & Political Weekly* 22: 207-216.

Falaky, F. (2014). *Social Contract, Masochist Contract: Aesthetics of Freedom and Submission in Rousseau*. Albany: State University of New York Press. ISBN 978-1-4384-4989-0

Fidelia A. A.(2018) International Examining equity in health insurance coverage: an analysis of Ghana's National Health Insurance Scheme Journal for Equity in Health · December 2018. DOI: 10.1186/s12939-018-0793-1. Accessed on 12th March, 2019

Fox, A, and Reich, M. (2016) The Politics of Universal Health Coverage in Low- and Middle-Income Countries: A Framework for Evaluation and Action. Journal of Health Politics Policy and Law · July 2015. DOI: 10.1215/03616878-3161198 · Source: PubMed

Gaétan Lafortune, Gaëlle Balestat, & The Disability Study Expert Group Members. (2007). *Trends in Severe Disability among Elderly People: Assessing the Evidence in 12 OECD Countries and the Future Implications* (No. DELSA/HEA/WD/HWP). Paris. Retrieved from https://www.oecd.org/els/emp/38343783.pdf

Gaffney, A and McCormick, D. (2017) The Affordable Care Act: implications for health-care equity. https://www.ncbi.nlm.nih.gov/pubmed/28402826

Gathara, P. (2018) Devolved healthcare: Makueni's trailblazing experiment in providing universal health coverage. Accessed on 12th March, 2019. https://www.theelephant.info/features/2018/01/11/devolved-healthcare-makuenis-trailblazing-experiment-in-providing-universal-health-coverage/

County government of Makueni (2018) The official opening of the Makueni mother and child hospital. Accessed on 12th April, 2019. http://www.makueni.go.ke/site/files/2018/12/Start-of-a-new-era-of-health-care-in-Makueni.pdf.

Ministry of Health. (2012). Draft Health Policy Framework, 2012-2030, unpublished reports County Government of Makueni (2018) County fiscal strategy paper.

Ministry of Medical Services (MOMS) and Ministry of Public Health and Sanitation (MOPHS) (2012): Kenya Health Policy 2012–2030 G.O.K. Nairobi

Mugo, P, Onsomu, E, Munga, B, Nafula, N, Mbithi, J and Owino, E. Commissioned by KIPPRA (2018)"An Assessment of Healthcare Delivery in Kenya under the Devolved System" Special Paper No. 19/2018. website: http://www.kippra.org. ISBN 9966 058 80 5. Nairobi, Kenya

Nambiar, D, and Mander, H,.(2016) Inverse care and the role of the state: the health of the urban poor. Bull World Health Organ 2017;95:152–153 doi: http://dx.doi.org/10.2471/BLT.16.179325

Nguyen, H, Rajkotia, Yand Wang, H. (2011) The financial protection effect of Ghana National Health Insurance Scheme: evidence from a study in two rural districts. International Journal for Equity in Health 2011, 10:4. http://www.equityhealthj.com/content/10/1/4

NHIF (2015), Contribution and deductions rates. [http://www.nhif.or.ke/healthinsurance/ ratesNyamwaya D., (2011) Draft Report: Situational Analysis of Health promotion in Kenya, MOHS

Nyakundi,C, Teti, C, Akimala, H, Njoya, E, Brucker,M, Nderitu,R and Changwony, J. (2011) Health Budgeting in Kenya - The case of RH/FP

Nyandekwe, M , Nzayirambaho, M & Kakoma, J. (2014). Universal health coverage in Rwanda: dream or reality. Pan African Medical Journal. 2014; 17:232 doi:10.11604/pamj.2014.17.232.3471. http://www.panafrican-med journal.com/ content/

O'Connell ST. National health insurance in Asia and Africa; advancing equitable social health protection to achieve universal health coverage 2012

World Health Organization (WHO) (2008) Commission on the social determinants of health – Final report. Retrieved from http://www.who.int/social_determinants/thecommission/finalreport/en/

Yamane, T. 1967. *Statistics, An Introductory Analysis*, 2nd Ed., New York: Harper and Row

Zere, E, Moeti, M, Kirigia, J, Mwase, T, and Kataika, E (2007) on *Equity in health and healthcare in Malawi: Analysis of trends*. from: https://www.researchgate.net/publication/6326940_Equity_in_health_and_health care_in_Malawi_Analysis_of_trends [accessed Apr 18 2019].

Zikusooka C, Kyomuhang R, Orem J, Tumwine M. (2009) Is health care financing in Uganda equitable? African Health Sciences Vol 9 Special Issue 2. https://www.researchgate.net/publication/51443891

Zikusooka CM, Kwesiga B, Lagony S, Abewe, C. (2014) Universal Health Coverage Assessment Uganda. Global Network for Health Equity (GNHE) December 2014t