FINAL REPORT

ASSESSING THE EFFECTS OF DIFFERENT FINANCING MECHANISMS ON EQUITY IN ACCESS TO AND UTILISATION OF PRIMARY HEALTH CARE SERVICES AND EXPLORING STRATEGIES FOR INCREASING THE USE OF THE SERVICES BY THE POOR IN NIGERIA.

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FOR

ALLIANCE FOR HEALTH POLICY AND SYSTEMS RESEARCH

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Table of contents

CHAPTER 1: INTRODUCTION:

This study provides information for improved accessibility and equity in financing within the Primary Health Care (PHC) system because PHC is the cornerstone of the Nigerian health care system (FMOH, 2001). There are many operational financing mechanisms within the PHC system. However, there is no existing information of how different financing mechanisms lead or affect socio-economic differentials in health care seeking, access to care and utilization of services in Nigeria. Developing innovative equitable financing approaches will depend on the assessment of existing financing mechanisms, leading to determining how best to protect the poor.

There are many operational financing mechanisms within the PHC system, but out-of-pocket user fees are the major payment strategy. The federal government provides global budgets to the PHC centres, which are complemented by user fees generated. The various levels of government also have a reimbursement system for the public servants, whereby the patients pay when they receive care and get reimbursed later by the government. Complementing these public health-care financing strategies is the existence of a small private insurance market in the country, operated by private insurance firms.

Developing strategies that can be used to improve the equity of the various financing mechanisms is a national priority. Musgrove defines equity as "equal treatment for all of the population" and an equitable healthcare system is one that assures "probabilities (of access, given health need) will be equal across population groups for a given set of health problems" (Macinko and Starfield, 2002). Health inequity refers to health inequalities that are unjust according to some theory of social justice (Armstrong-Schellenberg et al., 2003).

Experiences show that the poor can be disadvantaged by user fees in health care, paying a higher percentage of their income than other households (Fabricant et al, 1999). The same situation can also apply to other financing mechanisms. For instance, the poorer public servants may either delay or not seek care because they will be required to pay some user fees at point of utilisation of care and get reimbursed later on. There is no existing information of how different financing mechanisms affect health care seeking, access to care and utilisation of services in Nigeria. Thus, developing innovative equitable financing approaches will depend on the assessment of existing financing mechanisms, leading to determining how best to protect the poor.

The problem of characterizing equity in access to and utilization of PHC services, as well as mechanisms to protect the poor from the adverse effects of the different financing mechanisms is national priority. This is as a major health policy challenge in Nigeria is how to achieve universal and equitable PHC coverage. Moreover, with the recent coming of democracy, the talk in the polity has been how to ensure equity in service delivery, but reliable information is needed to motivate such new policy thrusts. Basing new policy interventions on anecdotal evidence or intuitions could result in misguided decisions (Makinen et al, 2000).

The key issues would be developing mechanisms that ensure that services are responsive to users, avoiding of polarisation of services between rich and poor, and improving systems of regulation, supervision and monitoring (Mills, 1998). The National Primary Health Care Development Agency (NPHCDA)'s current aim is to improve physical access to PHC by building more health centres all over the country as part of addressing the problem of inequity. However, a concern is that the poor and some vulnerable groups may not access the PHC, even if the health centres are built right inside their compounds if the financing mechanisms used are not protective of the poor.

Thus, innovative approaches reduce the inequity in access to and utilization of PHC services by the poor are needed, especially as the policy makers and researchers have identified (as part of a general consensus) that equity in access to all public services should be improved. Health care is a priority service sector where the maintenance of equity is a primary concern to the governments. The mortality and morbidity rates from different common diseases and rate of utilization of PHC services by different socio-economic, geographic and vulnerable groups are possible measures of inequity in health care finance and provision.

All the quantitative and qualitative data that were collected were triangulated to provide a complete picture about the inequalities in access and utilization of primary health care services. The data also provides us with much needed information about the socio-economic differentials of the effects of the different financing strategies that are operational within the system.

1.2 Aim of the study:

To provide information to policy makers about the effects of different health-care financing mechanisms on equitable access to and utilisation of primary health care services by different socio-economic and geographic groups and examine strategies that could be used to improve equity in use and access to basic primary health care services.

1.3 Objectives:

1   To determine the effects of various health-care financing mechanisms on access to and utilisation of basic primary health care services by different socio-economic and geographic groups.
2   To assess how the different health-care financing strategies are planned, budgeted and monitored, in order to shed light on how they are geared towards providing equitable access to and utilisation of primary health care.
3   To elicit strategies that could be used by policy makers to improve the access to and utilisation of the poor to basic primary health care.
4   To disseminate the findings and recommendations of the study to policy makers

CHAPTER 2. METHODS:

2.1 CONTEXT OF THE STUDY

2.1.1 Diseases addressed: Five common groups of communicable and non-communicable health conditions were addressed in this study because they rank among the most important causes of morbidity and mortality in Nigeria. The groups were: **(a)** Very common illnesses (Malaria and diarrhoea); (b) Common chronic communicable disease (Pulmonary Tuberculosis); (c) Common chronic non-communicable disease (maintenance of Hypertension) (d) Special care/Promotion (Antenatal and child-birth services); and (e) Common surgical procedures (Appendicectomy and Herniorrhaphy).

The first two groups of health conditions are the major causes of burden of disease in Nigeria and a current national priority is findings means of effectively controlling them, using primary health care as the strategy for achieving this. Moreover, antenatal and child-birth services consumers who are often poor, are mostly women, their children and families are also at extraordinary risk of receiving poor or no health care (Akukwe and Nowell, 1999). In Nigeria, only 89% and 59% of pregnant women in urban and rural areas respectively sought pre-natal care (CBN, 1999). Nonetheless, the first four groups of health conditions are part of the basic package of primary health care, while the last group was included to shed light to equity in access implications of minor surgeries.

2.1.2. Financing mechanisms addressed: There are major health-care financing mechanisms that were investigated were user fees, reimbursement to public servants, health insurance schemes, payment by installment, payment in-kind and pre-payment. The reason for choosing many financing mechanisms was because there are many operational mechanisms that are used to pay for primary healthcare services in Nigeria, which form the subject of this study. User-fees (out-of-pocket payments) appear to be the most common payment strategy in public and definitely in private sectors.

In the public sector, the federal government provides global budgets to the PHC centres, which are complemented by the generated user fees. There is also reimbursement system for the public servants and some big private companies/organisations, whereby people pay out-of-pocket for healthcare and later file claims and are reimbursed by their employers. Two major insurance strategies exist and these are the newly introduced National Health Insurance System (NHIS), which is complemented by a small private insurance market in the country, operated by private insurance firms.

Other payment strategies that are used to pay for healthcare (usually in private sector) are payments by installment, payment in-kind (where people use chicken or other goods to pay) and prepayment. In prepayment, people deposit some money with private care providers in the absence of illness and when they or any member of their household falls ill, they will be provided with healthcare by the providers up to the value of the money they pre-paid.

2.2 STUDY AREAS

The study areas are Ebonyi and Enugu states in South-east Nigeria. The South-east health care zone comprises of 5 states. The two state capitals (Enugu and Abakiliki), two local government headquarters (LGA) (Udi in Enugu state and Ezilo in Ebonyi state) and two rural communities from each state constituted the study communities. The two rural communities were Eke-na-ene in Enugu state and Nkalagu in Ebonyi state. Enugu has a population of about 800,000 people, while Abakiliki has about 500,000 residents. Each LGA headquarters has a minimum population of 40,000 people, while each rural community has a minimum population of 10,000 people.

The major malaria vector in both states *is Anopheles Gambiense*, while Plasmodium falciparum causes more than 90% of all malaria cases [MVCU, 2000; Okonkwo et al, 2002 (project report)]. There are two major seasons in the study areas; namely the Rainy season from May to October, which is the period of increased mosquito and malaria incidence; and the Dry season from November to April. The lowest rainfall of about $0.16cm^3$ is normal in February, while the highest is about $35.7cm^3$ in July (ESG, 1999).

The indigenes of the two states are of "Igbo" ethnic group, although there are about 5% to 10 % of other ethnic groups in Enugu and Abakiliki less than 1% of such people in the other 4 communities. The Igbo people comprise the third largest ethnic group in Nigeria with a population of more than 20 million people (NPC, 1999). Christianity is the major religion in both communities. While trading and civil service work are the major sources of income in Enugu and Abakiliki, subsistence farming and petty trading are the major sources of livelihood in the other four communities.

Each study site has at least one primary health care centre. In Enugu state, there is a public general hospital in the local government headquarters in Udi local government headquarters (Udi town), which is about 5 kilometres from Obinagu and 2 kilometeres from Eke-na-ene. There is a general hospital and teaching hospital in other parts of Enugu, which are less than 5 kilometres from Uwani. There is also a general and teaching hospital in Abakiliki. Ezilo has a general hospital. There are also a number of private hospitals/clinics, and patent medicine dealers and other wide range of private healthcare providers, including traditional medicine practitioners in each study community.

2.3 GENERAL RESEARCH PROCESSES
Cross-sectional surveys and in-depth interviews with different stakeholders were the study tools.

Advocacy and mobilisation of policy makers and heads of facilities: The policy makers in Ebonyi and Enugu States were mobilised for the study. Also, the heads of the facilities in both states were mobilised and their consents obtained for them to be interviewed. The policy makers and heads of facilities are also willing to be interviewed. The key officials in our policy partner - the National Primary Health Care Development Agency - have been mobilised by Prof. Akpala (policy partner) and the agency eagerly awaits the executive policy summary of the study.

Household surveys in three communities: A through interview of randomly selected households from six communities in the two states was undertaken. The leadership of these communities was mobilised and their assents obtained for the study to be conducted in their domains. The community leaders recommended the interviewers and the best ones were selected to conduct the interviews. The interviewers were residents of the various communities and they were trained over a period of one month. Oral informed consents were also obtained from all the respondents, who were all given the option of not participating in the study if they so wished. The actual household surveys lasted a period of one to two months in each of the three communities.

The PHC house numbering system was used as the sampling frame to select at least 300 households from each study area using simple random sampling. The primary woman household caregiver or in her absence, her spouse were/will be interviewed using questionnaire administered by trained interviewers. The reliability of the observations was ensured by thoroughly training the field workers, strictly supervising the field-work and pre-testing the study tools to ensure that they are content valid.

In-depth interviews: The sociologist developed the interview guide for the in-depth interviews. The sociologist conducted the interviews (12) and transcribed, analysed and wrote-up the information that was elicited through the interviews. The qualitative data was triangulated with the information from the quantitative surveys so as to ensure that the objectives of the study were satisfactorily achieved.

2.4 HOUSEHOLD SURVEY

The leadership of the study sites was mobilised and their assents obtained for the study to be conducted in their domains. Verbal informed consents were also obtained from all the respondents, who were all given the option of not participating in the study if they so wished. The actual household surveys lasted a period of one to two months in each of the three communities.

The sample size was determined using the formula for sample size for a definite population, considering 0.25 as the proportion of the population positive for the illnesses, power of 80%, confidence interval of 95% and 0.05 as the absolute sampling error that can be tolerated. Hence, 300 households represented an adequate sample size per study area. However, in order to take care of refusals, the PHC house numbering system was used as the sampling frame to select 380 households from each urban site and 330 from each rural site using simple random sampling. Data was collected from the primary woman household care-giver or in her absence, her spouse using pre-tested questionnaire administered by trained interviewers.

Trained interviewers administered a pre-tested questionnaire to the householders. The community leaders recommended the interviewers and the best ones were selected to conduct the interviews. The interviewers were residents of the various communities and they were trained over a period of one month. The questionnaire was pre-tested amongst 50 residents of a peri-urban community near Enugu and the results were used to improve some of the language used in the questionnaire, some questions, the mode of questioning and the coding of some responses. We arrived at the decision to use some specific household assets and cost of food to determine socio-economic status after discussions with many key informants from the communities.

Each interviewer had at least post-primary education and they comprised both males and females. Inter-gender interviewing was not undertaken because there were more male than female interviewers and women were most of the respondents. It was necessary to use local field workers since they were familiar with the households in their communities and were more likely to elicit truthful answers than outsiders. It was felt that the respondents would be less suspicious of the motives behind the questions, in contrast with an external person, where they may have suspected that the exercise was for tax purposes. Furthermore, asking people sensitive questions about food expenditures and assets, which were the key variables for exploring socio-economic differentials of the focal variables, require some degree of openness and familiarity between interviewee and interviewer, as that will help assure the interviewee of confidentiality and the interviewers are better positioned to detect false responses.

The questionnaire explored households' and respondents' socio-economic and demographic characteristics. The questionnaire was also used to examine the healthcare seeking practices of the respondents using one-month recall period. In addition, the expenditures (transportation and actual treatment) to treat or pay for primary healthcare services for the diseases or health conditions were

determined. Some questions were used to determine the payment strategies that people used to offset the healthcare costs as well as how they coped with the payments. The non-financial costs of healthcare wer also examined.

2.5 IN-DEPTH INTERVIEWS WITH HEADS OF FACILITIES AND POLICY MAKERS

Sampling frame: The target groups were Policy makers and Heads of public health facilities (primar health care centres and general hospitals) in the six study sites. Policy makers and heads of health facilitie were purposively selected from Ministry of Health and Public Health Care facilities at Enugu and Udi i Enugu State and from Abakaliki, Ishielu and Ezilo in Ebonyi State.

Method of Data Collection

The instrument used for data collection was the In-depth interview (IDIs). That involved one to on discussion between the moderator and the discussants. The discussions were tape-recorded. A total of 1 IDIs were conducted.

Four Policy makers and eight heads of facilities were interviewed. The policy makers interviewed were a follows: Director of, Pharmaceutical Services Ministry of Health, Enugu, Enugu State; Director o Pharmaceutical Services, Abakaliki, Ebonyi State; Director of Primary Health Care Services, Ministry o Health Enugu, Enugu State; and The Acting Hospital Administrator, Abakaliki, Ebonyi state.

For the heads of facilities the following were interviewed: Officer in-charge of the Primary Health Car Center at Udi, Enugu state; The Principal Environmental Health Officer in –charge of Nationa Immunization Programme at Ishielu, Ebonyi State; The head of Primary Health care facility at Ishielu Ebonyi State; Head of Department for Health and Coordinator for Abakaiki LGA, Ebonyi State; Head o Accounts Park lane Specialist Hospital Enugu, Enugu State; Head of Social Welfare unit Udi LGA, Enug State; Chief Public Health Officer, Uwani Health Center, Enugu State; and Deputy Director Social welfar Officer, Park lane Specialist Hospital, Enugu State.

Problems Encountered

The exercise was to a large extent smoothly carried out. The main problem that was encountered was th unwillingness of some of the policy makers to grant interviews without the permission of thei commissioners. Some of these positions have become so politicized and people tend to be afraid of losin their jobs if they become too vocal. There was also the case of a policy maker who is new on the job an so information from him was a bit limited.

2.6 MANAGEMENT OF DATA

2.6.1 Management of quantitative data (household surveys)

Data were entered into the computer on the same week the interviews were conducted and were initiall processed using EPI INFO software. Data cleaning was undertaken through compilation of summar statistics on the variables during and after the fieldwork. The EPI6, SPSS and STATA software packages were used for the analysis. Three data entry clerks co-ordinated by a systems' manager undertook the dat entry, while the principal investigator was responsible for the data analysis.

Logistic regression analyses were used to examine the multivariate relationship of the most commonly used payment strategy (user fees) with key explanatory variables. The dependent variable was whether or not someone paid through user fees. The explanatory variables were the weight that was used to derive the SES index, households' socio-demographic characteristics and costs of transportation and cost of

treatment itself. There were no prior hypothetical expectations about the relationship of the dependent and the explanatory variables, because the analyses were more about hypotheses generating than hypotheses testing.

2.6.2 Management of qualitative data (in-depth interviews)

The tape recordings of the interviews were transcribed verbatim after each interview. Emphasis was placed on the interpretation as well as the description of the actual statements of the participants. The method used for data analysis was content analysis. A codebook was subsequently developed in accordance with thematic areas covered in the study. Categories were established in line with the key variables in the study. The transcripts were then coded by relating various sections of the data to the established categories in such a way as to be able to make comparisons by location and categories of IDIs. The open code software was used to generate the findings into charts and tables as presented in the text and also as part of the appendix.

2.6.3 Characterizing inequality using a socio-economic index

Principal components analysis (PCA) in STATA software package (STATA Corporation, 1998) was used to create a continuous socio-economic status (SES) index (Filmer and Pritchett, 2001) using information of the households' asset holdings together with the average weekly cost of food. The first principal component of the PCA was used to derive weights for the SES index (Onwujekwe et al, 2004). The assets were key ones that assets included ownership of motorcar, motorcycle, radio, refrigerator, television set and bicycle. The cost of food is used as proxy for income, since households are reluctant to provide information about their income and Nigerian households usually spend more than 50% of their income on food. The SES index was decomposed into quartiles and quintiles, but tests of validity showed that the quartiles were more valid and were used to decompose the households into different SES groups. Testing of means was used to decompose some key variables into the SES quartiles and Kruskal-Wallis statistics was used to compute chi-square for trends, in order to determine whether the means of the quartiles are statistically significantly different.

The measures of inequity was the ratio of the mean of the poorest SES group (1st quartile) over that of the least poor SES group (4th quartile) (top/bottom quartile ratio) and concentration index (Wagstaff et al., 1989, 1991). The top/bottom (Q1/Q4) quartile ratio shows the level of gap that has to be bridged in order to ensure equity and improve the condition of the poorest households and a score of 1 signifies perfect equity (Onwujekwe and Uzochukwu, 2004). However, if the ratio is more than one, the variable of interest occurs more amongst the poorest than the least poor group. The concentration index varies from -1 and +1 and a negative sign shows that the variable of interest is higher among the poorest and if positive, it means that it more among the richest (or least poor). The results of top/bottom quartile ratios were compared with that of the concentration indices so as to assess the level of convergent validity of the two methods.

10

CHAPTER 3: RESULTS

The first part of the result presents the results of the household survey, while the second part presents results of the in-depth interviews with policy makers and heads of facilities.

3.1 RESULTS OF QUANTITATIVE ANALYSIS

3.1.2: Characteristics of the respondents and their households

The numbers of complete questionnaires that were available for data analysis were 370, 366, 376, 298, 352 and 300 in Abakiliki, Ezilo, Nkalagu, Eke-na-ene, Uwani and Obinagu respectively (Table 1). The low numbers of respondents in Eke-na-ene and Obinagu (rural areas) was due to the low population there. The reduced number of questionnaires in the six communities when compared with the sample selected was because of some few refusals to be interviewed and refusal to answer some of the questions.

As shown in Table 1, the respondents were mostly heads of households in the rural areas (with the exception of Nkalagu), while representatives of households were the majority of the respondents in the two urban areas (Abakiliki and Uwani). Also, majority of the respondents was males in the rural areas (with the exception of Nkalagu), while the converse was true in the two urban areas.

The respondents from the urban areas were expectedly more educated than those from the rural areas. The average years of formal schooling were 11.5 years in Enugu and 8.6years in Abakiliki while they were 4.5 years, 6.0 years, 3.3 years and 6.0 years in Obinagu, Eke-na-ene, Ezilo and Nkalagu respectively. Most of the respondents in the six communities and were middle-aged.

The average weekly cost of food ranged from as low as 947 Naira in Obinagu to as high as 2875 Naira in Nkalagu. The higher amounts in some rural areas were due to the high costs of home produced and consumed food items there. The households in the urban areas had better valuable asset holdings than their rural counterparts and were more likely to own a television set, refrigerator and motorcar. The numbers of respondents in each socio-economic status (SES) quartile are shown in Table 1.

Table 1: Respondents' and households' Socio-economic and demographic characteristics

	Abakaliki (N=370)		Ezilo (N=366)		Nkalagu (N=376)		Eke-na-ene (N=298)		Uwani (N=352)		Obinagu (N=300)	
Household heads: n %	163	43.9	341	93.2	104	27.7	199	66.8	118	33.5	236	78.7
No of household residents: Mean (SD)	4.8 (2.5)		6.4	(3.4)	6.8 (4.2)		5.9	(2.8)	4.4(2.0)		5.2(2.54)	
Age of respondent: Mean (SD)	36.6 (11.2)		42.6	(11.7)	42.1 (13.6)		54.8 (14.1)		40.46(13.34)		54.4(13.5)	
Sex (Males)	163	43.9	334	91.3	91	24.2	188	63.1	95 (27.0)		164 (54.7)	
Years of education: Mean (SD)	8.6 (4.7)		6.0 (5.1)		3.3 (5.0)		6.0 (4.9)		11.5 (4.7)		4.5(4.4)	
Whether married: n %	356	96.0	351	95.9	366	97.3	290	97.3	331	94.0	293 (97.7)	
Weekly food cost: Mean (SD)	1732 (1167)		1894 (1980)		2875 (3090)		1108 (1799)		1868(1227)		947(1018)	
Radio: n %	347	93.5	323	88.3	346	92.0	276	92.6	346	98.3	239	79.7
Fridge: n %	176	47.4	26	7.1	30	8.0	96	32.2	309	87.8	48	16.0
TV: n %	296	79.8	96	26.2	60	16.0	177	59.4	325	92.3	95	31.7
Bicycle: n %	84	22.6	206	56.3	260	69.1	46	15.4	6	1.7	37	12.3
Motorcycle: n %	169	45.6	58	15.8	47	12.5	20	6.7	41	11.6	17	5.7
Motorcar: n %	50	13.5	5	1.4	23	6.1	60	20.1	106	30.1	14	4.7
SES quartiles												
Q1 (most poor)	93		92		94		75		88		78	
Q2 (very poor)	94		91		94		75		87		73	
Q3 (poor)	92		92		94		74		88		75	
Q4 (least poor)	92		91		94		74		88		73	
Total	371		366		376		298		351		299	

3.3: General Health Seeking of the Household

Healthcare seeking practices

Malaria was the major health condition that households had one month prior to the survey and generally more than 60% of the households from the urban and rural area respectively suffered from the disease, with the exception of Ezilo where 54.4% of households reported household incidence of malaria (Table 2). Diarrhoeal diseases were the second most common specific health conditions that were reported by households. Out of the remaining specific health conditions under this study, respiratory diseases, appendicitis and hypertension were the next most frequent health conditions that households had one month before the survey. However, a cocktail of all other health conditions or illnesses that were outside the tracer health conditions were prominent contributors to adverse health burden of the households. Table 2 also shows that the rural households suffered more from respiratory diseases and hypertension than there urban (Enugu) counterparts (p<0.05).

Table 2: Health conditions/illnesses that people had one month prior to the interview

	Abakaliki		Ezilo		Nkalagu		Eke-na-ene		Uwani		Obinagu	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Malaria	245	66.0	199	54.4	299	79.5	200	67.1	232 (65.9%)		186 (62.0%)	
Tuberculosis	0	0	3	0.8	7	1.9	8	2.7	1 (0.9%)		4 (1.3%)	
Respiratory diseases	14	3.8	27	7.4	29	7.7	10	3.4	2 (0.6%)		22 (7.3%)	
Hypertension	3	0.8	6	1.6	4	1.1	10	3.4	9 (2.6%)		17 (5.7%)	
Minor surgery	15	4.0	21	5.7	5	1.3	1	0.3	1 (0.3%)		2 (0.7%)	
Malnutrition	0	0	1	0.3	1	0.3	0	0	4 (1.1%)		0 (0%)	
HIV/AIDS	0	0	3	0.8	0	0	0	0	0 (0%)		0 (0%)	
Antenatal care	5	1.3	19	5.2	13	3.5	0	0	0 (0%)		0 (0%)	
Childbirth	22	5.9	9	2.5	6	1.6	0	0	5 (1.4%)		1 (0.3%)	
Diarrhoea	54	14.6	42	11.5	41	10.9	10	3.4	3 (0.9)		7 (2.3)	
Others	162	43.7	94	25.7	304	80.9	71	23.8	95 (27.0%)		91 (30.3%)	

3.4: Health Seeking of the Respondent

3.4.1 Diagnosis of the illness/health condition

Self-diagnosis was the major diagnostic approach that was used the three communities from Ebonyi state (Abakiliki, Ezilo and Nkalagu) to diagnose their health conditions/illnesses (Table 3). The results also showed that medical tests were the second most common diagnostic approach in Ebonyi state, although it came a distant second in Nkalagu. On the other hand, the major diagnostic approaches in the three communities from Enugu state were both self-diagnosis and medical tests.

Table 3: Method of diagnosis of illness

	Abakaliki		Ezilo		Nkalagu		Eke-na-ene		Uwani		Obinagu	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Community-based health worker	2	0.5	3	0.8	0	0	5	1.7	1	0.3	1	0.3
Family member	1	0.3	4	1.1	1	0.3	2	0.7	10	2.8	4	1.4
Traditional healer/Herbalist	1	0.3	12	3.3	8	2.1	4	1.3	0	0	15	5.2
Self diagnosis	263	70.9	235	64.2	335	89.1	115	38.6	153	43.5	112	38.5
Medical test	86	23.2	61	16.7	13	3.5	122	40.9	107	30.4	114	39.2
Do not know	0	0	11	3.0	2	0.5	2	0.7	0	0	2	0.7
Others	0	0	3	0.8	1	0.3	2	0.7	1	0.3	2	0.7

3.4.2 Actions taken to receive healthcare

A total of 229 (61.9%), 244 (66.7%), 333 (88.6%), 209 (70.1%), 321 (91.2%) and 174 (58%) out of the respondents in Abakiliki, Ezilo, Nkalagu, Eke-na-ene, Uwani and Obinagu had health conditions/illnesses one month prior to the survey. Most of the people that were ill/had the health conditions actually sought healthcare for their conditions (Table 4). The Table shows that most of the people recovered as a result of the first healthcare source that they sought, although the least proportion of people (64.9%) from Obinagu claimed that they recovered. The average number of days that illnesses lasted ranged as low as 4 days in Abakiliki to as high as 31 days in Nkalagu.

Table 4: General actions taken by respondent and outcomes, when ill

	Abakaliki N = 229		Ezilo N = 244		Nkalagu N = 333		Eke-na-ene N = 209		Uwani N = 321		Obinagu N = 174	
Sought healthcare	218	95.2	239	98.0	328	98.5	202	96.7	311	96.9	160	92.0
Did you recover	204	89.1	189	77.5	277	83.2	167	79.9	263	81.9	113	64.9
Days ill: Mean (SD)	4.4 (7.9)		11.3 (52.0)		31.1 (125.9)		6.6 (9.5)		11.0 (24.9)		4.6 (6.0)	

The most common source of healthcare where people first sought healthcare were hospitals/clinics in the six study communities (Table 3). The second most common source of healthcare in four of the communities was patent medicine dealers, while it was traditional healers (herbalists) in Ezilo and Nkalagu. The table shows that people in the four rural areas used traditional healers more than the urbanites. Few people used the PHC centers as the first port of call for utilization of primary healthcare services and the table also shows that urbanites were more likely than their rural counterparts to have sought healthcare from patent medicine dealers, hospitals, private clinics and other providers that provide higher quality of service ($p < 0.05$). Conversely, the rural'' dwellers were more likely than the urbanites to have sought healthcare from traditional healers and primary healthcare centers ($p < 0.05$).

Table 5: Provider where treatment was first sought by the respondent

	Abakaliki N = 229		Ezilo N = 244		Nkalagu N = 333		Eke-na-ene N = 209		Uwani N = 321		Obinagu N = 174	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Herbalist	17	7.4	30	12.3	56	16.8	13	6.2	8	2.5	27	15.5
Patent medicine dealer	75	32.8	120	49.2	181	54.5	52	17.4	113	35.2	53	30.5
Community-health worker	1	0.4	3	1.2	4	1.2	2	1.0	2	0.6	5	2.9
Health centre	1	0.4	54	22.1	67	20.1	5	2.4	9	2.8	22	12.6
Hospital/clinics	129	56.3	7	2.9	3	0.9	133	63.6	155	48.3	65	37.4
Others	6	2.6	30	12.3	22	6.6	4	1.9	34	10.6	2	1.2
Total	229	100	244	100	333	100	209	100	321	100	174	100

The major reasons that people gave for seeking healthcare from different providers varied in the six communities (Table 6). In the three communities from Ebonyi state, the three major reasons were availability of good quality of services, availability of drugs and distance to the homes. In the three communities from Enugu state, the reasons were near the homes, availability of drugs and good quality of services.

Table 6: Reasons that healthcare was sought from the different providers as the first action

	Abakaliki N = 229		Ezilo N = 244		Nkalagu N = 333		Eke-na-ene N = 209		Uwani N = 321		Obinagu N = 174	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Good quality of services	207	90.4	224	91.8	202	60.7	88	42.1	20	6.2	40	23.0
Affordability	194	84.7	150	61.5	77	23.1	77	36.8	85	26.5	30	17.2
Availability of drugs	188	82.1	168	68.9	117	35.1	96	45.9	48	15.0	31	17.8
Near the homes	147	64.2	150	61.5	205	61.6	16	7.7	146	45.5	89	51.2
Prompt attention	141	61.6	153	62.7	36	10.8	20	9.7	11	3.4	11	6.3
Polite health workers	106	46.3	71	29.1	1	0.3	10	4.8	6	1.9	1	0.6
Others	3	1.3	7	2.9	8	2.4	9	4.3	63	19.6	4	2.3

Payment strategies

Full user fee without reimbursement on consumption of care was by far the commonest type of payment mechanism that was used to pay for healthcare in the six communities (Table 7). This was followed distantly by instalment payment, with the exception of Abakiliki where reimbursement was the second most common payment mechanism (Table 7). The other payment mechanisms were rarely used, though it was interesting to find out that some few people claimed to have utilised the health insurance, which is still quite rare in Nigeria. The urbanites significantly used more of full user fees payment strategy, while the rural dwellers significantly used more of reimbursement, instalment payment and in-kind payment mechanisms.

Table 7: Payment mechanism for the first action

	Abakaliki N = 229		Ezilo N = 244		Nkalagu N = 333		Eke-na-ene N = 209		Uwani N = 321		Obinagu N = 174	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Reimbursement	6	2.6	7	4.6	19	5.7	6	2.9	2	0.6	15	8.6
Full user fees	210	91.7	205	56.0	273	82.0	184	88.0	311	96.9	119	68.4
Health insurance	0	0	3	0.8	1	0.3	1	0.5	3	0.9	7	4.0
Installment payment	0	0	15	4.1	17	5.1	18	8.6	24	7.5	30	17.2
In-kind	0	0	2	0.5	4	1.2	2	1.0	2	0.6	1	0.6
Pre-payment	0	0	3	0.8	1	0.3	4	2.0	3	0.9	0	0
Others	13	5.7	6	1.6	18	5.4	5	2.4	6	1.8	2	1.2

Table 8 shows the different payment-coping mechanisms that the respondents used to pay for health care. The use of own money was the commonest payment-coping mechanism in the three communities. However, a sizeable proportion of the respondents in the three rural communities (ezilo, Nkalagu and Obinagu) borrowed money in order to pay for care. The sales of movable household assets or land were not commonly used to pay for care. Fee exemptions and subsidies were almost non-existent as coping mechanisms amongst the sample for this study.

Table 8: Payment coping for first action

	Abakaliki N = 229		Ezilo N = 244		Nkalagu N = 333		Eke-na-ene N = 209		Uwani N = 321		Obinagu N = 174	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Own money (cope 1)	210	91.7	181	74.1	283	85.0	190	90.9	311	96.9	144	82.8
Borrowed money (cope 2)	3	1.3	33	13.5	36	10.8	4	1.9	2	0.6	40	23.0
Sold households' assets (cope 3)	1	0.4	20	8.2	1	0.3	1	0.5	0	0	4	2.3
Sold land (cope 4)	0	0	0	0	1	0.3	0	0	0	0	1	0.6
Took a loan (cope 5)	0	0	1	0.4	2	0.6	0	0	0	0	4	2.3
Community solidarity (cope 6)	0	0	1	0.4	7	2.1	0	0	0	0	2	1.2
Someone else paid (cope 7)	11	4.8	3	1.2	0	0	7	3.3	8	2.5	6	3.5
Was exempted from payment (cope 8)	3	1.3	1	0.4	1	0.3	0	0	2	0.6	2	1.2
Payment was subsidised (cope 9)	1	0.4	2	0.8	2	0.6	0	0	1	0.3	0	0
Others (cope 10)	0	0	2	0.8	9	2.4	7	3.3	3	0.9	1	0.6

As shown in Table 9, in general, households coped with the respondents' illnesses or health conditions by getting someone else within the household to perform the usual duties of the ill person (intra-household labour substitution). However, it is seen that most of the ill people continued to perform their normal duties and there were few cases of hiring someone to perform the normal duties of the ill people, although Eke-na-ene and Obinagu presented exceptions.

Table 9: Illness coping mechanism for first action

	Abakaliki N = 229		Ezilo N = 244		Nkalagu N = 333		Eke-na-ene N = 209		Uwani N = 321		Obinagu N = 174	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Hired labour	3	1.3	38	15.6	15	4.5	55	26.3	2	0.6	31	17.8
Ill person continued normal work	49	21.4	63	25.8	116	34.8	73	34.9	128	39.9	47	27.0
Intra-household labour substitution	130	56.8	86	35.2	212	63.7	67	32.1	198	61.7	77	44.3
Others	47	20.5	57	23.4	5	1.5	7	3.3	2	0.6	19	10.9

Most of the people recovered or achieved their healthcare goal after consuming the services of the providers where they first sought healthcare. However, few respondents who did not recover after the first resort to healthcare which they consumed utilized further healthcare. Table 10 shows that majority of them used the services of hospitals when the first healthcare they sort failed. In general, the low-level providers were not commonly patronized when the first treatment did not work. Nonetheless, a relatively appreciable proportion of the respondents in Ezilo and Obinagu used the services of herbalists as the second source of healthcare.

Table 10: Second action where treatment was sought by the respondent

	Abakaliki N = 12		Ezilo N = 22		Nkalagu N = 41		Eke-na-ene N = 28		Uwani N = 64		Obinagu N = 43	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Herbalist	3	25.0	11	50.0	9	22.0	1	3.6	8	12.5	11	25.6
Clinic	0	0	0	0	1	2.4	3	10.7	11	17.2	10	23.3
Patent medicine dealer	2	16.7	2	9.1	11	26.9	7	25.0	7	10.9	2	4.7
CBHW	0	0	1	4.6	3	7.3	0	0	0	0	1	2.3
PHC centre	0	0	1	4.6	1	2.4	0	0	3	4.7	6	14.0
Hospital	7	58.3	7	31.8	16	39.0	14	50.0	29	45.3	12	27.9
Others	0	0	0	0	0	0	3	10.7	6	9.4	1	2.3

Full out-of-pocket user fee was the overwhelming payment mechanism that was used to pay for healthcare in the second action that the people took (Table 11). It was followed distantly by payment by installment in three of the communities.

Table 11: Payment mechanism for second action

	Abakaliki		Ezilo		Nkalagu		Eke-na-ene		Uwani		Obinagu	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Full user fees	12	100	13	59.1	33	80.5	21	75.0	58	90.6	32	74.4
Reimbursement	0	0	1	4.6	2	4.9	0	0	0	0	3	7.0
Health insurance	0	0	0	0	0	0	1	3.6	0	0	3	7.0
Installment	0	0	3	13.6	4	9.8	4	14.3	2	3.1	6	14.0
In-kind	0	0	1	4.6	0	0	0	0	3	4.7	1	2.3
Pre-payment	0	0	0	0	1	2.4	2	7.1	0	0	1	2.3
Others	0	0	4	18.2	1	2.4	0	0	1	1.6	0	0

3.5 HEALTHCARE SEEKING OF OTHER HOUSEHOLD MEMBERS

As was in the case for respondents' payment mechanism for healthcare, out-of-pocket user fee was used for the payment of healthcare for other household members (Table 12). It was again followed in frequency of use by payment by installment. People mostly used their own money to pay for the healthcare services, although their was some appreciable use of borrowed money to pay for healthcare in some rural areas (Table 13).

Table 12: Payment mechanism for other household members

	Abakaliki		Ezilo		Nkalagu		Eke-na-ene		Uwani		Obinagu	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Full user fees	265	98.9	204	80.6	308	88.3	157	81.8	298	91.4	118	79.7
Reimbursement	2	0.7	17	6.7	7	2.0	6	3.1	6	1.8	13	8.8
Health insurance	0	0	6	2.4	1	0.3	3	1.6	5	1.5	10	6.8
Installment	1	0.4	19	7.5	23	6.6	17	8.9	14	4.3	1	0.7
In-kind	0	0	1	0.4	3	0.9	0	0	0	0	1	0.7
Pre-payment	0	0	3	1.2	3	0.9	8	4.2	2	0.6	1	0.7
Others	0	0	3	1.2	4	1.2	1	0.5	1	0.3	4	2.7
Total	268	100	253	100	349	100	192	100	326	100	148	100

16

Table 13: Payment coping for other household members

	Abakaliki		Ezilo		Nkalagu		Eke-na-ene		Uwani		Obinagu	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Own money (cope 1)	268	96.8	192	70.3	300	86.2	150	93.8	302	96.8	125	69.8
Borrowed money (cope 2)	8	2.8	25	9.2	36	10.3	6	3.8	2	0.6	41	22.9
Sold households' assets (cope 3)	1	0.4	41	15.0	2	0.6	0	0	0	0	3	1.7
Sold land (cope 4)	0	0	0	0	1	0.3	1	0.6	0	0	1	0.6
Took a loan (cope 5)	0	0	2	0.7	0	0	0	0	0	0	1	0.6
Community solidarity (cope 6)	0	0	2	0.7	5	1.4	0	0	0	0	1	0.6
Was exempted from payment (cope 8)	0	0	2	0.7	0	0	1	0.6	3	1.0	1	0.6
Payment was subsidised (cope 9)	0	0	5	1.8	3	0.9	0	0	2	0.6	2	1.1
Others (cope 10)	0	0	4	1.5	1	0.3	2	1.2	3	1.0	4	2.2
Total	277	100	273	100	348	100	160	100	312	100	179	100

Expenditures on healthcare seeking

Higher costs of treatment were incurred in the two urban areas (Abakiliki and Uwani) and overall mean cost of treatment ranged from 440.7 Naira in Obinagu to 1477.0 Naira in Uwani. Conversely, the average costs of transportation were higher in the rural areas and the people paid an average of 35.3 Naira in Eke-na-ene to 162.3 Naira in Ezilo. The total treatment costs for other household members mirrored that of the respondents, although the highest costs were incurred in Ezilo and Nkalagu.

Table 14: Costs of treatment (respondents and other householders)

	Abakaliki Mean (SD)	Ezilo Mean (SD)	Nkalagu Mean (SD)	Eke-na-ene Mean (SD)	Uwani Mean (SD)	Obinagu Mean (SD)
Respondent's treatment cost (1st action)	1066.6 (3946.1)	1061.1 (1955.5)	750.4 (1607.1)	686.4 (2275.5)	1477.0 (5713.0)	440.7 (752.0)
Respondent's transportation cost (1st action)	51.7 (131.1)	162.3 (1230.1)	69.0 (227.2)	35.3 (90.7)	48.0 (122.1)	48.4 (111.7)
Respondent's total cost (1st action)	1094.1 (3803.2)	1189.1 (2910.7)	912.7 (2526.8)	674.6 (2229.0)	1795.8 (6679.0)	484.6 (957.3)
Other household members' total cost (1st action)	1046.2 (2092.8)	1316.5 (1999.0)	1327.7 (2909.9)	753.1 (3290.1)	1119.6 (1629.0)	508.4 (805.0)

Fee exemptions

There was very low knowledge about the existence of fee exemptions, although 50.9% of the people in Uwani claimed that they were aware about the existence of fee exemptions (Table 15). Nonetheless, very few people have ever been exempted from paying fees. In addition, fewer other household members have been exempted from paying fees.

Table 15: General knowledge about fee exemptions

	Abakaliki		Ezilo		Nkalagu		Eke-na-ene		Uwani		Obinagu	
	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Aware exempt	20	5.4	4	1.1	25	6.6	32	10.7	179	50.9	2	0.7
Ever been exempted	17	4.6	2	0.5	20	5.3	9	3.0	24	6.8	1	0.3
Exemptions for other household members	2	0.5	1	0.3	3	0.8	8	2.7	15	5.0	1	0.3

17

3.6 TABLES SHOWING SES DIFFERENTIALS IN KEY VARIABLES

There were statistical significant socio-economic differentiations in the self-reported occurrence of few of the diseases. The occurrence of malaria was statistically significantly different in five communities, although the trends were different. This is because, while the higher SES groups reported most incidence of malaria in Abakiliki, Nkalagu and Uwani, the converse was true in Ezilo and Obinagu (Table 16). There were other patchy findings of statistical SES differences in other diseases/health conditions. It is seen that more cases of diarrhoea were reported by Q4 SES and more minor surgeries with increasing SES in Ezilo. Antenatal visits were not reported by most poor SES in Nkalagu.

Table 16: Diseases/health conditions that respondents had within one month to the date of the survey

	Malaria n (%)	Diarrhoea n (%)	Malnutrition n (%)	Hypertension n (%)	HIV/AIDS n (%)	Respiratory problems n (%)	TB n (%)	Antenatal n (%)	Childbirth n (%)	Surgery n (%)
akiliki										
Most poor	46 (18.8)	16 (29.6)	0	0	0	2 (14.3)	0	0	4 (18.2)	3 (20)
Very poor	64 (26.1)	11 (20.4)	0	1 (33.3)	0	4 (28.6)	0	2 (40)	9 (40.9)	3 (20)
Poor	58 (23.7)	13 (24.1)	0	0	0	5 (35.7)	0	2 (40)	5 (22.7)	4 (26.7)
Least poor	77 (31.4)	14 (25.9)	0	2 (66.7)	0	3 (21.4)	0	1 (20)	4 (18.2)	5 (33.3)
-square	24.7***	1.2	0	3.7	0	1.5	0	2.2	3.1	0.8
-rich ratio	0.60	1.14	NA	NA	NA	0.7	NA	NA	1.0	0.60
centration index	0.08	-0.02	NA	NA	NA	0.09	NA	NA	-0.04	0.14
o										
Most poor	47 (23.6)	3 (7.1)	1 (100.0)	2 (33.3)	1 (33.3)	7 (25.9)	0	3 (15.8)	1 (11.1)	0
Very poor	57 (28.6)	13 (31.0)	0	2 (33.3)	1 (33.3)	5 (18.5)	0	4 (21.1)	3 (33.3)	6 (28.6)
Poor	58 (29.1)	16 (38.1)	0	2 (33.3)	1 (33.3)	7 (25.9)	2 (66.7)	4 (21.1)	2 (22.2)	7 (33.3)
Least poor	37 (18.6)	10 (23.8)	0	0	0	8 (29.6)	1 (33.3)	8 (42.1)	3 (33.3)	8 (38.1)
square	12.59***	10.01**	2.97	2.02	1.00	0.75	3.68	3.34	1.29	7.89**
-rich ratio	1.27	0.30	NA	NA	NA	0.88	NA	0.38	0.33	NA
centration index	-0.03	-0.17	NA	NA	NA	0.05	NA	NA	NA	NA
agu										
Most poor	61 (20.4)	13	0	0	0	8	2	0	1	2
Very poor	78 (26.1)	8	0	1	0	8	3	3	1	1
Poor	81 (27.1)	14	0	0	0	9	0	7	2	0
Least poor	79 (26.4)	6	1	3	0	4	2	3	2	2
square	16.77***	4.90	3.01	6.07	0	2.21	2.77	7.89**	0.68	2.23
-rich ratio	0.77	2.17	NA	NA	NA	2.0	1.0	NA	0.5	1.0
centration index	0.04	-0.08	NA	NA	NA	NA	NA	NA	NA	NA
na-ene										
Most poor	47 (23.5)	3 (30.00)	0	4 (40.00)	0	2 (20.00)	3 (37.5)	0	0	0
Very poor	48 (24.00)	1 (10.00)	0	0	0	1 (10.00)	1 (12.5)	0	0	0
Poor	57 (28.50)	2 (20.00)	0	1 (10.00)	0	2 (20.00)	1 (12.5)	0	0	0
Least poor	48 (24.00)	4 (40.00)	0	5 (50.00)	0	5 (50.00)	3 (12.5)	0	0	1 (100.0)
square	4.47	2.1	0	7.10*	0	3.8	2.1	0	0	3.00
-rich ratio	0.22	0.56	NA	0.10	NA	0.29	0.56	NA	NA	NA
centration index	0.02	NA	NA	NA	NA	0.25	0.09	NA	NA	NA
ni										
Most poor	47 (20.4)	0	1 (25.0)	2 (22.2)	0	0	0	0	1 (20.0)	0
Very poor	64 (27.7)	3 (50.0)	2 (50.0)	3 (33.3)	0	0	0	0	3 (60.0)	0
Poor	60 (26.0)	3 (50.0)	1 (25.0)	2 (22.2)	0	2 (100)	2 (66.7)	0	1 (20.0)	0
Least poor	60 (26.0)	0	0	2 (22.2)	0	0	1 (33.3)	0	0	1 (100.0)
square for trend	8.78**	6.14	2.05	0.36	0	6.01	3.68	0	3.9	3.00
-rich ratio	0.78	NA	NA	1.0	NA	NA	NA	NA	NA	NA
centration index	0.03	0.11	0.56	0.95	NA	0.11	0.30	NA	0.27	0.39
agu										
Most poor	49 (27.22)	7 (24.14)	0	5 (29.41)	0	5 (23.81)	0	0	0	0
Very poor	33 (18.33)	4 (13.79)	0	4 (23.53)	0	1 (4.76)	2 (50.0)	0	1 (100)	1 (50.0)
Poor	52 (28.89)	10 (34.48)	0	2 (11.76)	0	9 (42.86)	1 (25.0)	0	0	0
Least poor	46 (25.56)	8 (27.59)	0	6 (35.30)	0	6 (28.57)	1 (25.0)	0	0	1 (50.0)
square for trend	7.4*	2.48	0	2.14	0	6.28	2.34	0	3.33	2.18
-rich ratio	1.07	0.88	NA	0.83	NA	0.83	NA	NA	NA	NA
centration index	0.03	0.10	NA	0.55	NA	0.09	0.51	NA	0.34	0.54

Note: * = p<0.10; ** = p<0.05; and ***p<0.01

18

In Table 17, it is shown that there were very few socioeconomic differences in the general actions that people took when they were ill or had a health condition that required a visit to a health care provider. All the SES groups equally sought healthcare when they needed to However, the results from Ezilo and Uwani show that the poorer households used medical tests sparingly to determine the illness they had. There were equal reports of full recovery by all SES groups after the healthcare that people sought for their health condition, with the exception of Abakiliki where the least poor SES groups recovered more than the poorer SES groups.

Table 17: General issues about health seeking

	Abakaliki	Ezilo	Nkalagu	Eke-na-ene	Uwani	Obinagu
Sought healthcare						
Q1	49	57	76	49	78	48
Q2	61	52	83	48	82	38
Q3	49	67	84	57	85	37
Q4	59	63	85	48	80	36
Chi-square	5.12	6.05	4.78	3.90	4.77	3.03
p-value	0.16	0.11	0.19	0.27	0.19	0.39
Q1/Q4	0.83	0.90	0.89	1.02	0.98	1.33
Concentration index	-0.24	0.03	0.02	0.01	0.01	-0.04
Medical tests						
Q1	17	6	3	30	12	22
Q2	21	13	1	28	27	30
Q3	25	19	3	29	34	29
Q4	23	23	6	35	34	32
Chi-square	2.28	13.10	4.06	1.76	17.32	5.37
p-value	0.52	0.004***	0.26	0.62	0.00***	0.15
Q1/Q4	0.74	0.26	0.5	0.86	0.35	0.69
Concentration index	0.07	0.24	NA	0.03	0.17	0.09
Recovered						
Q1	39	49	63	42	66	33
Q2	57	42	73	37	66	27
Q3	48	51	73	44	67	24
Q4	60	47	68	44	63	28
Chi-square	11.80	1.72	3.77	2.10	0.61	1.68
p-value	0.008***	0.63	0.29	0.56	0.89	0.64
Q1/Q4	0.7	1.0	0.9	1.0	1.0	1.2
Concentration index	0.07	0.01	NA	0.02	-0.01	-0.04

Note: * = p<0.10; ** = p<0.05; and ***p<0.01

In the three communities from Ebonyi state, there were inequities in the use of various providers as source of first healthcare that the people took when they had a health condition (Table 18). The poorer households were most likely to use low level and informal providers such as traditional healers in Abakiliki and Ezilo and patent medicine dealers in Nkalagu. Conversely, the least poor households more than other SES groups used services of higher level and more formal providers such as primary healthcare centres in Ezilo and Nkalagu and hospitals in Abakiliki and Ezilo.

Table 18: First action that the people took

	Abakaliki	Ezilo	Nkalagu	Eke-na-ene	Uwani	Obinagu
itional healer						
	10	18	14	5	2	10
	1	5	13	4	3	5
	5	5	13	2	1	8
	1	2	16	2	2	3
-square	13.48	21.97	0.50	2.1	1.05	4.09
lue	0.004***	0.00***	0.92	0.55	0.79	0.25
Q4	10.0	9.0	0.86	2.5	1.0	3.33
centration index	-0.35	-0.40	0.03	-0.21	NA	-0.14
ic						
	0	0	1	8	13	6
	0	0	0	7	13	8
	0	3	0	6	10	3
	0	4	2	10	15	8
-square	0	7.45	3.70	1.28	1.18	3.45
lue	0	0.06*	0.30	0.73	0.76	0.33
Q4	NA	NA	0.5	0.80	0.87	0.75
centration index	NA	NA	NA	0.04	0.02	0.03
nt medicine dealer						
	17	27	44	13	27	15
	17	31	47	10	32	13
	18	27	55	19	33	12
	23	28	33	10	21	12
-square	1.81	0.64	10.61	5.20	4.86	0.41
lue	0.61	0.89	0.01**	0.16	0.18	0.94
Q4	0.74	0.96	1.33	1.30	1.29	1.25
centration index	0.06	0.01	-0.04	0.00	-0.03	-0.04
HW						
	0	0	1	0	2	2
	1	0	2	1	0	1
	0	3	0	1	0	2
	0	0	1	0	0	0
-square	2.95	9.01	2.02	2.01	6.01	2.07
value	0.40	0.03**	0.57	0.57	0.11	0.56
Q4	0	NA	1.0	0.00	NA	NA
centration index	NA	NA	NA	NA	NA	NA
alth centre						
	0	8	14	0	1	7
	0	9	11	2	3	5
	0	18	13	0	3	4
	1	19	29	3	2	6
-square	3.04	8.80	14.87	5.52	1.27	0.77
value	0.39	0.03**	0.002***	0.14	0.74	0.86
Q4	0	0.42	0.48	0.00	0.5	1.17
centration index	NA	0.20	NA	NA	NA	-0.04
spital						
	23	0	1	23	23	8
	42	0	0	26	24	9
	28	3	1	27	27	11
	36	4	0	26	29	8
-square	9.74	7.45	2.01	0.62	1.20	0.94
value	0.02**	0.06*	0.57	0.89	0.75	0.82
Q4	0.64	NA	NA	0.88	0.79	1.0
centration index	0.05	NA	NA	0.01	0.05	0.03

Note: * = p<0.10; ** = p<0.05; and ***p<0.01

In most cases, people belonging to different SES groups used similar payment mechanisms to pay for healthcare (Table 19). Hence, there were mostly statistically significant differences in payment mechanisms with the exception of use of out-of-pocket user fee in Abakiliki where the most poor had the lowest proportion of people that used the mechanism and use of installment payment in Uwani where the most-poor SES had the highest proportion of people that used the mechanism. However, whilst all SES groups mostly used similar payment mechanisms, there were notable SES differences in their coping mechanisms (Table 20).

Table 19: Payment mechanisms (respondents)

	Reimburse	User fees	Private insure	NHIS	Installment	In-Kind	Prepay	Others
Abakiliki								
Q1	0	47	0	0	0	0	0	0
Q2	1	60	0	0	0	0	0	1
Q3	3	45	0	0	0	0	0	2
Q4	2	58	0	0	0	0	0	2
Chi-square	3.45	7.16*	0	0	0	0	0	2.27
Poor-rich ratio	NA	0.81	NA	NA	NA	NA	NA	NA
Concentration index	NA	0.03	NA	NA	NA	NA	NA	NA
Ezilo								
Q1	4	46	1	0	3	2	2	1
Q2	3	48	0	0	4	0	0	2
Q3	3	59	0	1	6	0	1	0
Q4	7	52	0	1	2	0	0	3
Chi-square	2.70	4.25	2.99	2.01	2.40	5.99	3.66	3.43
Poor-rich ratio	0.57	0.88	NA	NA	1.5	NA	NA	0.33
Concentration index	0.14	0.04	NA	NA	-0.01	NA	NA	NA
Nkalagu								
Q1	3	65	0	0	4	1	0	1
Q2	6	61	0	0	5	1	0	3
Q3	2	73	0	0	2	0	0	6
Q4	8	74	0	1	6	2	1	1
Chi-square	5.04	6.35*	0	3.01	2.16	2.02	3.01	6.27*
Poor-rich ratio	0.38	0.88	NA	NA	0.67	0.5	NA	1.0
Concentration index	0.15	0.04	NA	NA	0.04	NA	NA	NA
Eke-na-ene								
Q1	1	43	1	0	8	0	1	1
Q2	1	45	0	0	4	0	0	2
Q3	3	51	0	0	5	0	3	2
Q4	1	45	0	0	1	2	0	0
Chi-square	2.10	2.35	3.00	0	5.83	6.10	6.12	2.23
Poor-rich ratio	0.56	0.50	0.40	NA	0.12	0.12	0.12	0.53
Concentration index	NA	0.01	NA	NA	-0.27	NA	NA	NA
Uwani								
Q1	1	74	1	0	5	0	0	1
Q2	0	80	1	1	8	1	1	2
Q3	1	78	0	0	6	1	1	1
Q4	0	78	0	0	5	0	1	2
Chi-square	2.00	2.66	2.02	3.04	1.13	2.02	1.01	0.69
Poor-rich ratio	NA	0.9	NA	NA	1.0	NA	NA	0.5
Concentration index	NA	0.01	NA	NA	-0.08	NA	NA	NA
Obinagu								
Q1	5	32	0	4	6	0	0	0
Q2	1	26	0	1	12	0	0	1
Q3	4	30	0	2	4	0	0	0
Q4	5	25	0	0	11	1	0	1
Chi-square	2.59	0.90	0	4.57	7.40*	3.02	0	2.18
Poor-rich ratio	1.0	1.28	NA	NA	0.55	NA	NA	NA
Concentration index	0.06	-0.02	NA	NA	NA	NA	NA	NA

Note: * = p<0.10; ** = p<0.05; and ***p<0.01

Table 20 shows the equity implications of the different payment-coping mechanisms that the respondents used to pay for health care. The coping mechanisms (presented in Table 8) were coded from cope 1 to cope 2 so that there will enough space for all of them in Table 20. The use of own money to pay for healthcare was equal across all SES groups in the study areas with the exception of results from Uwani where the least poor used it more than the most poor, but the Q1/Q4 ratio and the concentration index show that there was very minimal inequity in the result. Whilst the least poor were most likely to borrow money in Abakiliki to pay for healthcare, the converse was true in Obinagu. The other statistically significant differences in payment coping are shown in Table 20.

Table 20: Payment coping mechanisms (respondents)

	Cope 1	Cope 2	Cope 3	Cope 4	Cope 5	Cope 6	Cope 7	Cope 8	Cope 9	Cope 10
Abakiliki										
Q1	45	0	0	0	0	0	1	0	0	0
Q2	58	3	0	0	0	0	2	1	0	0
Q3	49	0	1	0	0	0	0	1	0	0
Q4	58	0	0	0	0	0	3	1	1	0
Chi-square	5.52	8.91**	3.04	0	0	0	3.40	1.01	3.04	0
Poor-rich ratio	0.78	NA	NA	NA	NA	NA	0.33	NA	NA	NA
Concentration index	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ezilo										
Q1	47	3	9	0	1	0	3	0	0	0
Q2	43	6	4	0	0	0	0	1	0	2
Q3	52	11	5	0	0	0	5	0	2	0
Q4	39	13	2	0	0	1	6	0	0	0
Chi-square	3.70	8.42**	5.40	0	2.99	3.03	6.24	3.03	5.99	6.08
Poor-rich ratio	1.2	0.04	4.5	NA	NA	NA	0.5	NA	NA	NA
Concentration index	-0.02	0.27	-0.26	NA	NA	NA	NA	NA	NA	NA
Nkalagu										
Q1	67	13	1	1	0	4	4	1	0	2
Q2	65	7	0	0	1	0	3	0	2	3
Q3	75	8	0	0	0	0	1	0	0	4
Q4	76	8	0	0	1	3	3	0	0	0
Chi-square	5.30	2.70	3.01	3.01	2.01	7.42*	1.78	3.01	6.03	3.98
Poor-rich ratio	0.88	1.63	NA	NA	NA	1.33	1.33	NA	NA	NA
Concentration index	0.04	-0.10	NA	NA	NA	NA	NA	NA	NA	NA
Eke-na-ene										
Q1	44	2	0	0	0	0	1	0	0	0
Q2	48	2	0	0	0	0	0	0	0	0
Q3	53	0	0	0	0	0	1	0	0	0
Q4	45	0	1	0	0	0	3	0	0	0
Chi-square	3.10	4.00	3.04	0	0	0	3.91	0	0	0
Poor-rich ratio	0.38	0.26	0.39	NA	NA	NA	0.27	NA	NA	NA
Concentration index	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
Uwani										
Q1	70	2	0	0	0	0	1	1	1	1
Q2	81	0	0	0	0	0	2	1	0	0
Q3	80	0	0	0	0	0	4	0	0	1
Q4	79	0	0	0	0	0	1	0	0	1
Chi-square for trend	9.25**	6.01	0	0	0	0	3.06	2.02	3.00	1.00
Poor-rich ratio	0.89	NA	NA	NA	NA	NA	1.0	NA	NA	1.0
Concentration index	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
Obinagu										
Q1	38	16	0	0	0	1	1	0	0	0
Q2	31	13	2	1	4	0	4	0	0	1
Q3	33	7	1	0	0	1	1	1	0	0
Q4	36	4	1	0	0	0	0	1	0	0
Chi-square for trend	0.47	10.1**	2.34	3.33	13.4***	1.87	6.9*	2.00	0	3.33
Poor-rich ratio	1.06	4.0	NA	NA	NA	NA	NA	NA	NA	NA
Concentration index	0.01	-0.24	NA	NA	NA	NA	NA	NA	NA	NA

Note: * = p<0.10; ** = p<0.05; and ***p<0.01

Table 21 shows that the major tendency within each SES quartile was to use out-of-pocket user fee payment mechanism. However, there was a uniform statistically significant SES differences in the use of out-of-pocket user fees to pay for healthcare in the six study areas (Table 21) and it is seen that the most-poor group were less likely to that payment mechanism compared to better-off SES groups. Both the inter-quartile ratios and the concentration indices support the trend of inequity in use of out-of-pocket user fees to pay for healthcare. The only other statistically significant difference in payment mechanisms found was in the use of installment payment in Uwani where the least-poor SES had the highest proportion of people that used the mechanism.

Table 21: Payment mechanisms (other householders)

	Reimburse	User fees	Private insure	NHIS	Installment	In-Kind	Prepay	Others
Abakiliki								
Q1	1	52	0	0	0	0	0	0
Q2	1	61	0	0	0	0	0	0
Q3	0	76	0	0	1	0	0	0
Q4	0	76	0	0	0	0	0	0
Chi-square	1.98	24.21***	0	0	0	0	0	0
Poor-rich ratio	NA	0.68	NA	NA	3.04	NA	NA	NA
Concentration index	NA	0.10	NA	NA	NA	NA	NA	NA
Ezilo								
Q1	2	42	1	2	4	1	0	1
Q2	3	48	1	0	7	0	1	1
Q3	8	57	0	0	5	0	2	0
Q4	4	57	1	1	3	0	0	1
Chi-square	5.06	7.32*	1.02	3.68	1.96	2.99	3.68	1.02
Poor-rich ratio	0.5	0.74	1.0	2.0	1.33	NA	NA	1.0
Concentration index	0.16	0.06	NA	NA	-0.07	NA	NA	NA
Nkalagu								
Q1	1	63	0	0	3	0	0	1
Q2	4	76	0	1	3	1	1	1
Q3	0	83	0	0	8	1	0	0
Q4	2	86	0	0	9	1	2	2
Chi-square	5.10	22.55***	0	3.01	5.70	1.01	3.70	2.02
Poor-rich ratio	0.5	0.73	NA	NA	0.33	NA	NA	0.5
Concentration index	NA	0.06	NA	NA	0.25	NA	NA	NA
Eke-na-ene								
Q1	1	33	1	0	7	0	2	0
Q2	2	33	0	1	6	0	0	1
Q3	3	47	0	0	2	0	2	0
Q4	0	44	1	0	2	0	4	0
Chi-square	3.42	9.38	2.01	2.98	5.10	0	4.17	2.98
p-value	0.33	0.03**	0.57	0.39	0.17	0	0.24	0.39
Poor-rich ratio	0.33	0.03	0.57	0.39	0.16	NA	0.24	0.39
Concentration index	NA	0.07	NA	NA	-0.28	NA	NA	NA
Uwani								
Q1	2	64	1	0	1	0	0	0
Q2	1	74	0	0	4	0	0	0
Q3	1	76	2	1	6	0	0	0
Q4	2	83	1	0	3	0	0	0
Chi-square	0.67	16.14***	2.01	3.00	3.87	0	0	0
Poor-rich ratio	1.0	0.77	1.0	NA	0.33	NA	NA	NA
Concentration index	NA	0.05	NA	NA	0.14	NA	NA	NA
Obinagu								
Q1	2	24	0	2	2	0	0	2
Q2	5	22	2	3	6	1	1	1
Q3	1	34	0	2	7	0	0	0
Q4	5	38	1	0	12	0	0	1
Chi-square	4.68	10.00**	4.13	3.03	8.71**	3.33	3.33	1.86
Poor-rich ratio	0.4	0.63	NA	NA	0.17	NA	NA	2.0
Concentration index	0.11	0.13	NA	NA	0.31	NA	NA	NA

Note: * = p<0.10; ** = p<0.05; and ***p<0.01

Table 22 shows the equity implications of the different payment-coping mechanisms that were used to pay for health care for other householders. The results show that as SES quartile increases, households used more of own money (cope 1) to pay for healthcare, although the trend was not very linear in Ezilo. Another interesting result was that as SES quartile decreases, the households sold their assets (cope 3) to pay for healthcare in Ezilo. The better-off quartiles more than the poorest quartiles used borrowing (cope 2) to raise to pay for healthcare in Ezilo and Nkalagu, while the converse was true in Eke-na-eneThe other statistically significant differences in payment coping are shown in Table 22.

Table 22: Payment coping mechanisms (other householders)

	Cope 1	Cope 2	Cope 3	Cope 4	Cope 5	Cope6	Cope7	Cope 8	Cope 9	Cope 10
Abakiliki										
Q1	54	2	0	0	0	0	0	0	0	0
Q2	62	1	0	0	0	0	0	0	0	0
Q3	76	2	0	0	0	0	0	0	0	0
Q4	76	3	1	0	0	0	0	0	0	0
Chi-square	21.0***	1.1	3.0	NA	NA	NA	NA	NA	NA	NA
Poor-rich ratio	0.7	0.7	0	NA	NA	NA	NA	NA	NA	NA
Concentration index			NA	NA	NA	NA	NA	NA	NA	NA
Ezilo										
Q1	40	2	15	0	1	0	4	0	1	0
Q2	49	5	18	0	0	0	0	2	1	2
Q3	58	8	4	0	0	2	2	0	2	1
Q4	45	10	4	0	1	0	0	0	1	1
Chi-square	7.5*	6.4*	17.7***	NA	2.01	6.0	7.4*	6.1	.60	2.0
Poor-rich ratio	0.9	0.2	3.8	NA	1	NA	NA	NA	1	0
Concentration index			NA	NA	NA	NA	NA	NA	NA	NA
Nkalagu										
Q1	64	3	0	0	0	1	0	0	0	0
Q2	76	9	2	0	0	2	0	0	1	0
Q3	79	12	0	1	0	0	0	0	1	1
Q4	81	12	0	0	0	0	4	0	1	0
Chi-square	11.5***	6.6*	6.0	3.0	NA	2.2	12.1***	NA	1.0	3.0
Poor-rich ratio	0.8	0.25	0	0	NA	0	0	NA	0	0
Concentration index			NA	NA	NA	NA	NA	NA	NA	NA
Eke-na-ene										
Q1	34	4	0	0	0	0	1	0	0	1
Q2	35	2	0	0	0	0	1	1	0	0
Q3	40	0	0	0	0	0	6	0	0	0
Q4	41	0	0	1	0	0	1	0	0	1
Chi-square	2.3	7.4*	NA	3.0	NA	NA	8.7***	3.0	NA	2.0
Poor-rich ratio	0.8	0	NA	0	NA	NA	1	0	NA	1
Concentration index			NA	NA	NA	NA	NA	NA	NA	NA
ENUGU										
Q1	66	0	0	0	0	0	0	0	0	0
Q2	73	1	0	0	0	0	0	0	1	0
Q3	78	0	0	0	0	0	1	0	2	0
Q4	84	1	0	0	0	0	1	0	0	0
Chi-square for trend	20.0***	2.0	NA	NA	NA	NA	2.0	NA	4.0	NA
Poor-rich ratio	0.8	0	NA	NA	NA	NA	0	NA	0	NA
Concentration index			NA	NA	NA	NA	NA	NA	NA	NA
UDI										
Q1	17	8	0	0	1	1	1	0	1	0
Q2	26	6	0	0	1	0	1	1	0	0
Q3	35	12	0	0	0	0	0	0	0	2
Q4	47	14	0	0	1	0	0	0	0	2
Chi-square for trend	29.5***	4.4	NA	NA	1.0	2.8	2.0	3.3	1.9	4.0
Poor-rich ratio	0.4	0.6	NA	NA	1	0	0	0	0	0
Concentration index			NA	NA	NA	NA	NA	NA	NA	NA

Note: * = p<0.10; ** = p<0.05; and ***p<0.01

Table 23 shows that there were statistically insignificant SES differentiations with respect to awareness about fee exemptions and more importantly, about the people that have been exempted from paying fees for health care.

Table 23: Awareness and practice of fee exemptions

	Abakaliki	Ezilo	Nkalagu	Eke-na-ene	Uwani	Obinagu
...ware of exemption						
	5	0	3	7	1	1
	4	0	8	4	0	0
	5	2	4	10	0	0
	6	2	10	11	1	1
...hi-square	0.47	4.04	5.61	4.35	1.90	1.90
...value	0.93	0.26	0.13	0.23	0.59	0.59
...1/Q4	0.83	NA	0.3	0.64	1.0	1.00
...oncentration index	0.04	NA	0.17	0.14	NA	NA
...er been exempted						
...1	4	0	3	1	0	0
...2	4	0	6	2	0	0
...3	6	1	4	3	0	0
...4	3	1	7	3	0	0
...hi-square	1.20	2.01	2.11	1.30	0	0
...value	0.75	0.57	0.55	0.73	NA	NA
...1/Q4	1.33	NA	0.43	0.33	NA	NA
...oncentration index	-0.01	NA	NA	NA		
...ther people exempted						
...1	1	0	0	3	1	1
...2	0	0	2	0	0	0
...3	0	1	0	2	0	0
...4	1	0	1	3	0	0
...hi-square	2.02	2.97	3.70	6.40	2.76	2.76
...value	0.57	0.39	0.30	0.70	0.43	0.43
...1/Q4	1.00	NA	NA	1.00	NA	0.00
...oncentration index	NA	NA	NA	NA	NA	NA

Note: * = p<0.10; ** = p<0.05; and ***p<0.01

Table 24 provides information with regards to SES differentiation about the costs of malaria. There was no statistically significant SES differences in the number of days that the respondent was ill (a proxy for the person's opportunity cost of been ill) with the exception of Ezilo where the least-poor suffered from illnesses for fewer number of days than the most-poor groups. There were statistically significant SES differences in the expenditures on treatment in Abakiliki, Ezilo and Nkalagu. Nonetheless, the trends were different in the three areas because in Abakiliki and Ezilo, the better-off SES groups reported more expenditure than the most-poor SES group, it was not so in Nkalagu. In five of the study areas, there were statistically significant SES differences in the total cost of treatment for other household members although the trends were not strictly linear in all the areas.

Table 24: Cost of treatment for respondents

	Abakaliki Mean (SD)	Ezilo Mean (SD)	Nkalagu Mean (SD)	Eke-na-ene Mean (SD)	Uwani Mean (SD)	Obinagu Mean (SD)
Number of days the respondent was ill	4.01 (7.367)	5.99 (8.786)	8.71 (10.36)	6.61 (8.74)	9.82 (17.88)	4.43 (5.30)
	5.71 (11.649)	4.03 (5.265)	8.17 (8.43)	6.32 (8.77)	12.81 (34.93)	5.25 (6.46)
	3.76 (5.323)	6.00 (6.944)	10.03 (8.61)	7.04 (12.39)	10.21 (17.97)	3.75 (5.35)
	4.02 (4.876)	4.57 (4.726)	9.86 (10.23)	6.45 (7.83)	10.95 (24.87)	5.11 (7.00)
F-square	3.6	6.4	5.4	.26	4.4	2.7
P-value	.30	.09	.15	.97	.22	.45
Treatment cost for respondents	777.9 (3747.61)	549.51 (1139.56)	903.1 (1871.6)	1273.1 (4373.3)	965.17 (1907.48)	502.21 (856.11)
	965.96 (1976.5)	718.19 (1522.67)	491.9 (1087.99)	473.3 (721.13)	1731.62 (6650.4)	518.96 (822.71)
	754.57 (2652.9)	1409.1 (2334.55)	417.71 (753.74)	511.3 (571.93)	1737 (7103.32)	350.00 (585.40)
	1773.1 (6114.3)	1569.47 (2365.3)	872.9 (1336.55)	482.84 (592.03)	1476.69 (5712.9)	394.44 (721.23)
F-square	9.6	20.4	13.2	.67	1.2	2.8
P-value	.02	.0001	.004	.88	.76	.43
Transport cost for respondents	48.82 (131.63)	39.57 (124.1048)	59.6 (175.8)	42.53 (111.27)	42.20 (96.92)	50.40 (113.36)
	54.89 (96.73)	64.51 (172.0288)	36.6 (110.9)	28.40 (67.74)	67.09 (165.49)	55.52 (116.95)
	35.11 (58.43)	117.05 (215.16)	45.1 (94.4)	33.24 (76.47)	34.62 (87.75)	31.51 (60.93)
	67.94 (197.08)	110.98 (163.41)	110.8 (332.7)	37.03 (101.67)	47.95 (122.14)	57.50 (141.85)
F-square	3.9	29.9	11.23	.80	3.7	.34
P-value	.28	.0001	.011	.85	.29	.95
Total cost of treatment respondents	899.3 (3880.76)	580.38 (1243.4)	844.6 (1591.4)	1173.5 (4289.9)	1151.4	555.5
	1044.8 (2066.8)	782.69 (1634.28)	527.5 (1153.4)	457.1 (655.3)	1160.5	538.8
	676.5 (2242.9)	1466.6 (2401.83)	466.0 (800.1)	548.0 (631.4)	2003.4	343.4
	1758.9 (5789.9)	1474.9 (2344.5)	970.5 (1551.5)	515.8 (615.5)	2860.5	502.5
F-square	9.2	16.9	10.48	.80	2.1	3.2
P-value	.03	.0001	.015	.85	.56	.36
Total cost of treatment other householders	608.6 (1082.1)	694.8 (1279.1)	995.8	952.9 (2974.6)	661.2	280.8 (581.2)
	781.9 (1374.2)	1629.2 (2627.9)	1252.4	373.2 (519.7)	906.0	426.3 (809.5)
	1539.7 (2835.8)	1601.4 (2186.9)	4696.0	508.8 (759.8)	1189.7	578.6 (800.1)
	1264.9 (2467.9)	1344.1 (1494.1)	2858.6	1179.7 (5812.5)	1722.8	733.3 (926.6)
F-square	20.4	16.3	25.6	2.8	30.7	28.3
P-value	.0001	.001	.001	.42	.00001	.0001

Note: * = p<0.10; ** = p<0.05; and ***p<0.01

Table 25 presents the results of the breakdown of the assets and cost of food (components of the SES index) by SES quartiles and it clearly shows that there were statistically significant SES differences in ownership of all the assets and in cost of food in the six communities. The trends were also linear in all the variables and they show that the better-off quartiles owned more of the assets with the exception of bicycles which were owned most by the most-poor households. Similarly, the costs of food incurred by households increased as SES status increased.

Table 25: Socio-economic differences in ownership of assets (in the SES index) and weekly food cost

	Food cost	Own a radio	Refrigerator	Television	Bicycle	Motorcycle	Motorcar
Abakiliki							
Q1	1024.9 (826.6)	69	5	26	33	7	0
Q2	1447.0 (564.7)	94	8	88	20	42	3
Q3	1734.3 (915.1)	92	71	90	25	59	6
Q4	2736.0 (1438.1)	92	92	92	6	61	41
Chi-square	101.0	76.7	257.7	207.9	23.6	83.0	103.1
p-value	.0001	0.0001	.0001	.0001	.0001	.0001	.0001
Ezilo							
Q1	1358.5 (1265.1)	54	0	0	4	0	0
Q2	1497.9 (709.5)	91	0	0	68	0	0
Q3	2394.4 (1265.8)	89	2	11	67	19	0
Q4	1736.1 (892.25)	89	24	85	67	39	5
Chi-square	84.9	104.02	68.59	296.99	134.79	85.84	15.32
p-value	.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.002
Nkalagu							
Q1	1747.5 (968.6)	64	0	0	8	0	0
Q2	2118.6 (598.3)	94	0	0	87	0	0
Q3	3451.6 (980.0)	94	0	0	88	7	0
Q4	3458.2 (1796.0)	94	30	60	77	40	23
Chi-square	150.9	97.80	97.80	214.18	219.72	106.7	73.50
p-value	.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Eke-na-ene							
Q1	885.7 (2146.2)	58	0	0	21	0	0
Q2	1175.1 (1391.5)	74	1	42	11	1	1
Q3	1139.9 (815.8)	71	30	63	8	10	6
Q4	1235.1 (2407.4)	73	65	72	6	9	53
Chi-square	21.7	34.7	175.6	174.48	13.36	17.84	164.04
p-value	.0001	.0001	.0001	0.0001	0.004	0.0001	0.0001
Uwani							
Q1	738.1	83	63	69	3	8	19
Q2	1450.9	87	79	84	1	15	16
Q3	1936.0	87	80	86	1	10	25
Q4	3347.8	88	87	85	1	8	46
Chi-square	274.1	11.5	33.7	32.1	2.0	3.8	29.3
p-value	.0001	.01	.0001	.0001	.57	.29	.0001
Obinagu							
Q1	104.1	22	0	2	1	0	0
Q2	223.9	65	9	21	5	0	0
Q3	346.4	73	35	67	15	5	1
Q4	393.9	71	88.51	188.50	15	13	12
Chi-square	17.9	172.80	0.00	0.00	19.34	26.86	33.26
p-value	.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Note: * = p<0.10; ** = p<0.05; and ***p<0.01

Logistic regression analysis showed that there were some statistically significant determinants of choice of out-of-pocket user fees for the payment of healthcare (Table 26). All the regression analyses were statistically significant and predicted majority of the observations in the six communities. The cost of treatment determined the payment mechanism that the people used in four of the communities, although the magnitudes of the coefficients were small. Females were less likely than men to use out-of-pocket payment mechanism in four of the communities, although the finding was also statistically significant in Obinagu. Factors that had positive influence on use of out-of-pocket payment mechanism were respondents being household heads in Obinagu, higher number of household residents in Eke-na-ene and Ezilo, years of schooling in Ezilo and transportation costs in Abakiliki and Eke-na-ene. However, transportation costs had a negative influence on use of out-of pocket payments in Ezilo. The weights of the SES indices were insignificant explanatory factors, with the exception of Ezilo, where it was negatively related to use of out-of-pocket payment strategy.

Table 26: Logistic regression analysis of out-of-pocket (user fee) payment strategy versus independent variables

	Abakaliki Coeff (SE)	Ezilo Coeff (SE)	Nkalagu Coeff (SE)	Eke-na-ene Coeff (SE)	Uwani Coeff (SE)	Obinagu Coeff (SE)
Status in household	-.11 (.58)	-.37 (.58)	-.37 .49)	-.80 (.63)	-.67 (.52)	.95 (.38)**
No of household residents	-.09 (.07)	.07 (.04)*	-.02 (.03)	.11 (.05)**	-.01 (.08)	.07 (.06)
Sex	-.35 (.58)	.18 (.51)	-.05 (.49)	.80 (.61)	-.22 (.53)	-.91 (.32)***
Age	.03 (.01)**	.003 (.01)	-.01 (.01)	-.0002 (.01)	.01 (.02)	-.02 (.01)
Years of schooling	.001 (.04)	.04 (.03)*	.02 (.04)	-.01 (.03)	.01 (.04)	-.04 (.04)
Marital status	-1.06 (.66)	-1.2 (.69)*	.59 (.70)	1.00 (.87)	.43 (.62)	1.30 (1.16)
Cost of treatment in first action	.01 (.001)***	.001 (.0002)***	.0004 (.0002)**	.0002 (.0002)	.0002 (.0001)	.0004 (.0002)*
Transportation costs in first action	.02 (.006)***	.002 (.001)	-.002 (.001)*	.02 (.004)***	-.002 (.001)	-.001 (.002)
Weight of SES index	.04 (.10)	-.18 (.10)*	.09 (.10)	.05 (.10)	.09 (.15)	.04 (.10)
Constant	-.56 (.88)	.24 (.99)	.94 (.83)	-1.43 (1.01)	1.26 (.96)	-1.38 (1.31)
LR chi2	197.6***	64.4***	20.0**	40.7***	11.46	22.31***
Pseudo R2	0.39	0.13	0.05	0.11	0.05	0.06
No of correct predictions	86.52%	67.21%	73.40%	69.80%	88.64%	65.86%

Significance of parameters * <0.10, **<0.05, ***<0.01

3.7: RESULTS OF IN-DEPTH INTERVIEWS (the full report is attached as appendix 1)

3.2.1 Procedures for payment

In both Enugu and Ebonyi states, the responses from the policy makers and heads of facilities indicated that the procedures for payment in the hospitals were as follows: (1) patient registers and obtains a card; (2) patient goes to the clinic for consultation with the a doctor; (3) doctor examines and recommends the drugs; (4) the patient goes to the pharmacy department where the drug price is indicated and the patient pays; (5) if on admission at the end of the treatment a bill is given and is paid. This bill is classified for drugs, folders, and admissions; (6) if a laboratory test is done one pays for the test; and (7) If there is X-ray, one pays for it. However one has the option of paying only for the drugs one can afford.

> "…If you don't have enough money to pay for all the drugs, you pay in parts and collect the ones you have paid for and finally you pay up and collect the remaining ones" (Director Public Health Care Services, Enugu).

3.2.2 Mode of Payment:

User fees

All the policy makers and heads of facilities indicated that the health care facilities make use of the Drug revolving Fund (DRF). According to the director of Pharmaceutical services, Enugu, the hospitals are making use of the DRF. In the operation of the DRF scheme,

> " …Hospitals are provided with drugs from the central medical stores and patients are supposed to collect their drugs from the pharmacy after they must have paid to the account section of the hospital. The payment collected from the patients should be paid into the drug revolving fund account which is specifically for replenishing the stock of drugs in their system" (Director Pharmaceutical Services, Ebonyi State).

Reimbursements

If there are people whose establishments pay re-imbursements for hospital bills then they can use their receipts to make claims.

> "…You find civil servants from different ministries sending their claims for re-imbursements to be authenticated by the Director of medical services in the ministry of health because once it is authenticated by the medical services department, the ministry from where the person is working is bound to refund the person when money is available". (Director Pharmaceutical Services, Ebonyi State).

When asked whether the fact that people who are self employed or those not employed do not have access to re-imbursement facilities would prevent them from utilizing primary health services, the Director of Pharmaceutical Services, Ebonyi state responded that she did not think so because those who cannot pay can make use of the grassroots mobile clinic. The movement of the grassroots mobile clinic is always publicized. It moves round the various LGAs in the state. However, the grassroots mobile clinic does not handle complicated cases.

According to the Head of Accounts Park lane Specialist Hospital, Enugu, civil servants are expected to pay and get reimbursed through their ministries.

> "If they pay they will get the receipt and the prescription, then send it back to their ministry for re-imbursements" (Head of Accounts Park lane Specialist Hospital, Enugu).

However, he also pointed out that due to the austerity measures, ministries no longer make re-imbursements.

> "… Around 1980 -82, if you were a civil servant, you could go to any of the state hospitals and they will attend to you…you will get a paper from your ministry…After attending to you, the hospital will prepare the bill and send it to your ministry. Your ministry will forward your name to

the state management board, which will now recoup your money through the ministry of finance…" (The Head of Accounts Park lane Specialist hospital, Enugu)

Discretionary fees' policies (Exemptions and subsidies)
There are no exempt patients at present in both states. According to the Principal Community Extension Worker at Ezilo, Ebonyi state.

"We do not exempt especially if the drug is the one given to us by the government… They will pay so that we can get another one. If not you are the one to pay for it at the local government…"

"…Yes, everybody pays it, no exemptions, even if you are a staff, you have to pay it…Even if you are disabled you have to pay" (The Head of Accounts Park lane Specialist hospital, Enugu).

However it was pointed out that consultation could be carried out without payment but people get the drug after they have paid.
"…The drugs are under drug revolving fund…if you pay they give you the drugs. But if you don't they will prescribe for you and you go outside and buy the drugs…" (The Head of Accounts Park lane Specialist hospital, Enugu)

In case of surgery the patient is required to provide all the requirements for the surgery. The Head of Accounts Park lane also indicated that previously civil servants and children in primary schools were not paying hospital bills. But now they do pay.

Where some kind of discretionary fees are applied, the social welfare is to handle this and trace the person's home background. The problem areas include emergencies like a road accident victim where there would be no time for tracing the background.
"We just go treating the patients without trying to find out first about the background in order to save life. If the patient can not pay you go ahead, if he can pay then he pays…" (Director pharmaceutical Services Enugu State).

Even though they do not normally handle exemptions at Park lane, the Head of accounts mentioned that there have been some exceptional cases. According to him,
"Last two weeks a woman was brought in here, she was pregnant, very heavy, she was brought in by policemen. She was assisted and the baby was delivered and we didn't charge her anything. We just gave her assistance. We use our brain to assess the situation. "If we see any case that is sympathetic, we are all human beings…"

Questioned on the criteria they use, he said that the welfare section makes the decision.
"We have welfare, if welfare says this person is incapacitated to pay, the person will be released".

In case of exemption, the provision is that the family or clan of the patient will testify that the person is very poor and cannot pay. With that the patient could be placed on exemption list. The family or clan will do the selection and present the exemption list to the hospital. It was reported that a memorandum for the implementation of the exemption and deferral has been written by the Director of Pharmaceutical services Enugu.

According to the Director of PHC services, Enugu, Some of the reasons why discretionary fees do not exist are as follows; Because they feel that the poor people have wealthy relations who could pay for them and the community or clan could raise money to pay for them. Emphasizing the importance of social bonds in the Igbo culture he said "Like in my own clan when a poor person is sick… the better off ones contribute money and pay for them…" (Director PHC, services Enugu).

"When they tell us, we will exempt them or a times, if we notice that the person can't pay we can equally leave the person…in particular such decisions were made by the PHC coordinator… Most people that don't normally pay come when our former PHC coordinator was around. So at that time the little money that they will be asked to pay, he will just pay it for them. Like the sister in-charge now, although she is an assistant but there are patients she will treat and after that she will tell us not to collect money from the person…" (Junior community health officer, Udi, Enugu state)

The officer in charge of the social welfare unit at Udi LGA emphasized the need for exemptions for those women who bring children for injections but who cannot pay. She is of the opinion that the government could provide subsidies to take care of such cases. She pointed out that the cost prevents some of them from bringing their children for treatment "…So that those that cannot be able to pay like the poor, the widows that bring their children can bring them without thinking about the money involved. They bring children from 1 to 5 years. But after checking them and treating them, the payment is always difficult for some …some will stay and die because when somebody does not have money for hospital bills, and the person will die…" (Junior community health officer Udi, Enugu state).

The Principal Community Extension Worker at Ezilo, Ebonyi State also pointed out that they use their discretion to charge for treatment in order to accommodate those less capable to pay at the health centers.

"…We that are working with them already know their capabilities" as we are in the villages, they are like our brother/sisters. We do not refuse giving drugs to a woman because she is not with any money and you know that our work is mainly humanitarian. You don't even mind paying for a woman when she comes…Some may even be given credit, as they come they pay".

Responding to whether they have exemption the PHC Coordinator, Abakaliki local government council, Ebonyi state said:

"Yes, like a youth corper will come in, you will treat him but quite alright you will bill him but that bill will be paid by somebody. So he goes without paying a kobo while somebody comes in and pays his bill unknowingly of course" Asked whether that was peculiar to their local government council, she said that the practice was common in many health centers in Nigeria. "…Yes, it was taught, we were educated, very extensive workshops were held to that effect…"

The findings also demonstrated that that there are discretionary fees for antenatal care, immunization and treatment of Tuberculosis and Leprosy. In Ebonyi State, there is free antenatal care except for complications and old people who cannot afford to pay are allowed exemptions but this is not very often. The Hospital administrator (ie doctor in charge) takes decision on discretionary fees. The German Leprosy Unit provides free services for Tuberculosis and Leprosy Patients in both states and Immunization is free.

Deputy Director, Social Welfare Services Parklane mentioned that sometimes they have "bad patients". According to him, "bad patients" are those who cannot pay. They often ask to be discharged prematurely because they cannot pay. The strategy they adopt is to investigate the background of such patients. If they find out that they patients have relations who can pay for them, then they take it up to solicit the relations assistance.

According to him "…in that case such a person cannot be said to be poor, you are poor to the extent that you don't have a single relation that can help you. When such a situation happens we can now make a recommendation to the management to waive, either full up to the entire payment or part of the payment. We can now say okay, let me find a solution to waive the feeding fee. Then he or she can pay for the drugs or you can recommend complete removal "…like I said you have to carry our proper investigations to arrive at the conclusion…" The reason for such investigations according to him is to avoid patients

31

cheating on the ground that they are indigent because anybody who comes here can say that he/she cannot pay and if you leave everybody, nobody pays and the hospital does not manufacture these drugs and even if it does we have to make an input to be able to manufacture the drugs…" Within the year 2003 they had made three recommendations for exemptions. Sometimes they have patients who were discharged but could not go because their bills had not been paid. In such situations such overstaying patients are given exemptions based on the recommendation of the social welfare department.

Community sensitization is one of the strategies used in the PHC programme to ensure that the projects are community driven

"…the community has to participate. If they participate they will give us feedback on the way the government can help so that the cost can be minimized. They make suggestions and inputs". (Director PHC services Enugu. According to the latter, to implement the deferral and exemption, the community or clan will be involved in selection of those to benefit from the deferrals and exemptions.

For example

"…In old cases, not emergency we take time to determine or to find out from community but if its an emergency we don't have to wait, especially when the patient does not have any money on him, but we can later find out…"

3.2.3 Priority Setting Mechanisms

The priority setting mechanisms identified include

- PHC plans with LGAs and Council members. The plans for PHC are based on data, which are generated from the local government primary health care department. According to the Director PHC Enugu "Then from the data, we progress to the areas of concentration".
- Specifically PHC focus is on immunization for children, against the six killer diseases (namely malaria, Tuberculosis, polio, measles, tetanus and Diphtheria), reduction of maternal mortality, antenatal cases, delivery improvements and training of staff for life saving skills in local government areas (Table 3).

3.2.4 Planning guidelines and problems with healthcare provision

According to the acting Hospital Administrator Abakaliki, the PHC services are usually managed by the local government while the hospital administration takes up the management of general hospitals. Various criteria are used as planning guidelines.

With regards to running of PHC services at the health centers, the Chief Public Health Officer Uwani Health Center, Enugu, said that the planning is done in conjunction with the LGA Council members although the initiative could come from her or from the state. The planning guidelines for the PHC activities are also based on the data generated from the local government areas and council. The council is the mechanism that is used to ensure that the health facilities are properly run. According to the Director of PHC services, Enugu

"…The LGAs have their council where the community is involved. The doctor in charge is the head of the council, seconded by a community member or a Rev. father or Nursing sister. It is a sort of committee. They go to the grassroots called health committee. All the hospitals in the LGAs have health committees. They hold meetings on regular basis and whenever there is fund given to them, they decide how to spend it…" Director of PHC services, Enugu) (Table 4)

Remuneration of staff is a problem the local governments are always complaining. The Director of PHC pointed out the difficulty in working with the committees set up in communities/villages without incentives. "…You select some people to form a committee, the people may be meeting regularly but you

see that they leave their work and family to come for the meeting…so they need some incentive. So lack of incentive to motivate members is one of the weaknesses".

Non-availability of drugs is a weakness in the sustainability of the health centers and health posts. Lamenting the situation the principal environmental health officer at Ezilo, Ebonyi state remarked

"Since this year we have not been having a regular supply…so the vaccine for immunization are not available…last week when we went for a meeting at Abakaliki, the general manager promised us immediately all the local government areas return their monthly statistics they will prepare it and send to Enugu so that they can collect vaccine…"

Non-availability of structures especially for staff accommodation remains a serious source of weakness. The need to provide adequate accommodation of quarters for the staff in the health centers was also mentioned. The health centers in the rural areas are not habitable. It is more difficult to attract staff to those areas. "It will be difficult for them at least to come there everyday or leave at the close of work. …And if you have may be quarters near the health center people will be happy to live there … we can site a health center in a place that there is no building and with large areas surrounding it, it become difficult for a few caretakers to keep it low all the time especially in the rainy season". (Acting Director, Hospital Management Board, Abakaliki).

3.2.5 Cost for treatment

The unit cost of treatment depends on the nature of the illness and the procedures for treatment. Even for malaria, cost may vary depending on whether it is simple or complicated malaria. However it was indicated that in the health centers that the staff tend to adopt a system of charging those who can pay higher in order to supplement the bills for the poor.

"But you know we had this system of robbing Peter to pay Paul in PTF. We were taught. Like both of us will come into the health facility, present with the same problem…and you will be charged N200 and I will pay N100… the thing is that N50 from what you have paid will be used to complement my own payment because I cannot afford N150 but you can afford N200… A way of attracting people more to these facilities and helping those who do not have…" (PHC Coordinator Abakaliki local government council, Ebonyi state)

Fees for admission vary according to ages. Adults pay N50 for bedding per night, a child N25 per night for feeding, adults N120 per day and under aged N90 per day.

The Director Pharmaceutical services Enugu state also argued that the costs are within reach.

"… We don't treat malaria with more than N300 at drug cost, apart from cost of laboratory investigations and consultancy fee…our prices are very competitive, the cost of treatment in our hospital, all things being equal, is very considerable and it's never unaffordable"

The unit cost of PHC cases depends on severity of the illness but immunization is free. In case of surgery it depends on whether it is minor, intermediate or major. Stitching for is about N50 – N100, while intermediate surgery like appendectomy cost about N2000. Major surgeries like caesarian section are up to N10, 000 in government hospitals and about N30, 000 in private hospitals. When questioned on how poor people would be able to have access to hospital facilities for major surgeries the Director of PHC Enugu, agreed that it is a problem but that they are still planning a system of deferral for the benefit of the poor. Such a system he said is now obtainable in Benue State (Table 5).

One of the officers at the Health Center Udi reported that the money they charge patients for drugs, spirit or cotton wool during immunization is not much.

"Everybody pays it because it's little. They are happy paying it" (Junior community health officer).

3.2.6 Financing and service provision monitoring mechanisms:

In Enugu state there is a monitoring team, comprising people from medical services and accounts department with a pharmacist as the chairman. The monitoring team in Enugu state moves from hospital to hospital to assess how they are performing.

> "At the end of the day they examine the balance sheet to see how hospitals are performing. So their report tells us who to pursue, who's holding our money" (Director Pharmaceutical Services Enugu). In Ebonyi state the monitoring unit comprises members of the ministry of health and hospitals management board. Apart from the general monitoring, that the teams do from time to time, the Director of central medical stores also monitors the operation of DRF "…when they are coming to replenish the stock they should also account for what they have done with the one given to them, how much they realized, how much they paid in and based on that you replenish their stock" (Director of Pharmaceutical Services Ebonyi state).

> "At the end of the month they tabulate all the money they have realized and reconcile with the accounts. If there is any deviation, they will find out what happened. So we have the internal control system" (Head of Accounts section, Park Lane Hospital, Enugu)

On the question of how the social welfare department of Park lane monitors the recommended exemptions to ensure that the privilege is not abused, the deputy director said that the preliminary investigations they conduct about the patients' background is a kind of monitoring. He gave an illustration,

> "…For instance let me give you an example of one patient that we had here two years back. This was a lady. She was introduced to us that, she was not able to pay and a relation came and said that he was a bricklayer and that he was injured and has not been working for some time. But then we did not take the story on its face value. We discovered that this lady had a prison staff as a son. So we now told them that if…she could not pay by installment, she could get the prison authority to guarantee her son to pay by installment…"

The monitoring team usually gives feedback to the facilities visited, or when health staff sends statistics they are also given comments or remarks about their submission. Since preparation of statistics was identified as one of the problems during monitoring, part of the feedback given to staff in health centers and health posts is on how to prepare returns. The Chief public health officer at Uwani health center said that it is only

> "…On serious occasions where you have to put down in writing if you have not measured up to what they have given you, you have to explain".

According to Director of Pharmaceutical Services Enugu, when they receive the report from the monitoring team, a report is sent to the management. Any missing money is recouped from the defaulter's salary. For the PHC programmes, the feedback is provided for the chairman of the local government and the policy makers in the communities who would help them to make corrections. These people in turn provide a feedback to the monitoring health team. For example some of the complaints are that

> "…The nurses are not very friendly to the patients, and that they are selling the drugs above prescribed prices…the staff do not come to work on time and most of the time they do not come everyday …and drugs are out of stock…" (Director PHC services, Enugu).

> "The 6 hospitals will now come and buy from out central medical stores. They will only buy the ones we don't have…but we give them guidelines to make sure that we don't have fake drugs in our system and to make sure that the patients are not exploited in terms of over pricing…"

3.2.7 Strategies that could be used to enhance equity in healthcare financing and increase equitable access to healthcare services

The Director public health and diseases control, Enugu state stated that they have a strategy of deferral and exemption where possible, and provide health education nutrition, and environmental health. The Director of Pharmaceutical services in Enugu state however reported that the authorities are fashioning out a strategy with Partnership For Health System's Reform (PATHS) to have a fund that is set aside from DRF. This fund will be used to take care of exempt patients (i.e. paupers that cannot pay). He explained that the DRF will give these drugs to the exempt patients free of charge but from the package that is being developed with PATHS.

"…It is a kind sinking fund kept aside. From there we will now go and charge the cost of treatment so that we can recoup without bothering the patient" (Director pharmaceutical Services Enugu State).

They also plan to establish a welfare scheme or welfare office. The function of the later is to assist in detecting people who cannot pay. Essentially they want to make sure that only those who cannot pay will be exempt because "if we open the gate every person will claim that he cannot pay" (Director, Pharmaceutical Services, Enugu). The idea is that exempt persons pay and be re-reimbursed from the package that will be funded by PATHS, the ministry and other agencies…" to make sure that the DRF is not decapitalized.

The Director of Public Health Care (PHC) Services, Enugu also indicated that discretionary fees are not yet obtainable in the hospital facilities but they are trying to establish deferral and exemption mechanisms. What the deferral mechanism means is that if one consults with a doctor and drugs are prescribed or where there will be surgery, if the person cannot pay, the patient will still be treated while payment will be deferred to a later date.

"…But there must be a strategy so that you will come back later through your family or your clan to complete the payment…" (Director PHC, services Enugu).

The idea of ensuring that every one has access to health care was also highlighted by the Director Pharmaceutical Services, Ebonyi State. According to her "One of the corner stones of this administration is to make health care available to as many people as possible irrespective of their ability to pay or not…" Consequently Ebonyi State has free grassroots mobile health care services. There is also free antennal health care delivery service at Ebonyi State General Hospital or the Teaching Hospital. The grassroots mobile health care services "…take a lot of burdens from the citizens of the state… At the same time, the DRF system is utilized in the hospital, for those who can pay (Director Pharmaceutical Services, Ebonyi State)

The Assistant Chief Medical Social Welfare Officer Park Lane hospital emphasized the need for exemptions with a very pathetic example and it was a case of a healthcare worker paying the fees for a patient.

"…There was one case of a man who brought his wife to the hospital. Incidentally the wife died and he has to carry that grief of loosing his dear one and at the same time the hospital was asking him to pay for the bill. I took the case to the medical director and told him everything. The man said he couldn't do anything as far as this government money is concerned. He gave the man ₦2000 from his pocket just to help him. The director mentioned that if he insisted that the bill should be waived then that it would appear as if he was trying to be against the authority. He also cited his experience at the psychiatric hospital where there are exemptions to show how such services encourage the utilization of health care facilities.

However, the Chief Public Health Care Officer at Uwani Health Center did not think that there is any need for exemptions. According to her, "We have passed that stage and almost everybody can afford to pay for paracetamol. Even if they don't, most people can get their relatives to help them out…"

However, she suggested that the government should provide subsidies for people. The officer at the medical center Udi attested the fact that some patients are not able to pay for treatment. In Enugu state, the Director of Pharmaceutical service said that in the meantime there is no budget on exemption but they process is being prepared with PATHS. Also in Ebonyi state although the Grass Root Mobile clinic provides free services we were not able to obtain information on the actual budget expended on subsidies and exemptions.

Concerning the willingness of policy makers to develop policies that will ensure that the poor have free services, the director of pharmaceutical services stated that the issue of free medical services posed a lot of malpractice in the past. Previously when the free medical services existed people never got all the prescriptions.

"…You will have 10 items on your prescriptions, you will get only three. A lot of fraud was in place, over invoicing, over drug list, drugs that may cost about N2million is projected to N10 million…but with this idea that you must pay for your drugs and responsibilities trust on the hospital operatives, you find out that the issue of not getting the drugs is of course completely ruled out…if you ever give the loophole that drugs are free in the hospital, from experience you won't get drugs in the hospitals again…But for the fact that there are financial responsibilities attached to that thing, you find out that drugs will be there and the patients come and take their drugs…what we are making sure is that the drugs are not only genuine but affordable…".(Director of Pharmaceutical Services Enugu)

The Assistant Chief medical social welfare officer at Park lane Specialist hospital indicated that financial constraint is a major factor constraining the poor from utilizing health care facilities. He indicated that due to financial complications he himself indulges in self-medication sometimes. "…Even for me I work in the hospital, I know the importance of going to the hospital but at times if I am sick, I just buy drugs, simply because if I check the money involved in hospital, I won't go…"

The Director of Pharmaceutical Services Enugu opined that "when the drugs are on the shelves in the hospitals and patients don't have to resort to use of quacks when the welfare scheme for exempt patients is in operation. "…Once you are getting the drugs, you get your prescriptions filled and those who cannot pay equally get their medicine, then to an extent, I think we are pursuing that equity".

The deputy director of social welfare dept. of Park lane also suggested budgetary allocation for exemption services. He said that meanwhile there is no allocation for that in the budget. Inability of some hospitals to come and buy the drugs cash and carry in order to replenish their drug stock is also one of the weaknesses. The Chief Public Health Officer at Uwani Health Center argued that a major weakness is in monitoring. There is need for adequate monitoring. "If they are giving adequate monitoring everything will be okay".

According to the Deputy director social welfare department. Park lane, the strength of the exemptions is that people who do not utilize hospital facilities because they are poor would be encouraged to do so when they realize that such provisions are available. "…Because some people shy away from going to the hospital because having considered the financial implications they stay back home and start treating themselves…self medication, going to quacks…but if such a person realizes that may be if I come, if I don't have any money, I may get some help, then he will avail himself or herself of that opportunity" (Deputy director social welfare department, Park lane Hospital).

CHAPTER 4: DISCUSSION AND CONCLUSION

Malaria was the major cause of visits to health care providers in urban and rural areas. There was an increased occurrence of TB, respiratory diseases, diarrhoeal diseases and hypertension among the rural poor compared to the urban poor. Altogether, malaria was generally responsible for more than 50% of reported illness, but the figure may be a bit lower because people usually report fever as malaria. This point equally applies to instances of reported illnesses in our study. Hence, a limitation of self-reported illness is that some respondents might not be able to correctly identify they had and this could lead to either over or under reporting of occurrence of various diseases. In this regard, the four-week recall period for responses on TB is probably too short. Nonetheless, using a longer recall period could also lead to elicitation of invalid responses because people could have forgotten what they actually did to obtain healthcare.

Households use the services of informal low-level health-care providers most, especially in rural areas. The Primary Health care centres that are supposed to be the first level of care in the National health care system are usually bypassed for hospitals and clinics. The commonest source of healthcare where people first sought treatment was patent medicine dealers, followed by hospitals. The people in the rural areas used traditional healers more than the urbanites. It is unfortunate that the primary healthcare (PHC) centres that are supposed to be the first port of call of patients for healthcare were hardly patronised in the communities. Meanwhile, all three communities have their own functioning health centres. This could be a reflection of failure of PHC centres to attract patients, probably because they are perceived to offer lower quality of services than hospitals. However, this does not explain the preference of patent medicine dealers over PHC centres. An explanation for this phenomenon could be because the patent medicine dealers are more geographically and financially accessible to the people.

The higher level of treatment costs in the urban areas could be because many of the respondents used the services in hospitals and clinics where the charges are higher than in patent medicine dealers and herbalists which the rural respondents used more often. On the hand, the rural people incurred higher transportation costs, perhaps, because they had to travel longer distances to obtain healthcare. The level of direct costs of treatment were higher in urban than in rural areas, and the trends of the level of costs were not statistically significantly different for the socio-economic quartiles in both urban and rural areas. These imply that there are distributional (equity) problems in the costs incurred that have to be addressed in the healthcare provision will become more equitable.

There were very little evidence of actual existence of fee exemptions and other discretionary payment strategies that could be used to pay for the poorest and hence improve their level of access and utilization to healthcare services. User fee, which has been universally recognised to be very inequitable, was the most common payment mechanism that was utilised to pay by care by all the socio-economic quartiles and geographic groups. The use of own money to cope for paying for care means that the poorest with less resources are already disadvantaged and they resorted to borrowing and taking loans to pay for care in the rural areas. The evidence from the study showed that the poorest were most likely to sell household assets so as to pay for healthcare services. It is also ironic that the less poor households were more likely to obtain loans to pay for healthcare, maybe because the creditors trusted that they would be able to repay the loans unlike the poorest who are hence denied loans.

In principle there are no discretionary fees. The federal government handles the budget for PHC programmes through the National Primary Health Care Department Agency and there is no budget on fee exemptions. The welfare department of Park lane Specialist Hospital Enugu sometimes recommends exemption for patients who cannot pay. Payments for healthcare are usually for a variety of sub-services and they include payments for cards, folders, laboratory tests and X-rays as well as for admissions. The

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unit cost of treatment depends on the nature and severity of illness as well as the procedures followed in the treatment. Hence, there is a wide range of fees that people pay in primary and secondary healthcare facilities and the payments are uaually equally paid by people from all socio-economic status groups. According to some policy makers, the bottom line in the financing mechanism being operated is to ensure that drugs are genuine, are affordable and available. However, in isolated cases, operatives in the health centers and health posts tend to charge those who are capable of paying more in order to charge those who are poor and not capable to pay less.

In priority setting mechanism, the emphasis is on meeting the drug needs of the people, ensuring that through appropriate international and national biddings that genuine drugs are procured and that the prices "are right". Plans for PHC activities are based on data generated from the Local government primary health care department. The focus of PHC programmes is on immunization for children against the six killer diseases, reduction of maternal mortality, antenatal cases, delivery improvements and promotion of training for life saving skills.

A monitoring team monitors the performance of operatives in hospitals and health centers and there are routine and impromptu monitoring of balance sheets for drugs, laboratory supplies and other facilities. Human resources for monitoring are available but logistics for monitoring are often a source of serious constraint and constitute a serious handicap in monitoring. The health facilities in Enugu and Ebonyi states obtain their drugs through the Drug Revolving scheme. Since 1997 drugs purchased through the drug Revolving Fund is being recycled and are able to meet 70% to 60% drug needs in Enugu state. Both Enugu and Ebonyi states have monitoring teams that evaluate the management of DRF drugs and the team provides feedback to health staff, policy makers and local government council.

The responses of the policy makers to indicate their willingness to pay for the poor include ensuring that drugs are available and affordable, plan to develop welfare schemes for patient, ensure that genuine drugs are procured, and that funds are not liquidated and sensitization of communities to ensure that projects are community driven. Communities are being sensitized to be willing to pay for the poor. Community/clan will be involved in the implementation of proposed deferrals and exemptions.

Adequate implementation of the financing mechanism will lead to enhanced access to health care that will be affordable, and drugs distribution before expiration. The threats include political decisions overriding medical priorities, poor attitude of staff, expiration of drugs. Strength of the strategies to pay for the poor lies in availability of drugs in facilities, effective monitoring, and commitment by staff and appreciation of the system by patients. The weaknesses of strategies to improve public health facilities so that they'll be able to serve the poor better include poor remunerations and lack of incentives for staff motivation, drug expiration, inability to replenish drugs and non-availability of structures.

Since, a simple disease such as malaria was the most common cause of illness and probably costs of illness, the malaria control programme should be re-invigorated. Cost-effective malaria control tools should be deployed and the poorest socio-economic quartiles should be targeted with subsidies or fee exemptions when they consume these malaria control services or goods. The control tools should be both for the prevention and treatment of malaria. Available cost-effective malaria control tools are insecticide-treated nets (ITNs), intermittent preventive treatment of malaria in pregnancy (IPT), larviciding, indoor residual house spraying, rapid diagnostics and treatment with drug combinations.

The National Primary Health Care Development Agency (NPHCDA) has to re-engineer the Primary Health Care system so that the consumers will see the primary health care centres as attractive places to go for treatment or for the consumption of other healthcare goods and services. The first steps should be the improvement of the quality of services in existing primary healthcare centres and ensure that staff

members are adequately and promptly remunerated. The second steps should be to ensure that there are equity enhancing fee payment strategies in order to increase financial access and thirdly there should be the construction of more health centres and health posts so as to increase geographical access to services.

The National primary healthcare development agency (NPHCDA) and other relevant policy makers should consider the recruitment, training and formal institutionalization of the use of community-based health workers (CBHW) to increase geographical access to primary healthcare services at the household or community level. This is because it might be too expensive to start building many health centres at present and use of CBHW represents a potential cost-effective means of bringing healthcare nearer to the people.

The financing mechanisms that exist in the healthcare system are against the poorest households as have been demonstrated and mechanisms that engender equity should be developed and made part and parcel of the healthcare system. Fee exemption policies exist as was inferred from the in-depth interviews with policy makers and providers, but the results of the household surveys and even the in-depth interviews sowed very little evidence of actual exemptions in practice. Therefore, it is possible that the healthcare providers are shortchanging patients and could only be exempting their friends and relatives from paying fees. However, this is a conjecture that demands further in-depth investigation.

Some of the current healthcare financing and provision strategies that policy makers are adopting are indicative of the polities' willingness to pay for the poor. The strategies include policy to ensure drug availability and affordability; develop welfare schemes for exempt patients; ensure that genuine drugs are procured; ensure tat funds are not decapitalized; and sensitization of communities for projects to be community driven. In Enugu state, three likely options for exemptions are envisaged. (1) Exemption to be funded through a package that is being formulated with funding from partnership for health care reforms (PATHS). (2) A welfare scheme (3) Use of deferral system especially for the PHC services. The Ebonyi state government established a grass roots mobile clinic, which provides free medical services for non-complicated health problems to ensure that every one has access to medical care. Ebonyi state also provides discretionary fees for antenatal care. Immunization is free and the German Leprosy unit provides free treatment for Tuberculosis and Leprosy in both states.

This study has demonstrated the existence of inequities in health, treatment seeking. costs of illness and payments for primary healthcare services. Fee exemptions, mobile free clinics, improvement of quality of public healthcare services and discretional fees were suggested as strategies for enhancing equity in access and utilization of healthcare services. It was also suggested that governments should make budgetary provisions for fee exemptions and put an effective monitoring system in place so as to ensure that the policy and budgeted money are not abused or used improperly. It is now left to the policy makers, programme managers and donors to design and implement strategies that will lead to the improvement of fees and payments for healthcare since the inequities are directly related to the peoples' health status and possibly poverty level too. Improvement of availability and quality of services in primary and secondary healthcare facilities will increase their use by all socio-economic status groups and lead to shift from the informal (with poor quality of services) providers such as drug sellers to the formal healthcare providers for the provision of optimal quality healthcare services.

DISSEMINATION PLAN

1 POLICY EXCUTIVE SUMMARY
* For NPHCDA
* For THE TWO STATES

2 PAPERS:
An article in *Health Policy* entitled "Socio-economic and geographic differentials in costs and payment strategies for primary health care services in Southeast Nigeria" by Obinna Onwujekwe and Benjamin Uzochukwu. (accepted for publication – paper attached as appendix 2).

• Four others are in the pipeline

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Appendices:

1. Publication from the study
2. Full report of In-depth interview

42