ASSESSMENT OF OUT-OF-POCKET EXPENDITURE ON HEALTHCARE AMONG HOUSEHOLDS IN KEFFI

BY

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DECLARATION

I declare that the work in this project report entitled Assessment of Out-of-pocket Expenditure on Health Care among Households in Keffi has been carried out by me in the Department of Community Medicine. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this project report was previously presented for another degree or diploma at this or any other institution.

_____ _____

Husain Shaba, ADAMS Date

CERTIFICATION

This project report entitled ASSESSMENT OF OUT-OF-POCKET EXPENDITURE ON HEALTH CARE AMONG HOUSEHOLDS IN KEFFI by HUSAIN SHABA ADAMS meets the regulation governing the award of the degree of Master in Public Health of the Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

DR. EJEMBI C.L.

| --- | --- | --- |
| Supervisor (Name) | (Signature) | Date |

DEDICATION

This work is dedicated to God Almighty for his protection and provisions.

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I wish to acknowledge with gratitude my major supervisor, Dr. Ladi Clara Ejembi, for the wealth of knowledge she imparted on me in the course of this project. I also wish to appreciate the effort my minor supervisor, Dr. Alhaji Aliyu for what he put in to make this study a success. The sleepless night Mr. Jalo, the statistician, who saw me through the analysis is also appreciated. The last and not the least are my wife and other family members who missed my presence from home all the time I was in Zaria.

SUMMARY

Background:One of the main challenges of accessing health care in Nigeria is payment for service at the point of delivery. Out-of-pocket (OOP) payments being the main method of financing health care, has posed a serious constraint in accessing health care. This study assessed the socio-economic status of households in relation to out-of-pocket payment and how these have influenced households' access to health care in Keffi, Nasarawa state, North Central Nigeria. It also provided the necessary information on the options available for health care prepayment other than OOPs.

Method: A cross-sectional household based descriptive study design was used to study out-of-pocket expenditure on health care by households in the settlement. A structured closed-ended interviewer administered questionnaires was administered on eligible 316 household heads or appointed persons selected from listed wards using multistage random sampling technique. Wealth index was developed to assess the socio-economic status of household heads and the equity of OOPs by the use of Principal Component Analysis (PCA). Pearson Chi-square test was used to determine the relationship between OOPs and other categorical variables. Logistic regression was used to examine the multivariate relationship of OPPs.

Results: Of the 316 households 171 sought for treatment within the three months covered by this study. About 66% of households were in the lowest and second quintiles (combined) and only 3.8% is of the highest quintile. Households utilized health care services from traditional healers, patent medicine stores, clinics and hospitals. The educated used the formal health care services more than those with none formal education, however the association was not statistically significant. . Those with lower income accessed clinics and hospitals (63.0%) than the wealthiest (35.0%) who utilized more of patent medicine vendor service but; the difference was also not statistically significant. Ninety eight percent (98.2%) paid directly for health care service while only 1.8% paid for the same service through health insurance, especially, National Health Insurance Scheme (NHIS). The proportion of income spent on health care was 6.22%. The poor spent five times disproportionately higher than the better off and their spending was more catastrophic than the higher income groups.

Conclusion: the main constraint to accessing health care was OOPs which is as a result of none availability of social health insurance or any other form of health care insurance. There is therefore the urgent need to expand the National Health Insurance scheme and introduce the Community Based Social Health Insurance Programme so as to reach those in the non-formal sector.

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ACRONYMS

HCF	-	Health Care Financing
HH	-	Household
THE	-	Total Health Expenditure
HHH	-	Household Head
HHHE	-	Household health Expenditure
NHIS	-	National Health Insurance Scheme
OOP	-	Out-Of-Pocket
THE	-	Total Government Health Expenditure
THE	-	Total Health Expenditure

CHAPTER ONE

INTRODUCTION

Out-of-pocket (OOP) expenditure by households was the most important financing agents through which health expenditure sources channel funds to providers for health services in Nigeria and many other low/middle-income countries.[1] The world Health organization (WHO) defined Out-of-pocket payment for health care as, 'the direct outlay of households, including gratuities and payments in kind, made to health practitioners and supplies of pharmaceuticals, therapeutic appliances and other goods and services whose primary intent is to contribute to the restoration or to the enhancement of the health status of the individual or population groups. It includes household payments to public services, non-profit institutions and nongovernmental organizations. It also include none reimbursable cost sharing deductions, co-payments and fee-for-service, but excludes payments by companies that deliver medical and paramedical benefits whether required by law or not, to the employee and also excludes payment for overseas treatmen'.[2] OOP expenditure on health has been observed through the years to be disproportionately higher among most developing countries than the developed ones. For example, Nigerian's private health expenditure as percentage of total expenditure on health in 2008 stood at 74.7%, out of this OPPs expenditure constituted 95.9%[3] while the total government expenditure during this same period stood only at 25.3%.[3] This suggests that government and privately organized institutions are not making enough investment in the health of the people which is supposed to be a national priority and that much of the burden of health care is bored by individuals and households.

Out-of-pocket payment for health care is one of the five major ways of financing health care in Nigeria. The others are, government (from all sources including taxes), health insurance (private and government schemes), donor funding from bilateral and multilateral organizations, and NGOs. There is however over-reliance on OPP expenditure as a major source of financing health in Nigeria and in most low and middle-income countries. Even though taxation may to some extent be equitable between the rich and poor, payment for health care is however, non-equitable, since both the poor and the rich pay equally for the same health care service in both public and private health facilities. The 25.3% general government health expenditure (GGHE) as percentage of total health expenditure (THE) is also contributed to by the poor as tax from their lean resources, even though they are often too poor to afford payment for health services, and many of this poor have become impoverished in an attempt to pay for such health care services,[4] either by way of the illness itself (most especially chronic ones needing prolonged and frequent absence from work), or by reduced ability to work, and thirdly by the cost of treatment which is often prohibitive to the poor. Consequent to this, many families are left with no alternative than to seek for discharge from health facility, which are most often against medical advice. As a result of these actions, such patients continue with their ill health, death, or go into impoverishment on recovery if they ever do so.

They are several and certainly obvious problems with our health care delivery system but, majorly with health care financing. Poor health care financing has contributed significantly to the low patronage of public health facilities. Because the sick often had to pay directly out of pocket at the point of service delivery even though they are almost always unprepared for this kind of sudden expenditure. Unfortunately Nigerian, most

especially the poor and middle income earners, do not save for health, possibly because they are not aware of the existence of such schemes or when they do they lack access to this schemes.[5]

Financing health care is one of the components of the Health system management. It is centered on three interrelated factors. 1) revenue collection, which is the process by which the health system receives money from households and organizations or companies as well as from donors, 2) polling of resources, which is the accumulation and management of revenue in such a way as to ensure that risk of having to pay for healthcare is borne by all the members of the pool and not by contributor individually, and 3) purchasing of interventions, which is the process by which pooled funds are paid to providers in order to deliver a specified or unspecified set of health interventions.[6] The objectives of health care financing therefore are to make funds available, ensure appropriate choice and purchase of cost effective interventions, give appropriate financial incentives to providers, and ensure that all individuals have access to effective health service.[6]

The challenges faced by most low and middle-income countries, such as Nigeria, are those of identifying sources of financing health care and being able to pool these resources together for the general benefit of the citizens. Failure to harness these components of health care financing leads to high out-of-pocket expenditure and therefore large failure of citizens to utilize available healthcare services.

In Nigeria the average household expenditure on health care between 1999 and 2001 stood at 64.25%, and rose to 68.45% between 2002 and 2005 while the public expenditure on health care stood at 35.7% and 31.65% during these same periods of time respectively.[1,7] This large percentage (68.4%) contribution by households to health care financing is made up of expenditure by both the majority have-not and a few have-much as there is no disparity between what the rich and poor households pay for health care despite the wide difference in their economic status. There are no specific provisions for healthcare schemes for the poor in the society, most especially for those living in the rural areas where the poor of the poorest are found in their numbers. Even where specific free health care services are made available, such as free immunization scheme or family planning, they are equally enjoyed by the rich and the poor. There is also an irony in the implementation of the social health insurance (National Health Insurance Scheme {NHIS}), where those that are in dire need for the scheme scheduled for the second set of people to be reached for the scheme while those who are economically better-off and therefore most likely able to purchase health care enjoy the privilege of being the first to benefit from this scheme. Therefore it can be subsumed that poor households are at disadvantaged position of paying disproportionately higher for health care than richer households.

Some African countries, e.g. Uganda and South Africa have some exemption methods for the terminally ill and people with HIV/AIDS most especially if such a person is the head of a households. Some other countries have special healthcare package(s) such as, exemption from payment for health care for the elderly or delayed payment for those who are incapable of paying at the point of service[8-10]. This type of package is almost in non-

existence in Nigeria even though the federal government and some states have some forms of free health care service such as immunization, free antenatal and delivery services for the pregnant women and free treatment bill for the under-5 children but, these packages are not exclusively reserved for the poor.

Low spending on health care by all tiers of government in Nigeria is an important contributor to the high out-of-pocket expenditure by households. The total government health expenditure (TGHE) as a proportion of the total health expenditure (THE) was estimated to be 18.69% in 2003, 26.4% in 2004 and 26.02% in 2005 while household health expenditure (HHHE) as a proportion of THE was 74.02% in 2003, falling to 65.73% in 2007 but went up to 67.22% in 2005.[1] Not only was TGHE low but also that the rate of increase per annum was rather too low and slow. Comparing the Nigeria case to some other African countries such as Zambia, where HHHE was 21.20% of the THE in 2002 while corresponding value for Kenya was 51% and Egypt was 60% in the same year[1.] It's evidently clear from this that there is unwillingness on part of Nigeria government to increase its expenditure on health. This apathy may not be peculiar to Nigeria as it has been observed that, there is general apathy among government of developing countries to improve spending on health care. For instance, in 1994 the global expenditure on health total US $ 2.3 trillion, with high-income countries spending about US $2.0 trillion of this total even though they accounted for only 16% of the world population. Developing nations on the other hand spent only 11% of the total global spending on health but accounted for 84% of the world population.[11]

This wide gap between developed and developing nations might have been contributed to by the enabling environment and incentives for independent health insurance

organizations to participate in health care for its citizens. The level of participation by private insurance institutions in the United Kingdom, USA, and Uganda stood at 55%, While in Nigeria, between 2003 and 2005 health insurance contributed at only 3% of the THE. Health insurance is meant to improve access to health care, thus promoting good health. Reasonable access to health care encourages individuals to seek health maintenance services more regularly than they otherwise would, thereby prevent potentially serious illnesses and protect individuals from financial hardship that may result from large or unexpected medical bills. Health insurance can be obtained from private organizations or from government agencies.[6] It was in response to the urgent need for health insurance that the Federal Government set up the National Health Insurance whose bill was passed into law in 1999 although it only became operational in 2006. This scheme is intended to be a tool for achieving health related Millennium Development Goals (MDGs) but, the target group are not being reached via this scheme. For example, reduction of infant and maternal mortality rates, those who contribute most to these high rates (poor households) are yet to be reached with the scheme[12]. Even though there are plans to expand the programme to reach the informal sector and therefore the rural poor, the actualization of this goal is not likely in the immediate feature in view of the rather slow phase of implementation and also for the lack of pre-existing structures, that could serve as the lunch pads for the programme as it was done in Ghana. Ghana started the mandatory health insurance that was introduced as a result of increased request for an alternative health care financing system for its PHCs, however, prior to this there were informal community and private trials of various health insurance schemes, i.e. by 2003 just before its introduction, there were at least 67 district wide schemes and 189 HMOs

ran by communities, schools, churches and NGOs that eventually collapsed into the national health insurance scheme thereby giving it wide range of coverage and reaching the informal sector was made with much ease.[13] It could therefore be said with some degree of certainty that community organizations for health are important tool for reaching rural households, and could also play the role of mobilizing contributions in rural communities where formal social security scheme cannot reach because of the difficulty of assessing and collecting contributions. The community can be very effective in mobilizing material and human resources for the expansion of the national health insurance scheme.

The alarming private share of expenditure on health in Nigeria is all more alarming as most of it takes place via non-pooled out of pocket expenditure. This seems to have arisen from limited awareness by communities and groups about the potential impact of prepayment financing which spreads risk and pool fund on issues of health care equity, financial protection and social safety-net improvement.[6]

These challenges posed by high out-of-pocket expenditure on health are likely to get worst in the face of global economic down-turn and the ever increasing poverty in low-income nations. Poor households without financial protection will also continue to experience diminished access to good health care service. Some may resort to leave the sick untreated or go for low quality health care and when these options fail such household could end-up spending catastrophically and, most of often than-not culminate in further impoverishment of such households.[14] Expenditure is said to be catastrophic when household expenditure or contribution to the health care system exceed 40 percent of income remaining after subsistence needs have been met.[15] This study was thus

conducted with the view to determine the level and incidence of out-of-pocket expenditure on health care by house-holds in Keffi, a semi-urban community of Nasarawa State, North-central Nigeria.

1.2 PROBLEM STATEMENT

The cost of health care service in both public and private health facilities has sky rocketed in the recent past and it seems this will continue in years to come except an urgent intervention is put in place. While the ability to purchase health care is diminishing there is increasing poverty in the country (Nigeria), as it is the case with most developing nations. Therefore there is the need for urgent intervention at all levels and quarters to bring about access to all, no matter their position or where they live.

The continuous inability of the sick and households to pay for health services is a common phenomenon in many health facilities across the length and breadth of Nigeria. This is, however, more common among the poor rural households and semi-urban dwellers. The situation may be so precarious that the sick's relation may have to sell some properties of the sick or of the household in order to pay for medical bills. In other instances loans with high interest rates may be obtained on behalf of the sick and this are usually not devoid of the consequence of impoverish of both the sick and the household. In extreme cases of poverty the sick are often left at home without treatment or if already on treatment at a health center she/ he is taken home and left at the mercy of death. These unfortunate happenings could be attributed to lack of commitment on part of government at the three levels, federal, state and local governments. For example, the financial contribution of all level of government was only about 36% between 2002 and 2004 while household have a share of an average of 64% within the same period[1,5]. This has

been the pattern over the last 15 to 20 years. The lack of health insurance for the poor is another major contributing factor. The National Health Insurance Scheme that is meant to alleviate the burden of high household expenditure on health is yet to reach the poor who need it most urgently, and the probability of reaching them in the near feature is almost not feasible because of the slow phase of attempt at implementation and for the lack of commitment on the part of government at all levels. The almost nonexistence of Private health insurance has further compounded the problem. As at the end of 2006 not many health insurance organization were in existence, even the mutual health organizations that were operating in early 1990s are almost in nonexistence today, except a few in Lagos State, e.g. Jas Medical Service in Mushin and Lawanson in surulere, Lagos.[16] The other contributing factor and probably the most crucial for now is the lack of savings for Health (or illness) by households. It could be said that two factors are responsible for the failure to save for health. First, the high level of poverty in the country, where 60% of its citizens live below poverty line and secondly, there is significant level of lack of awareness among Nigerians and it's households that they and the community could come together and save for their health care and thereby minimize the ugly, incessant and unnecessary incidence of catastrophic expenditure on health care and its impoverishment.

It's intended that this study will determine the level and frequency of household expenditure on health care and also explore the resources available to households in Keffi that could improve access to health care that are affordable, feasible, and sustainable.

1.3 JUSTIFICATION

Out-of-pocket payment for health care by households has been estimated by several studies and estimations to have contributed between 64 and 70 percent of health care financing in Nigeria and has largely contributed to the inability of households to access adequate and desirable health care be it in the public or private[1]. This unfortunate situation has not only contributed to the high morbidity and mortality but has also impoverished many households.

The National Health Insurance Scheme (NHIS) introduced to alleviate this high out-of-pocket expenditure on health is still not accessible by majority of those in the informal sector and the probability of reaching these sets of Nigerians in the nearest feature seems more of mirage than reality. It is in view of the urgent need to finding solution(s) to these challenges that calls for the necessity for an alternative, at least for now. Community Health Organization (CHO) and other forms of health insurance that are almost in non-existence need to be explored with the aim of establishing a less-burdensome health care payment mechanism for households in Keffi.

1.4 RESEARCH QUESTION

Does out-of-pocket expenditure on health care significantly affect household access to health care?

1.5 AIMS AND OBJECTIVES

General objectives

To determine the level and frequency of out-of-pocket expenditure on health care among households in Keffi

Specific objectives

1. To determine the source of household financing for health care.
2. To quantify the proportion of household income spent on health care
3. To determine factors influencing households access to health care services.
4. To measure the perception of household on the best method of payment for health care services.

1.6 SCOPE OF THE STUDY

This study assessed out-of-pocket expenditure by health households in Keffi municipal area of Keffi Local Government Area of Nasarawa State.

CHAPTER TWO

LITERATURE REVIEW

Many low and middle – income countries over the years continue to seek for better ways of financing their health systems. Common among many of these systems is that, present financial methods do not mobilize sufficient resources to provide the needed level of health care for the citizens. Much of the available resources are not pooled to provide any significant protection against households expenditure variance or channeled through some form of pre-payment mechanisms, and the scare resources that are mobilized often do not lead to value for money in terms of the health care on which it is spent.

Countries need to mobilize sufficient resources to provide essential health services for their population, reduce inequalities in the ability to pay for those services, and provide financial protection, against impoverishment from catastrophic health care cost through explicit policies affecting the three financial functions of collecting revenues, pooling risk, and purchasing of goods and services. Developing countries, particularly low – income countries, face severe challenges in mobilizing sufficient resources to meet even basic service needs, while middle–income countries focus more on providing universal coverage to their populations. Various mechanisms for risk pooling and prepayment are possible for countries at all income levels, but this depends much on problem associated with the structure of a country's economy, as well as its financial, and political capacities.[18]

Despite the increase in health expenditure over years millions of peoples suffer financial catastrophe. 150 million people globally suffer financial catastrophe each year and 100 million are pushed into poverty because of direct payment for health services.[19-21] This

indicates that a wide spread lack of financial risk protection, a deficiency that affects low income countries most, but by no means limited to them. The global health care expenditure have risen from 3% of world GPD in 1948 to 7% in 1997 and recently to 9% in 2010,[6,11] yet millions are pursued into further poverty in attempt to pay directly for healthcare services. Therefore, health care financing is much more than a matter of raising money for health; it is also a matter of who is asked to pay, when they pay and how the money raised is spent.

2.1 HEALTH CARE FINANCING SYSTEM

The purpose of health financing is to make funding available as well as to set the right financial incentives for providers, to ensure that all individuals have access to effective public health and personal health care. This means reducing or even eliminating the possibility that an individual will be unable to pay for such care or will be impoverished as a result of trying to do so.

To ensure that individual have access to health service, three interrelated functions of health system financing are crucial: revenue collection, pooling of resources and purchasing of interventions. It does not just stop at that but there are challenges of having the necessary technicalities, organizational and institutional arrangements so that such interaction will protect people financially the fairest way possible, and to set incentives for providers that will motivate them to increase health and improve the responsiveness of the systems.[6]

2.1.1 Revenue collection

Revenue collection is the process through which the health system receives money from several sources. This is mainly through those five broad ways of general revenue (taxation), mandatory health insurance contribution (from salary and almost always never risk related), voluntary private health insurance, out–of–pocket payments and donations [6, 8.] Most high–income countries rely largely on either general taxation or mandatory social health contributions; while low–income countries depend far more on out–of–pocket financing. In 60% of countries at income below $100 per capita, out–of–pocket spending is 40% or more of total health expenditure, whereas only 30% of middle and high–income depend so heavily on this kind of financing[6]. Methods of financing health care are discussed subsequently.

(1) Taxation

Most developed nations have efficient tax system and could therefore not have problem in using tax revenue to finance health services, however, developing nations generally have problem in their tax system and may not collect enough revenue from this system; this is more also for reason of high poverty level among the very poor and high rate of corruption in many of these countries. With efficient tax system and social health insurance (SHI) accessible by all, basic health services could be equitable.

(2) Social health insurance

Prepayment is one of the most important determinants of sustainable health care financing. Based on the concept of social solidarity, prepayment schemes contribute to equity goals because of their risk sharing and fund pooling potential. There is therefore the potential of transforming risk associate with out–of–pocket payment for health care services into a risk protecting prepayment mechanism. NHIS is one of them. It is in realization of it enormous advantage that the Federal Government of Nigeria introduced the scheme for its employees that became operational only in 2006. Its protective effect is not in dispute.

SHI differs from private health insurance where the later contributions are often individualized and related to the risk of ill health of the person being covered and has no pooling effect. Health care financing needs strengthening of institutions for prepayment schemes including community based health care insurance (CBHCI) and SHI. Ghana is one of such countries in Africa that used the existing community health schemes to launch and strengthen its mandatory social health insurance. This made it easier and faster to reach the informal sector and rural poor.[22] Another country with success story is Rwanda, it operate three types of social health insurance one for the formal sector, the second is for the military and the third for the informal sector known as Assurance Maladius Communities Mutual Health Schemes whose members predominantly live in rural settings and work in informal sector. These mutual insurance schemes have expanded rapidly over the past 10 years, and now cover more than 80% of the population. About 50% of the mutual insurance scheme funding comes from member premiums, the

other half being subsidized by the government through a mix general tax revenues and donor support.[23,24]

(3) Private health insurance

Private health insurance is playing an increasing role in both high – and low income countries in financing health care. As policy makers consider how to move towards financing mechanism that will protect their citizens from financially catastrophic effects of Illness; they have three major options to consider; taxation, social security, and private health insurance (which consists of non-profit and for-profit plans and as well as community health insurance schemes (policy and practice private insurance),[1,2] Unlike taxation and social security, which are commonly viewed as promoting equity, private insurance often conjure up vision of unequal access, large number of uninsured people, and elite health care for the rich. Experience indicates that unregulated or poorly designed private health insurance systems can indeed exacerbate inequalities, provide coverage only for the young and healthy, and lead to cost escalation.[25]

When properly managed, however, there are several ways in which private health insurance can play a positive role in improving access and equity in developing countries. First, out-of-pocket spending on health services is the most common form of health financing in developing countries and represent significant financial burden for household.[26] with this burden, private health insurance give households opportunity to avoid large out–of–pocket expenditure, it can provide access to financial protection that is otherwise lacking. Secondly, many developing countries have public expenditures for health of less than US $10 per person per year,[28] however, the commission on

macroeconomics and health advices that it cost US $34 per person per year to provide a package of essential health interventions.[28]

Developing countries also have lager informal sectors, which makes tax collection difficult. This limits the ability of developing countries to generate sufficient tax revenues or fund social insurance systems to provide broad financial protection for healthcare. Private coverage, when appropriately regulated, may be one way to move toward prepayment and risk pooling until policy makers aim to limit public resources at the most vulnerable groups, while those who can afford to contribute towards their medical cost are required to do so. Thirdly, social insurance systems in many developed countries involved from voluntary private insurance schemes based on those of professional Guild or communities.[29]

Finally, private health insurance continues to be important even in countries where universal coverage has been achieved and policy – makers who plan ahead for this supplementary role will be better prepared to ensure that private coverage complements public systems as they develop.

(4) Out–of–pocket payment/user fees

Out–of–pocket payment for health defined by World Health Organization in its 2008 World Health organization National Health Account, statistical Information system as the, "direct outlay of households, including gratitude and payments in kind, made to health practitioners and suppliers of pharmaceuticals, therapeutic appliances and other goods and services, those whose primary intent is to contribute to the restoration or to the enhancement of the health status of individual or population group it includes household

payment to public services, nonprofit institutions and non-governmental organizations. It includes non-reimbursable cost sharing deductibles, co-payments and free–for–service, but excludes payments made by companies that deliver medical and paramedical benefits, whether required by law or not, to their employer, it also excludes payment for overseas treatment", is the most common source of health care financing.[2]

In Middle and low–income countries, it is important to note that out – of – pocket health expenditure is partly for modern medical care and also partly for traditional remedies and increasingly for faith based treatment including the search for miracles.

Numerous studies have shown that out-of–pocket payment is an inequitable and inefficient way of mobilizing resources for health services. There are considerable data that indicate that low–income families spend a higher percentage of their income on health compared to high–income households. A health system where individual have to pay out of their own pocket for a substantial part of the cost of health services at the moment of seeking treatment clearly restrict access to only those who can afford it, and is likely to exclude the poorest members of the society.[4] By this some important health interventions would not be financed at all, as is the case for the public goods type of intervention e.g. treatment of TB (DOT), maternal health and safe motherhood interventions, family planning, integrated management of childhood illness, immunization, malaria prevention, and a host of other interventions. It has been estimated that a high proportion of the world's 1.3 billion poor have no access to health services simple because they cannot afford to pay at the time they need them, they also risk being pushed further into poverty, because they are too ill to work and earn a living. Even modestly charged service fee may lead to catastrophic expenses if the frequency of

service use is sufficiently high.[30]High level of out–of–pocket health spending by the households is recognized as one of the main causes of poverty as low–income populations often stretch all financial resources, including the disposal of their production assets, to pay for much – needed health care.

Many people who do seek treatment, and have to pay for it at the point of delivery, suffer severe financial difficulties as a consequence.[31-34] Estimate of the number of people who suffer financial catastrophe (defined as paying more than 40% of household income directly on health care after basic needs have been met)[4] show that in some countries up to 11% of the people suffer this type of severe financial hardship each year and up to 5% are forced into poverty because they must pay for health. Studies have shown that 100,000 households have been pushed below poverty line in both Kenya and Senegal. About 290,000 experienced the same fate in South Africa.[36] Even though financial catastrophe occurs in countries at all income levels, but is greatest in those that rely the most on direct payment to raise fund for health.[36]

The situation in Nigeria does not differ much from what is obtained in other developing or low-income countries where households continue to be the major source of financing health care. The average household health expenditure was 68.45% of the total health expenditure, up from 64.25%, over the period of 1998 to 2002. The burden is even worse at the state level where the average HHHE contribution to state total health expenditure was above 72%. Household share of the total health care expenditure in some Northern states was as high as 86%. With high poverty incidence in the country, poor households are definitely more adversely affected. Government has the responsibility to lessen the

burden of health expenditure by poor households if its stewardship is not to be called to question.

(5) Donor funding/external assistance

The need for donor funding cannot be overemphasized. In low– income countries where prepayment structure may be underdeveloped or inefficient and where health needs are massive, there are many obstacles to raising sufficient funds through prepayment and pooling, it is essential, therefore, that international donors lend their support investing in the development of prepayment policy, as opposed to simply funding projects or programmes through separate channels, is one of the best ways donors can help countries move away from user fees and improve access to healthcare and financial risk protection.[36-38]

Donor funding, from bilateral or multilateral international organizations, may take the form of loans, which have to be repaid along with interest charges, or of aid grants, which do not have to be repaid. There is heavy reliance on this by low–income countries exceeding about a quarter of health care funding in 35% of counties.[39]

2.1.2 Pooled money (resources)

Adequate funding is necessary toward attaining universal coverage for health. This fund could be generated from several sources such a revenue from tax, donor agencies, insurance and out–of–pocket. Tax collection has been noticed to be difficult to collect in most developing nations as compared to developed nations who have good tax system, majority of developing countries rely much on OOPs, which is highly retrogressive to the poor.

Pooling is the main way to spread risk among participants, even when there is a high degree of separation between contributions and utilization. Payment alone does not generate fair financing; it is on individual base alone, that is, via medical saving account. Individuals will then have limited access to services after their savings are used. Pooled resources bored by all instead of individuals give better coverage to all. The more people who share the financial risk in this way the lower the financial risk to which individuals are exposed to financial catastrophe. Using this same reasoning, pools with few participants are likely to experience extreme fluctuation in utilization and claims[40]. For pool to exist money must be put into it in advance of illness. This is why a system of prepayment is required. Prepayment simply mean that people pay some money in advance of illness, and then utilize the generally pooled money at time of illness. This payment could at the stage of payment be subsidized from the general government revenue.

2.1.3 Purchasing

Purchasing is the process through which pooled funds are paid to providers in order to deliver a specified or unspecified set of health interventions. Purchasing can be performed passively or strategically. Passive purchasing implies following a predetermined budget or simply paying bills when presented. Strategic purchasing involves a continuous search for the best way to mobilize health system. Purchasing uses different instruments for paying providers, including budgeting. Recently many countries, including Chile,[41-42] Hungary,[43] New Zealand,[44-45] and the United Kingdom[46-48] have tried to introduce an action purchasing role within their public health system.

2.1.4 Suggested ways out of excessive dependence of low income Countries on out-of-pocket payment for healthcare

The World Bank in a study observed that, while low-income countries are still struggling to raise sufficient resources to fund essential health care, countries in the middle-income group are focusing on a somewhat different set of priorities. With the ability to deliver basic health services, most middle-income countries are increasingly turning their attention to the issues of universal health coverage, financial protection, and health system efficiency. These objectives require an overhaul of the current financing structures a prospect that raises technical, institutional, and political challenges.

This overview of health financing challenges yields these policy recommendations for middle-income countries that could be applicable to low-income countries too. There are:

- Efficient revenue mobilization should be a top priority for health, because funding must be sustainable and must match long-term needs.
- Domestic revenues and funding sources will need to supply the bulk of financing.
- Tax-raising ability should increase and resources should be mobilized equitably and efficiently for health, possibly through better payroll collection, tax reform, or other structural reforms.
- Increased risk pooling is needed to improve allocating efficiency, equity, and financial protection. This would entail increasing the pooling of out-of-pocket health spending estimated to compose about 40 percent of total health spending as well as integrating informal sector workers into coverage schemes.

- Risk pools should be consolidated to provide maximum financial protection and universal coverage. The associated benefits are greater purchasing power and efficiency through lower transaction costs.

An appropriate package of benefits should be designed for covered populations, because the level of benefits affects the efficiency of risk pooling and resource allocation as well as the degree of financial protection. Standard or minimum benefit packages should have the right mix of coverage breadth and depth, so that trade-offs among the goals of universal coverage, financial protection, health outcomes, and cost containment are well balanced.

- Health spending should be parsimonious so that coverage can be expanded to more people. Overall efficiency in the health system can be increased by reforming procedures for purchasing services and by instituting incentive based payment mechanisms. Furthermore, payment policies should be in line with overall cost containment and cost-effectiveness objectives.
- The specific form of health insurance scheme, whether based on a National Health Service system, social health insurance, or a private health insurance model (or some combination of the three), is less important than ensuring that the scheme focuses on improving revenue collection, risk pooling, and service purchasing. Depending on the context, a combination of insurance schemes may be necessary to accomplish the dual goals of universal coverage and financial protection.
- Lessons and best practices from the health-financing reform experiences of middle-income countries, especially those that address ways to overcome

institutional impediments, are valuable for low-income countries as their economies grow. Development partners should document such experiences to expand global knowledge.

- The international community should not overlook the disparities in the health status of different populations within middle-income countries, a situation that also prevails in low-income countries and even some high-income countries.[49]

CHAPTER THREE

METHODOLOGY

3.1 Background of the Study Area

Keffi, the head quarter of Keffi Local Government Area council is a semi-urban settlement situated at the western part of Nasarawa State, North central zone of Nigeria. The town is divided into 8 political wards that are further grouped into smaller unit of zones. From the 2006 population census Keffi had an approximate population of 92,664 persons made up of 47,801 males and 44,863 females. The total numbers of households in the main town, keffi, is currently not available but the local government area has a total of 16,664 households and the modal household membership being one. The major ethnic groups are Hausa, Mada, Eggon, Igbos and others minority ethnic groups. The dominant religions are Christianity and Islam. By occupations its dwellers are majorly civil servants, subsistent farmers, traders, and artisans. Others are medical personnel of diverse professions such as, medical doctors, nurses, pharmacists; medical laboratory scientists employed in the public and private sectors. The town has some reputable health facilities, for example, one tertiary health institution (Federal Medical Centre), one General Hospital, four Private Hospitals, 8 Primary Health Care centers, numerous private clinics and one School of Health Technology. In addition to these are a few pharmaceutical outfits and sizeable number of patent medicine stores manned by either qualified or unqualified personnel, doting several streets and corners of the town. Traditional healers and religious prayer houses are often visited by many of its inhabitants for the purpose of obtaining treatment for their illnesses. This settlement has some characteristics common to most towns and cities in developing counties such as poor water supply, lack of proper

refuse collection and disposal, and poorly supervised health staff and facilities. While some areas are dominated by standard houses and infrastructures (mainly at the outskirts) and Government Reservation Areas (GRA), other areas are majorly urban-slums, squalors and ghettoes.

3.2 Study Design

The study is a descriptive cross-sessional design.

3.3 Study Population

The study population shall be households in keffi town.

3.4 Inclusion / Exclusion Criteria

A household included all those who live together, taken care of medically and eat from the same source. These are the targeted members in this study.

Those who are not permanent members of a household (i.e. visitors) shall not be included except such a person(s) also depends on the household for his/her health and other cares. Money donated for healthcare shall not be considered as expenditure on health care so also is money spent on oversea treatment and on health care of nonmembers of the household.

3.5 Sample Size Determination

To determine the sample size, the indices used to determine sample size in a study done to investigate. Out – of – pocket health expenditure for under five in a semi urban community in Northern Nigeria by Sambo MN et al was adopted in this study since both studies have significant similarities.[14] 0.25 was used as proportion of households positive

for health care that will require payment, power of 80% (0.8), confidence interval of 95% and 0.05 as the absolute sampling errors that can be tolerated.[50]

Using the formula $n = \frac{z^2 x\ pq}{d^2}$

Where

n = the desired sample size,

z = the standard normal deviation at 95% confidence interval =1.95

p = the proportion in the target population estimated to have a particular characteristics = 0.25

q = 1.0 – p = 0 .75

d = degree of accuracy desired, usually set at 0.05

Therefore $n = \frac{1.96^2 \text{ x } 0.25 \text{ x } 0.75}{0.05^2} = \frac{0.9604}{0.0025} = 288.12$

n = 288

To make up for nonresponse and errors in administering the questionnaire 36 is added to the calculated sample size hence, the final sample size is 324.

3.6 Sampling Method

A multistage sampling method is the method preferred in this study.

Stage 1: Four wards out of the eight in the area were selected by simple balloting. 81 households were allocated to each of the selected wards.

Stage 2: Streets in the selected wards were all named and four were selected by simple balloting.

Stage 3: The next step was numbering of all houses on the selected streets followed by systematic sampling of houses. 20 houses were selected starting from the first

house either to the left or right as the first picked house or compound, then every other third house (i.e. first house then skipped two houses then pick the next etc.), this was applied to all houses on each selected street. Where they are more than a household in house or compound a household was selected by simple balloting. Where the required number of households could not be obtained the remaining streets were subjected to further balloting to select additional street(s) to make up for the shortfall in the number. To make up for the required number of 81household per ward the fourth street in each selected ward was given additional one household by the same method of selection.

3.7 Data Collection Instrument

Information was obtained using a closed-ended questionnaire that examined the demographic, socio-economic characteristics of the heads of households. It also examined the healthcare seeking practices, that is, the number of cases in a household in the last three months that sought healthcare from different providers but did not include self-treatment. The expenditure (comprising of transport, drugs, laboratory test, procedures and others) for healthcare services for disease or health conditions was determined using three months recall period. It also set to determine the various modes of payment for healthcare services received during this time period. The payment methods that were explored included out-of-pocket spending (OOPS), direct payment with re-imbursement by the employer, National Health Insurance Scheme (NHIS), Community-based Health Insurance (CBHI), Private Voluntary Health Insurance (PVHI). It sought to determine the rate and frequency of out-of-pocket expenditure on health care. The

respondents were the Head of households or anybody appointed to stand on his/ her behalf.

The questionnaires were administered by interviewers who are Nurses and Community Health Workers. Pre-testing of the questionnaire was conducted in nearby town with demographic characteristics similar to that of keffi. This was followed with appropriate adjustment and corrections before the commencement of data collection. Data was collected by a team of 8 female and 2 male Nurses and Community Health Extension Workers who had been trained and supervised by the principal researcher and the assistant.

3.8 Data analysis

Statistical Package for Social Sciences version 17.0 (SPSS, Inc., Chicago, IL, USA) was used to create a continuous socio-economic status (SES) index using information from households' asset holdings. The assets were ownership of motorcar, motorcycle, radio, refrigerator, television set, and bicycle. The SES index was divided into SES quintiles. Income was not used generally because most people do not give reliable information on their incomes. Testing of SES quintile means Kruskal Wallis test statistic of chi-square for trends was used, in order to determine whether the mean of the quintiles were significantly different statistically.

Relationship between OOPs and other categorical variables was assessed using Pearson chi-square test. Also, continuous variables were tested by the use of t-test and analysis of variance where appropriate.

Logistic regression analysis was used to examine the multivariate relationship of OOPs with key explanatory variables. The dependent variable was whether or not someone paid through OOPs .The explanatory variable was the weight that was used to derive the SES index, households' socio-demographic characteristics and cost of treatment.

For all tests $p< 0.05$ was considered statistically significant.

3.9 ETHICAL CONSIDERATION

Approval for the study was obtained from the Federal Medical Centre Keffi Ethical Committee. Consent of participants was sought by first explaining the essence of the study to each head of household or representative in addition to a written consent given to such persons.

3.10 QUALITY ASSURANCE

The questionnaire was pre-tested for necessary adjustment, and necessary corrections made. The administering interviewers were adequately informed and re-trained on data collection method. The team was properly supervised by the principal researcher and his assistant. A four day intensive training of members of the research team was conducted and it included critical review of the questionnaire, role play of simulated interviews and discussion of various communications skills. Because significant number of the respondents do not understand English language the team members were carefully selected to ensure that they were both English and Hausa speaking interviewers'. The questionnaire was properly sifted by seeking the opinion of professionals in the field of public health research, statisticians, and population demographers. Sorting based on the wards area was ensured before the administration and return of the questionnaires.

Responses were pre-coded and entered by double data entry. Logical check by cross tabulation and data cleaning were undertaken before and during data analysis.

3.11 LIMITATIONS

The absence of proper house numbering, inadequate ward and district population figures, made the sampling method rather cumbersome. Some findings of test statistics could not be subjected to test of statistical significance because of multiple roles and columns. Inadequate fund was also a limiting factor as it was the major reason the study could not cover more than a town in the state.

CHAPTER FOUR

RESULTS

The data analysis and results presented in this chapter are based on the 316 out of 324 copies of questionnaires that were collected. Eight were improperly captured; therefore the response rate was 97.5%. 171 households had at least one member who was sick within the period of the study.

4.1 BACKGROUND CHARACTERISTICS OF RESPONDENTS

Table 4.1.1: Socio-demographic characteristics of household heads

Variable		Frequency (n=316)	Percent (%)
Age group(years)	< 20	4	1.3
	20-29	17	5.4
	30-39	80	25.3
	40-49	98	31.0
	50-59	55	17.4
	≥ 60	62	19.6
Sex	Male	309	97.8
	Female	7	2.2
Education	Non-formal	78	24.7
	Formal	238	67.3
Occupation	None	4	1.3
	Farming	35	11.1
	Petty trading	51	16.1
	Artisans	71	22.5
	Civil servants	130	41.1
	Others	25	7.9
Income per annum	≤ 500,000	139	44.0
	500,001-1,000,000	149	47.2
	>1,000,000	28	8.9

As shown in Table 4,1majority of the respondents were male (97.8%), had formal education (67.8%) and had a means of livelihood (98.7%), with 41.1% employed in the formal sector. The mean annual income for all households was 620,600 Naira (± N400, 902). Range of income of 260,000 to 7,131,000 Naira.

Table 4.1.2: Proportion of households according to Wealth Index Quintiles

Wealth Index Quartiles	Frequency (n=316)	Percentage (%)
Lowest	89	28.2
Second	121	38.3
Middle	74	23.4
Fourth	20	6.3
Highest	12	3.8

Table 4.1.2 above present the distribution of the 316 households surveyed into quintiles. The result showed that the second Social quintile has the highest concentration 121 (38.3%) of household heads followed by the lowest quintile 89 (28.2%). The frequency declined thereafter as the SE class increase toward the highest class.

Table 4.1.3: Comparison of SES Quintile Mean Wealth Index Using Kruskal Wallis Test

SES Quartiles	n=316	Mean	χ^2	df	p-value
Lowest	89	44.0	288.869	4	0.001
Second	121	148.50			
Middle	74	245.50			
Fourth	20	292.50			
Highest	12	308.5			

The households were classified into quintiles and the mean socio-economic score for each group was calculated (table 4.1.3). A comparison of these groups using Kruskal Wallis' test (chi-square for trend) showed a statistically significant socio-economic mean chi-square score difference of 288.87 ($p<0.001$) which is a statistically significant association.

Table 4.1.4: Usual sources of treatment by households in event of illness among respondents

Point of treatment	Frequency (n=171)	Percentage (%)
Self-treatment	9	5.3
Traditional/Herbalist	9	5.3
Patient medicine vendors	47	27.4
Clinic/Hospital	106	62.0

Table 4.1.4 shows that the commonest source of treatment in event of illness by majority of the households were clinics/ hospitals (61.9%), followed by patent medicine vendors (27.5%) and the least patronized was traditional healers 5.3%.

Table 4.1.5: Usual sources of treatment by households in event of illness in relation to educational status and annual income among respondents (n=171)

Characteristics		Self treatment	Traditional/Herbal	Patient medicine	Clinic/ Hospital	Total	χ^2	df	P
Education	None formal	2(4.9)	1(2.4)	14(34.1)	24(58.5)	41(100.0)	1.087	3	0.613
	Formal education	7(5.4)	8(6.2)	33(25.4)	82(63.1)	131(100.0)			
Income	≤ 500,000	3(3.7)	5(6.2)	22(27.2)	51(63.0)	81(100.0)	7.774	6	0.255
	500,000-1000,000	4(5.5)	2(2.7)	18(24.7)	49(67.1)	73(100.0)			
	>1,000,000	2(11.8)	2(11.85)	7(41.2)	6(35.3)	17(100.0)			

Table 4.1.5 showed that respondents with formal education (63.1%) preferably use the services of hospitals/clinics as compared to those without formal education (58.5%) who utilize the service of patent medicine vendors (34.1%) more than those with formal education (25.4%), however this difference was not statistically significant ($p<0.613$). The list income and middle income groups utilized hospitals (63.0, 67.1% respectively) than other forms of health care service providers while higher income group utilized patent medicine vendor service (41.2%) than other service providers.

4.2 HOUSEHOLDS' SOURCES OF FINANCING HEALTH CARE SERVICES

Table 4.2: Source of household financing for health care among respondents

Source	Frequency (n=171)	Percent (%)
Personal (OOPs)	168	98.2
National health insurance scheme	3	1.8

The main source of financing health care by household was personal, out-of-pocket, 168 (98.2%) and National Health Insurance, 3 (1.8%) only.

4.3 PROPORTION OF HOUSEHOLD INCOME SPENT ON HEALTH CARE

Table 4.3.1: Proportion of household mean income/expenditure on health care (n=171)

Variable	Amount (Naira)	SD
Mean Annual income	620,616.67	400,902.63
Mean Expenditure on health	39,126.34	25,499.82
Proportion (mean of annual income)	6.19	1.14
Proportion (%) of income spent on health	6.22	

Shown on table 4.3.1 is the average annual income of ₦600,616 with a large standard deviation of ₦400, 902 while the mean expenditure on health was ₦39, 126, also with significantly large SD of ₦25,000. The proportion of income spent on health was 6.22, while the proportion of mean income spent on health was 6.19.

Table 4.3.2: Proportion of household mean income/expenditure on health care (n=171)

Variables	Mean annual income	Mean Annual health care expenditure	Proportion of annual income spent on health care
Wealth quintile			
Lowest	697,267.11±417,567.36	32,091.41±22,958.86	4.70
Second	540,147.06V369,419.05	27,827.12±22,502.35	6.37
Middle	367,818.18±172,704.71	72,092.47±40,821.82	12.13
Fourth	-	-	-
Highest	180,000.00±0.00	80,000.00±0.00	44.44
Total	620,616.67±400,902.63	39,126.34±25,499.82	6.22
Education			
None	445,500.00±135,105.25	21,260.00±20,297.20	5.24
Quranic	465,121.21±227,966.66	63,161.58±42,117.58	11.99
Primary	532,153.85±286,754.79	20,386.41±18,369.23	5.30
Secondary	456,437.50±230,490.31	42,222.80±25,708.75	7.06
Tertiary	846,165.94±486,576.81	20,402.06±19,241.88	3.16
Total	620,616.67±400,902.63	39,126.34±25,499.82	6.22
Profession			
None	571,000.00±107,349.90	25,550.00±23,218.54	4.62
Farming	436,705.88±255,252.76	81,829.15±57,530.59	17.98
Business	480,620.69±210,874.95	18,696.55±16,066.09	5.23
Artisan	458,709.68±279,258.80	39,782.02±25,873.55	8.61
Civil servant	786,699.33±468,739.71	29,406.51±20,800.13	3.27
Others	617,133.33±411,213.67	29,655.76±25,064.00	5.08
Total	620,616.67±400,902.63	39,126.34±25,499.82	6.22

Table 3.2.2, Shows the relationship between the wealth quintiles and proportion of mean expenditure on health care. The highest wealth quintile takes larger proportion (44.44) of the total annual expenditure on health as compared to just 4.7 by the lowest quintile. There was no sick person in the 4^{th} quintile households. There was no clear observed association between educational level and proportion of annual income spent on health care. Farmers have larger proportion (17.98) of expenditure on health care than other professions and the least were civil servants.

Table 4.3.3: Proportion (%) of household annual income spent on health care in relation to socio-demographic characteristics (n=171)

Characteristics		Proportion (%)	χ^2	df	p-value
Age	≤20	4.6			
	20-29	8.2			
	30-39	4.8	1.462	5	0.917
	40-49	5.5			
	50-59	7.4			
	60 and above	8.2			
Sex	Male	6.0	1.471	1	0.225
	Female	11.2			
Education	None formal	10.7	2.250	1	0.134
	Formal	5.2			
Occupation	None	4.6			
	Farming	17.9			
	Petty trading	5.2	19.217	5	0.002
	Artisans	8.6			
	Civil servant	3.3			
	Others	5.1			
Income	≤500,000	9.9			
	500,001-1,000,000	3.2	7.600	2	0.022
	>1,000,000	1.9			
Wealth Quintiles	Lowest	17.5			
	Second	10.1	13.955	4	0.007
	Middle	6.4			
	Fourth	5.1			
	Highest	4.9			

The income per annum was compared with the socio-demographic characteristics. There were no statistically significant association between income and age groups ($P < 0.795$) and sex (P value < 0.281), however the proportion of Household expenditure on health was found to be significantly associated with the education level ($p< 0.004$) and also with the occupation ($p<0.001$) Respondent with no formal education spent disproportionately twice (10.7%) more than those with formal education (5.2%). Farmers spend disproportionately twice than other occupations while civil servants spent least (3.3%). In terms of income the least income earners spent disproportionately higher (9.9% i.e. thrice) than the average income earners (3.2%) but five times higher than the highest income earners ($p < 0.001$) as shown on Table 4.3.2 above.

Table 4.3.4: Rate of catastrophic expenditure on health among respondents

Catastrophic expenditure	Frequency (n=171)	Percent (%)
Catastrophic	6	3.5
Not catastrophic	165	96.5

Of the 171 who sought for treatment 6 (3.5%) spent catastrophically. Out of the six HHs who spent catastrophically on health care, 5 (83.3%) were males, while 4 (66.6%) were with no formal education, 5 (83.3%) were farmers and lowest income earners.

4.4 FACTORS INFLUENCING ACCESS TO HEALTH CARE SERVICES BY HOUSEHOLDS

Table 4.4.1 Factors influencing ability of household to access health care services

Factors	Frequency (n=316)	Percent (%)
Distance to treatment point	51	16.1
Money for treatment	113	35.8
Delays at treatment points	138	43.7
Against my faith	6	1.9
Others	8	2.5

Respondents were asked of the factors that most influenced their access to treatment; Delay at the health facilities 138 (43.5%) was the most influencing factor in accessing health care. This was closely followed by money 113 (35.8%) for treatment and, least was the issue of faith 6 (1.9%), all as shown of table 4.4.1.

Table 4.4.2: The relationship of demographic characteristics to factors influencing ability of household to access health care services (n=316)

Demographic characteristics		Distance treatment point	Money for treatment	Delays at treatment points	Against my faith	Others	Total
Age	<20	0(0.0)	1(25.0)	3(75.0)	0(0.0)	0(0.0)	4(100.0)
	21-29	4(23.5)	5(29.4)	7(41.2)	1(5.9)	0(0.0)	17(100.0)
	30-39	19(23.8)	21(26.3)	3847.5)	0(0.0)	2(2.5)	80(100.0)
	40-49	16(16.3)	31(31.6)	43(43.9)	3(3.1)	5(5.1)	98(100.0)
	50-59	4(7.3)	25(45.5)	26(47.3)	0(0.0)	0(0.0)	55(100.0)
	≥60	8(12.9)	30(48.4)	21(33.9)	2(3.2)	1(1.6)	62(100.0)
Sex	Male	50(16.2)	111(35.9)	134(43.4)	6(1.9)	8(2.6)	7(100.0)
	Female	1(14.3)	2(28.6)	4(57.1)	0(0.0)	0(0.0)	309(100.0)
Education	None formal	8(10.3)	54(69.2)	14(17.9)	2(2.5)	0(0.0)	78(100.0)
	Formal	43(18.1)	59(24.8)	124(52.1)	4(1.7)	5(2.1)	238(100.0)
Occupation	None	1(25.0)	0(0.0)	3(75.0)	0(0.0)	0(0.0)	4(100.0)
	Farming	2(5.7)	22(62.9)	9(25.7)	1(2.9)	2(2.9)	35(100.0)
	Petty trading	5(9.8)	22(43.1)	22(43.1)	1(2.0)	1(2.0)	51(100.0)
	Artisans	10(14.1)	35(49.3)	24(33.8)	2(2.8)	0(0.0)	71(100.0)
	Civil servant	30(23.1)	23(17.7)	70(53.8)	1(0.8)	6(4.6)	130(100.0)
	Others	3(12.0)	11(44.0)	10(40.0)	1(4.0)	0(0.0)	25(100.0)
Income	≤ 500,000	27(19.4)	55(39.6)	52(37.4)	3(2.2)	2(1.4)	139(100.0)
	500,001-1,000,000	21(14.1)	54(36.2)	65(43.6)	3(2.0)	6(4.0)	149(100.0)
	>1,000,000	3(10.3)	4(14.3)	21(75.0)	0(0.0)	0(0.0)	28(100.0)

Table 4.4.2 above; show that, among all socio-demographic characteristics, the major factors influencing access to health care were delay at point of treatment, money and distance. While other occupations were influenced by money for treatment, civil servants were influenced more by delay at treatment points.

4.5 PERCEPTION OF BEST METHODS FOR PAYMENT FOR TREATMENT

Table 4.5.1: preferred Prepayment health scheme opted for by households

Type of prepayment health scheme	Frequency (n=194)	Percent (%)
Community based	122	62.9
Employment based	62	32.0
Privately purchase commercial insurance	10	5.2

Table 4.5.1 above shows that 122 (62.0%) of households opted for community base prepayment scheme, therefore being the most acceptable prepayment method for their health care, while about half of this 62 (32%) opted for employment based social health insurance.

Table 4.5.2: Preferred Prepayment health scheme opted for by households compared to the Socio-demographic characteristics (n=194)

Demographic characteristics		Community based	Employment based	Privately purchase commercial insurance	Total
Age	<20	1(100.0)	0(0.0)	0(0.0)	1(100.0)
	21-29	6(50.0)	5(41.7)	1(8.3)	12(100.0)
	30-39	30(58.8)	18(35.3)	3(5.9)	51(100.0)
	40-49	32(53.3)	23(38.3)	5(8.3)	60(100.0)
	50-59	22(64.7)	11(32.4)	1(2.9)	34(100.0)
	≥60	31(86.1)	5(13.9)	0(0.0)	36(100.0)
Sex	Male	120(63.2)	61(32.1)	9(4.7)	190(100.0)
	Female	2(50.0)	1(25.0)	1(25.0)	4(100.0)
Education	None formal	47(83.9)	8(14.3)	1(1.8)	56(100.0)
	Formal	75(54.3)	54(39.1)	9(6.5)	138(100.0)
Occupation	None	0(0.0)	1(100.0)	0(0.0)	1(100.0)
	Farming	19(95.0)	1(5.0)	0(0.0)	20(100.0)
	Petty trading	25(71.4)	8(22.9)	2(5.7)	35(100.0)
	Artisans	38(73.1)	13(25.0)	1(1.9)	52(100.0)
	Civil servant	29(40.8)	37(52.1)	5(7.0)	71(100.0)
	Others	11(73.3)	2(13.3)	2(13.3)	15(100.0)
Income	≤ 500,000	60(63.2)	30(31.6)	5(5.3)	95(100.0)
	500,001-1,000,000	56(63.6)	27(30.7)	5(5.7)	88(100.0)
	>1,000,000	6(54.5)	5(45.5)	0(0.0)	11(100.0)

Table 4.5.2 above compared the acceptable methods of prepayment for health care to the socio-demographic characteristics. All age groups, sexes, educational attainment, income groups, and occupations opted for community base social health insurance except, civil servants that opted for employment based social health insurance. Statistical significance of these associations were not calculated because of less than a scores of 5 and not being a 2×2 table.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 DISCUSSIONS

The result showed that nearly all households in the studied population utilized personal out-of-pocket source to settle treatment bills while only a few, who are civil servant, paid through social health insurance scheme. This finding of low NHIS uptake and high out-of-pocket (OOPs) rates was similar to the finding of a study in Ebonyi and Enugu states that centred on investigating the determinants of OOPs spending and strategies for coping with payments for healthcare in southeast Nigeria by CA Onoka et al which showed that OOPs usage ranged between 68.4 and 96.9 per cent and health insurance coverage of less than 1%[50] in different communities of the states. The finding in this study of 1.8% NHIS coverage was less than the rate reported in the 2008 National Demographic and Health Survey (NDHS 2008)[51] that gave a figure of 3%. This could be attributed to the lack of uptake of NHIS by the state and local governments for their employees. However, based on the presence of some federal institutions, such as the Federal Medical Centre, and civil servants who work in Abuja but live in keffi, it was expected that the figure could have been higher. In addition to this, the significantly high percentage (41%) of households headed by civil servants in the community was also expected to have increased the level of uptake of the NHIS, but for the nonparticipation of the state and local governments in the scheme. The other reasons that could be adduced for higher national figure of NHIS coverage as compared to the finding in this study is that, bigger cities and towns with high number of federal civil servants, states that have started implementing the programme and private organizations participating in the scheme could have contributed

significantly to this difference. There is also the possibility that civil servants in this study area live at high concentration in one part of the town (ward) than the others thereby reducing the chances of being among the selected households in the other three wards.

The average income per household in this study was much higher than the current Nigeria Federal Government minimum wage of two hundred and sixteen thousand naira (₦216,000) per annum. However, those on the lowest income side are most likely to earn far below this mean income as signified by the large standard deviation (SD) that was above four hundred thousand naira. Taking the mean income and possible lowest income based on the naira value of the standard deviation [₦620,616:67(mean income) minus ₦400,902:63(SD)] such a household is left with ₦219,714 per annum or ₦18,309:50k per month. With the current exchange value of about 158 naira to a dollar, this will amount to less than a dollar/person/day for an average keffi household. This is below the "least poverty line" of US 1.25 Dollar per day for those considered extremely poor. The average annual expenditure on health stood at 39,000 Naira per HH per annum but, with a large standard deviation of 25,499 Naira, this gives an expenditure on health of about ₦3250 naira per HH per month. This amount could be used up by one person even if it is for the treatment and investigations for uncomplicated malaria alone, not to mention of a four member HH. This figure was, however, consistent with the findings of Onwojekwe and others in their study in Ebonyi and Enugu states among city HHs that spent about ₦1320 per week on health care services[50]. It was also observed that those of the lowest quintile, farmers and HHs with no formal education spent disproportionately higher on health care than those of the higher quintiles and those with formal education. For example, the lowest quintile spent three times disproportionately more than the highest

quintile, while farmers spent five times disproportionately more than civil servants. The explanation for these differences in proportion of expenditure on health was that, some professions earn less but may obtain health care services from the same source and pay same charges for similar services as other professions that earn higher income.

There was significant statistical association between educational attainment and the proportion of income spent on health care. Those HHs headed by those with non-formal education spent twice disproportionately more than HHs headed by those with formal education. This might have been responsible for their reduced capacity to purchase health care without catastrophic expenditure (for definition of catastrophic expenditure see page 8), because those who spent catastrophically on health care in this study were mostly of the lowest income and wealth quintile groups. These findings were also consistent with the finding of Tin Tin Su et al in their investigation into the catastrophic expenditure for health care in low-income society in Nouna district of Burkina Faso. In their investigation they found out that among other factors economic status was the most important factor leading to catastrophic expenses.[52] While the figure of 3.5% catastrophic expenditure was higher than that reported for some countries of the OECD countries, with weighted mean catastrophic expenditure rate that was barely 1% as reported in the WHO, World Health Report 2010 on Health system Financing.[53] Nonetheless, the finding in this study was comparable to the 4.6% obtained by Jane Chuma and Thomas Maina in their study of the Catastrophic health care spending and impoverishment in Kenya.[54]Onoka and Onwojeke reported 15% catastrophic rate in Enugu and Anambra states in their study of "Measuring Catastrophic Health Care Expenditure in Nigeria"[50] but fixed their catastrophic threshold at 40% of expenditure after other essential needs have been met contrary to this study

where the catastrophic rate was based on 40% expenditure on health of the total income. The low catastrophic rate by the OECD countries could be as a result of their health system financing that has significant mix of privatization, social health insurance and OOPs, contrary to Nigeria's over dependence on OOPs. On the final analysis the most disadvantaged groups in having access to good health care were the low in-come/lowest wealth quintle, farmers and those with no formal education who are in summary, poor.

The prominent factors influencing most households' access to health care services were delays at service points and money for services rendered including drugs. However, the influence of these factors defer among different socio-demographic groups. The lower income groups, the farmers, and those with non-formal education had problem with money for services, while those with formal education, civil servants and higher income groups had problem with delay at points of services. This also pointed in the direction of income being the main determinant to access health care among the poor, most especially if the preceding discussions are put into consideration. For example, the earlier group failed to access health care because of low-income just as it was observed by several other studies in a wide variety of developing countries, that the introduction of user fees or increases in prices can lead to decreased utilization and that this effect can be larger for the poor.[55-58] Those who considered time factor as a major hindrance to access health care were mainly civil servants who were probably in a hurry to return to their offices or duty posts so as to meet up with time permission granted them ab initio. In conclusion income among those who are financially poor was the main differential factor while time was the major factor among those who were most likely able to pay for services rendered.

Out of the 316 households in this study, 194 (61.4%) showed interest in having at least one type of prepayment health care scheme. It was however, not certain why the remaining 39.4% did not indicate interest in prepayment scheme for health care. this could be due to lack of proper and adequate information or knowledge on what prepayment means. There were indications that the studied community lacked adequate awareness on the types and methods of operation of health care insurance, as evident by the show of interest for employment based social health insurance scheme by those in the non-formal sectors who are the ones not presently enjoying the services of the NHIS . In agreement with the above assertion which could equally be associated with the lack of awareness, was the lower percentage of desire for employment based social health insurance by civil servants who were expected to clamour for such a scheme. For example, 41% of households were headed by civil servants but only 37% of this indicated interest in employment based social health insurance scheme. On the final analyses the most acceptable methods for payment for health care services among the studied population were community and employment based social health insurance schemes. The reason for these findings may not be unconnected with the low awareness of the benefit of national health insurance scheme and possibly also for reason of Keffi being significantly more of a traditional community. Additional research works need to be undertaken for a clearer picture of this unexpected finding.

5.2 CONCLUSION

The main source of financing health care among keffi households was out-of-pocket but, the proportion of income spent on health care was not high. The income to households had much influence on the poor's access to health care, however, majority of households were much willing in participating in prepayment health care financing schemes and programmes.

5.3 RECOMMENDATIONS

1. There is urgent need for introducing social health insurance scheme by all tiers of government for their staff without further delay, as this will go a long way in making health care accessible and affordable for its work-force and family and thereby reduce the high level of OOP expenditure on health.
2. Those in the non-formal sector are yet to access the services of social health insurance because of none commencement of the proposed Community Base Social Health Insurance Programme. It is here recommended that the federal government should fast track the commencement of this programme and the other tiers of government should key in immediately.
3. There is also the need of expanding The Poverty Alleviation Programmes in this community and state-wide so as to improve the earning power of households and therefore enhanced their purchasing power for health care services.
4. Attainment of higher level of education was associated with improve income and therefore increase access to better health care therefore, Keffi households stand to benefit better health care in the long run if they encourage their children to attain higher level of education.

5. Members of groups and associations should be encouraged to start contributory health financing schemes even before the commencement of the CBSHIP as this could become the launch pads for the programme.

REFERENCES

1. Soyibo A, Olaniyan O, Lawanson A.O. Incorporating sub-National Health Account of States: National Health Account of Nigeria 2003 – 2005, Main Report

2. World Health Organization, Associated terms, out – of – pocket spending by private households (OOPS): National Health Account, World Health Organization Statistical Information System (WHOSIS) 2008

3. WHO Health Expenditure, WHO Health Statistics, Geneva, Switzerland, 2011

4. World Health Organization, Direct payment, where are we now? Universal coverage, Health system financing, World Health report 2010, page 4.

5. Federal Ministry of Health, National Health Financing policy, Federal Republic of Nigeria Introduction, 2006, pages 6-9.

6. World Health Organization, who pays for health, Health system financing improving performance, World Health Report, Geneva, 2000, 95 – 97

7. Federal Ministry of Health, Federal Republic of Nigeria, National health Financing Policy Zero Draft 2006: 6.

8. Nguyen TH, Ha LT, Rifkin SB, Wright EP, the pusuit of equity: a health sector case study from Vietnam health policy. 1995. Pages 191-204

9. Wagstaff A. Poverty and health sector inequalities: Bulletin of Horld Health Organisation 2007 pages 97 – 105

10. Nabajongo I. Desmet M. Karamgi H. Kadama PY.Omaswa FG. Walkero M, abolition of Cost saving is pro-poor: evidence from Uganda. Health Policy and Planning 2005 pages 100-108

11. Schieber G, Maeda A, Global income, population, a disease burden. Health affairs, May-June 1999, content healthaffairs.org. accessed, 2011.

12. Federal Ministry of Health, national partnership on wealth: Nigeria National strategic health development plan 2010 – 2015, pages 11 – 12.

13. Gibson and Mutyombizi, Case study, Ghana's Mandatory Health Insurance, Government financing health. Health Reform Foundation of Nigeria (HERFON) 2007. Pages 99-105.

14. Sambo MN, Ejenbi CL, Adamu YM. Aliyu AA. Out – of – pocket health expenditure for under five in a semi urban community in Northern Nigeria. Journal of community medicine and primary health care. June 2004Vol. 16(1) pages, 29 – 32.

15. KeXu, David B. Evans, Carrin G, Mylena A, Rivera A, Musgrove P and Evans T Household Health expenditure, a multi- country analysis: the Lancet 2003 vol. 36, pages 111 – 117.

16. USAID/PHR, ILO/ACOPAM, ANMC, WSM, contribution of mutual health organisations to financing, delivery and access to health care: Nigeria case study 1996 – 2001, international labour Organisation 2003 (ILO) 10 – 51.

17. James C, Barbara MC, Hanson K, to retain or remove user fees? Reflection on the current debate: applied health economics and health policy (2006) volume 5, issue 3, publisher UNICEF, page 137 – 53

18. World Bank. Collecting revenue, pooling risk, and purchasing services. http:11siteresources,worldbank.org/INTHSD/resources/topic/health-financing/HFRChap2.pdf. accessed 31 january 2011,

19. Yip W, Hsiao WC. Non-evidence-based policy: how effective is China's new cooperative medical scheme in reducing medical impoverishment? *Social Science & Medicine (1982)*, 2009,68:201-209. doi:10.1016/j.socscimed.2008.09.066 PMID:19019519

20. Xu K, Saksena P, Durairaj V. The drivers of catastrophic expenditure: outpatient services, hospitalization or medicines? World health report 2010 back ground paper, no .21

21. World Health Organization, World report on disability and rehabilitation. Geneva, WHO 2011 http://www.unicef.org/protection/World_report_on_disability_eng.pdf Assessed June 2012

22. Gilson R; Mcintyre D. Removing user fees for primary health care in Africa: the need for careful action BMJ 2005: vol. 331: 76 pages 2-5

23. Fernandes A, Antunes F, Saksena P. health financing systems review of Rwanda. Option for universal coverage.World Health Organisation and ministry of Health; Republic of Rwanda, 2009.

24. World Health Organization. National health accounts (online database). Gevena, world health organization. 2012. http://www.int/nha, accessed 4th January 2012.

25. Nyonato F. Katy NJ. Health for some? The effect of user fees in upper volta region of Ghana. Health policy and planning,1999, vol. 14. pages 329 – 341.

26. Vogels RJ. Health Insurance in sub-Saharan Africa.A survey and analysis. Washington D.C., Africa Zechica Department of world bank, 0140 WPAS 476.

27. Abel – Smith, Rawal P. Employer's willingness to pay, the case for compulsory health insurance in Tanzania. Health policy and planning 1994, pages 409 – 418.

28. Arhin DC. Health Insurance in sub-Saharan Africa: What are the option? Paper presented at symposium on healthcare financing at European conference on tropical medicine, Hamburg, Germany 22 – 26 October 1995.

29. Bernmet S. Grees A, Marush R. Health Insurance Schemes for people outside formal sector employment current concerns. Ara series paper No 16, world health organization 1997.

30. World Health Organization. health sector reform and reproductive health WHO. Web page overview 2004.

31. Sutt, Kouyate B, Flessa S. Catastrophic household expenditure for health care in a low – income society: a study from Nouna District, Burkina Fasso. Bulletin of the World Health Organisation, 2006. 8421 – 27 PMID 16501711

32. Wagstatt A. the economic consequence of health shows evidence from Vietnam – journal of health economics, 2007, 26. 82 – 100.

33. Eddy VD; Owen O; Ravindra PR; Aparnaa S; Shiva RA; Charu CG et al, payment for healthcare in Asia 2007, vol. 16, issue 11, pages 1159-1184 (vandoorslaer@ese.eur.nl

34. Beeza C. Packart, Beyond Survival protecting households from health shocks in Latin America. Washington DC. The World Bank Report, 2006.

35. Social Health protection, an ILO strategy towards universal access to health care. Geneva, international labour organisation, 2008 (http//www.ilo.org/public (English/protection/secsoc/download/policy/polt-access 06 July 2010.

36. Xu, K et al household catastrophic health expenditure: a multi country analysis. Lancet 2003, 362:111 – 117 doc. 10.1016 (850140 – 0236 CO3) 13861 – 5 PMID: (2867110).

37. World Health Organization, "Primary Health Care: Now More Than Ever: Geneva", A Summary of World Health Report 2008:1

38. Kalik A, Groos N, Karasi J, Girrbach E. Health systems strengthening through insurance subsidies The GF ATM experience in Rwanda. Tropica medicine and international health: TM 814, 2010, 1594 97 PMD 19917038. November 2009

39. MCltyre D. Learning from Experience: Health Care financing in low and middle – income countries. Global forum for Health Research June 2007.

40. The American academy of actuaries Wading through medical insurance pools, a primer, 2006 (http://www.actually.org /pdf/health/pools-sep.06.pdf.accessed 06 January 2012).

41. Musgrove P. Reforms to the Chilean health sector: context, logic and possible trajectories. In: Giaconi J, ed. *La salud en el siglo XXI.*Santiago, Chile, Centuro de EstudiosPublicos, 1995 (in Spanish).

42. Oyarzo C, Galleguillos S. Reform of the Chilean health system: conceptual framework of the National Health Fund proposal. *Cuadernos de Economia,* 1995, 32(95).

43. Preker A et al. Health financing systems in transition: trends in Eastern Europe and Central Asia. Washington, DC, The World Bank, 1999 (World Bank Technical Paper, forthcoming). 45.

44. New Zealand Ministry of Health. Healthy New Zealanders: briefing papers for the Minister of Health 1996. Wellington, Ministry of Health, 1996.

45. Hornblow A. New Zealand's health reforms: a clash of cultures. British Medical Journal, 1997, 314: 1892–1894.

46. Robinson R, Le Grand J. Evaluating the National Health Service reforms. Oxford, Policy Journals, Transaction Books, 1994. 96-101

47. UK Department of Health. Working for patients. London, HMSO, 1989. Health Service Journal. 14th October 2010

48. UK Department of Health. The new NHS.London, the Stationery Office, 1998. Health Service Journal. 14th October 2010

49. http://siteresources.worldbank.org/INTHSD/Resources/topics/Ha8.pdf Accessed 17 July 2011

50. Onwujekwe OE, Uzochukwu BS, Obikeze EN, Okoronkwo I, Ochonma OG, Onoka CA, et al. Investigating determinants of out-of-pocket spending and strategies for coping with payments for healthcare in southeast, Nigeria. BMC Health Services Research 2010, 10:67 http://www.biomedcentral.com/1472-6963/10/67

51. National Population Commission. National Demographic and Health Survey 2008, health insurance coverage. 2010, 44- 46

52. Sun T.T, Kouyate B, Flessa S. Catastrophic household expenditure for health care in a low-income society: a study from Nouna district, Burkina Faso. Bulletin of the world health organization January 2006, 84(1) pages 67-70.

53 World Health Organization.health system financing: the part to universal coverage. WHO 2010 World health report. W.84.6. 13-14

54. Chuma and Maina BMC Health Services Research 2012, 12:413http://www.biomedcentral.com/1472-6963/12/413 accessed 24th August 2013

55. Collins D, Quick JD, Musau SN, Kraushaar K, Hussein IM. The fall and rise of cost sharing in Kenya: the impact of phased implementation, Health Policy Plan. 1996 Mar; 11(1):52-63

56 De Bethune, X Alfani, lahay JP. The influence of an abrupt price increase on health service utilization: evidence from Zaire. Health Policy Plan.1989 (1): 6.

57 Waddington, C.J. & K.A. Enyimayew. A price to pay, part 2: the impact of user charges in the Volta Region of Ghana. Int. J. Health Plan. 1989 5: 287–312.

58 Yoder, R.A Are people willing and able to pay for health services? Soc. Sci. Med. 1989 1: 35–42.

APPENDIX 1

ASSESSING OUT-OF-POCKET HEALTHCARE EXPENDITURE AMONG HOUSEHOLDS IN KEFFI FROM 12th OCTOBER to 12th NOVEMBER 2011

HOUSEHOLD QUESTIONNAIRE

Ward name_____ _____ House hold Number _____ Serial No in HH _____
Name of Respondent _____Name of Interviewer _____

A. Basic Information: Socio-Demographic Data
Expenditure

A	B	C	D	E	F	G	H
S/No.	Name	Relationship to HH head 1. HHH 2. Wife 3. Daughter 4. Son 5. Mother 6. Father 7. Others (specify)	Age in months if under 5 years and others in years	Sex 1. F 2. M	Highest education level 1. None 2. Qur'anic 3. Informal 4. Primary s 5. Secondary 6. Tertiary 7. Other (specify	Occupation 1. None (h/w) 2. Farmer 3. Petty trader 4. Artisans 5. Civil servants (F,S,L) 6. Student/pupil 7. Others (specify)	Illness in the last 3 months that required treatment
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13							
14							
15							
16							
17							
18							
19							

B. Morbidity Pattern in the last Three Months
(Extract information about 'the sick in the last three months' and the illness in the past three months from demographic table on page 1, from columns B, D, E, and H)

ENTRIES FOR INDIVIDUALS WHO WERE SICK IN THE LAST 3 MONTHS

	1	2	3	4	5	6	7	8	9
1Name ……..									
Age (months If < 5YRS)									
Sex									
(B1)What illness suffered in the last 3 months									
1) FEVER									
2) DIORRHOEA									
3) WEIGHT LOSS									
4) LACK OF BLOOD									
5)COUGH									
6)HIGH B/P									
7)SUGAR DISEASE									
8)SICKLER									
9)PREGNANCY PROBLEMS									
10)OTHERS									
(SPECIFY)									
(B2)How many days of illness?									
(B3) Was treatment sort for the above illness? 1) yes 2) no									

(B4)If B3 IS yes, what was the source of treatment?	1	2	3	4	5	6	7	8	9
1)self									
2)Traditional/herbal									
3) patent medicine									
4)Clinic/ hospital									
5)prayers									
6) others (specify)									
(B5)Was payment made for the treatment? 1) yes 2) No									
(B6) if treatment was paid for, how much was paid for(money value in naira)	1	2	3	4	5	6	7	8	9
Card									
Consultation									
Investigations									
Drugs									
Operations									
Blood transfusion									
Administration									
Bed fee									
Total									

	1	2	3	4	5	6	7	8	9
(B7) who paid for the treatment?									
1)personally									
2)Community regular contribution									
3)faith based group contributions									
4) private insurance									
5)national health insurance scheme									
6)Work place retainers									
7) in-kind									
8) others (specify)									
(B8)Did he/ she get better? 1) yes 2) No									
(B9) when he/ she did not get better, was further treatment sort? 1) yes 2) No									
(B10) If further treatment was sort, where was this?									
1)self									
2)Traditional									
3) patent medicine									
4)Clinic/ hospital									
5)prayers									
5) others (specify)									
(B11)Was payment made for the treatment? 1) yes 2) No									

(B12) if treatment was paid for how much was paid for(money value in naira)									
Card									
Consultation									
Investigations									
Drugs									
Operations									
Blood transfusion									
Administration									
Bed fee									
Total									

(B13) who paid for the treatment?	1	2	3	4	5	6	7	8	9
1)personally									
2)Community regular contribution									
3)faith based group contributions									
4) private insurance									
5)national health insurance scheme									
6)Work place retainers									
7) in-kind									
8) others (specify)									
(B14)Did he/ she get better? 1) yes 2) No									
(B15)If he/ she did not get better, was further treatment sort? 1) yes 2) No									

SECTION C STATE OF HOUSEHOLDS AND POSSESSIONS

No.	questions and filters	coding categories	skip
21	What is the main source of drinking water for members of your household?	**piped water** piped into dwelling……11 piped into yard/plot……..…...12 public tap……..13 **water from open well** open well in dwelling……....21 open well in yard/plot…….22 open public well ……..……..23 **water from covered well or borehole** protected well/borehole in dwelling…….……31 protected well/borehole in yard/plot……...32 protected public well/borehole……..33 **surface water** Spring…..…… .41 river/stream……42 pond/lake……...43 dam…….44 rainwater……..……..51 tanker truck……...61 bottled water……...……71 other _____ 96 (specify)	→ 23 → 23 → 23 → 23 → 23 → 23 → 25 → 25
24	How long does it take you to go there, get water, and come back?	Minutes…… ☐☐☐ on premises…….….996	

No.	questions and filters	coding categories	skip
25	what kind of toilet facilities does your household have?	flush toilet……11 **pit toilet/latrine** traditional pit toilet……..……..21 ventilated improved pit (VIP) latrine……..……..22 **no facility** bush/field……..31 river……..……32 other _____ 96 (specify)	——□ 27 ——□ 27
26	do you share these facilities with other households?	yes……..1 no……2	
27	does your household have: electricity? a radio? a television? a telephone/cellular phone? a refrigerator? a gas cooker? an electric iron? an electric fan? an electric generator other _____ (specify)	Yes/no electricity……..….1 2 radio… ……......1 2 television…… ….1 2 Telephone/cellular phone..……1 2 refrigerator…….……1 2 gas cooker…… ….1 2 iron……......1 2 fan……..……1 2 generator ……..……...1 2 generator ……12	
28	What does your household <u>mainly</u> use for cooking? probe to determine exact type	electricity……..01 lpg/natural gas……..02 kerosene……...…….03 charcoal…….04 firewood, straw…… ……05 dung…… ..06 other _____ 96 (specify)	
29a	How many rooms in total are in your household, including rooms for sleeping and all other rooms?	number of rooms (total)..... □□	
29b	How many rooms are used for sleeping in your household?	number of rooms (sleeping)..... □□	

No.	questions and filters	coding categories	skip
30a	main material of the floor. record observation.	**natural floor** earth/sand……11 dung…… ……...12 **rudimentary floor** wood planks……...….21 palm/bamboo…….22 **finished floor** parquet or polished wood…….…….31 vinyl or asphalt strips…… …….32 ceramic tiles…… ……33 cement… ……..34 carpet…… ……..35 other _____ 96 (specify)	
30b	main material of the roof Record observation.	zink …….01 mud ……02 thatch……03 other _____ 96 (specify)	
30c	main material of the walls Record observation.	cement……01 mud ……02 other _____ 96 (specify)	
40	ownership of the dwelling	own house…….01 rent……02 family owned……03 other _____ 96 (specify)	

No.	questions and filters	coding categories	skip
41	does any member of your household own? a bicycle? a motorcycle or motor scooter? a car or truck? a donkey or horse or camel? a canoe or boat or ship? other _____? (specify)	yes no bicycle……12 motorcycle/scooter ……12 car/truck…… 12 donkey/horse/camel……... ……12 canoe/boat/ship……..…..12 other ……..…….. 12	
42a	Does your household own any animals?	yes……..1 no……2	—□ 43
42b	How many and what type of animals your household own?	type /number A. cattle…….. B. sheep …….. C. goat …… D. chicken …… E. ducks ……. F. other _____ (specify)	
43	how much is your yearly yield or income from: probe, and even if farmed/fished products are not for sale, estimate the equivalent amount if the products were sold	naira amount A. farming…….. B. fishing ……. C. cattle rear……... D. factory/civil servant …… E. other _____ (specify)	
44	What is your monthly expenditure with food?	Naira amount ……	

SECTION D

Note that all words in italic are instructions therefore, carefully follow all directives.

D1*) for formal sector staff only*

Which category of civil servant are you?

1 Junior [ ]

2, intermediate [ ]

3, Senior [ ]

D2) which of the followings influenced your decision to seek for treatment for your household members in the last three months?

1) Distance to treatment point. [ ]

2) Money for treatment [ ]

3) Delays at point of treatment [ ]

4) It is against my faith [ ]

5) Others (specify) _____

(D4) In the last three months has treatment bill influenced your household choice of treatment point? (Probe)

1, Yes [ ] 2, No [ ]

(D5) How often have your household been able to pay for treatment bills in the last three months?

- 1, Always [ ] 2, almost always [ ]

  3, Sometimes [ ] 4, rarely able [ ] 5, never able [ ]

(D6) Have any of your household members in the last three months had cause to abandon treatment on grounds of lack of fund?

1, Yes [ ] 2, No [ ]

(D7) Has treatment bill in the last three months stopped you from taking care of other household essentials, such as food, education or house rent?

1, Yes [ ] 2, No [ ]

(D8) Are you aware of the existence of prepayment health insurance scheme? 1, Yes [ ] 2, No [ ]

(D9) Does your household have any form of health insurance or any prepayment health care service?

1, Yes [ ] 2, No [ ]

If answer to number 9 is No skip question 10 and go to question 11

(D10) What type do you maintain?

(1) National Health insurance scheme [ ]

(2) Private health insurance [ ]

(3) Employment based health insurance [ ]

(4) Mutual community health [ ]

(5) Others (specify) …….

If you answered question No 10 you need not answer the rest of the questions.

(D11) Do you wish to have a form of prepayment healthcare service scheme for your household? 1, Yes [ ] 2, No [ ]

(D12) If yes, which of these payment schemes would you prefer?

(1) Community based [ ]

(2) Religious based [ ]

(3) National health insurance for community (rural) [ ]

(4) Private health insurance [ ]

(5) Formal sector based National Health Insurance Scheme [ ]

(6) Others (specify) ……

(D13) Would you therefore wish to contribute to a prepayment healthcare service if given the opportunity to do so? 1, Yes [ ] 2, No [ ]

Thank you for contributing to this project.

APPENDIX 2

ETHICAL CLEARANCE

FEDERAL MEDICAL CENTRE

P.M.B. 004
KEFFI NASARAWA STATE,
HEALTH RESEARCH ETHICS COMMITTEE
047-620020, 620095, 08033970028

Website: http:www.fmckeffi.net
E-mail: fmc.keffi@gmail.com, info@fmckeffi.net

REG.NO.NHREC/21/12/2012

22nd August 2012

OUR REF: FMC/KF/HREC/030/12

Dr.Husain Shaba Adams
Dept.of Community Medicine,
Ahmadu Bello University,Zaria

RE: ETHICAL CLEARANCE TO CONDUCT RESEARCH

Your application dated 18th August 2012 refers.

I write to convey full ethical approval for you to embark on the said research study covering a period of six months (September 2012 t0 February 2013)only.

TITLED: ASSESSMENT OF OUT-OF- POCKET HEALTH CARE EXPENDITURE AMONG HOUSEHOLDS IN KEFFI MUNICIPAL, NASARAWA STATE.

This follows successful defense of your research proposal during our interview of 21st August 2012.

You are hereby obliged to adhere strictly to the internationally acceptable ethical standards governing the conduct of research. Accordingly, all rights and privileges of the volunteering participants must be respected all through the period of your study.

You would also be expected to give periodic update to the committee throughout your period of study. In addition, no form of alteration should be made on this approved protocol without the express permission of the Committee.

Extracts of your findings should be forwarded to our committee at the end of your research study for filing and possible intervention please.

Thank you.

Signed:
Pharm.Envuladu Elisha Y. (PPCPharm.)
Secretary,HREC