Socio-economic Differentials in Health Care Seeking Behaviour and Out-Of-Pocket expenditure for OPD Services in Madina Township

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Abstract

The National Health Insurance Scheme (NHIS) was introduced in Ghana in 2003 in an effort to address issues of inequities in financial access to health care. The aim of this study was to determine the trends of health care seeking behaviour by socio-economic status (SES) and out-of-pocket expenditure of OPD visits in Madina Township in Ghana.

A population-based, cross-sectional household survey was carried out in Madina Township in the Ga-East Municipal, Accra, Ghana, using structured questionnaires to obtain information from a random sample of 378 household heads using a two-week recall period.

The study found NHIS enrolment levels in Madina Township to be far below expectations (27.5%). There were disparities in waiting times indicating higher delays of insured patients. Despite the financial protection that the NHIS offers, poor households continue to incur significant costs on health care services. In addition, household perceptions regarding not only costs but also quality of service, severity of illness and proximity were found to influence choice of health services. Household SES continues to exert influence on choice of health services despite the introduction of NHIS. Efforts to improve enrolment and health service utilization must take cognizance of the broader range of factors that may challenge or even erode gains, if just the costs of health care are addressed as an isolated item.
Key Words: OPD visit, insured, non-insured, out-of-pocket expenditure, socio-economic status, Ghana.

1. Introduction

The Millennium Declaration in 2000, set benchmarks to halve extreme poverty in all its forms by 2015 and increase universal access to major health services Millennium Development Goals Report, (2009). Social Health Insurance (SHI) is a form of health care financing based on risk pooling of both the health risks of the people on one hand, and the contributions of individuals, households, enterprises and the government on the other (Witter and Garshong, 2009; WH0, 2003). Thus, it protects people against financial and health burden and is a relatively fair method of financing health care WH0, (2003).

Considering the fact that cost is often named as a major obstacle preventing the poor from accessing basic health care (Pearson, 2004; Ansah et al., 2009), countries have made efforts to ensure that their populations have access to appropriate health care when needed and at an affordable cost. Ghana's National Health Insurance Act (Act 650) was passed into law in 2003 and implementation started in 2005 Witter and Garshong, (2009). Membership is mandatory and formal sector workers have involuntary payroll deductions while the informal sector pay a determined premium Consolidated Statutes of Ghana (2003). Countries face different challenges in their bid to attain universal coverage. Efforts are frequently hampered by lack of national consensus on policy framework, poor regulation and inadequate administrative capacity WH0, (2003), including reports of discrimination against insured clients Ghanaian Times, (2006). For instance, in the Ghana Demographic and Health Survey for 2008 and a 2009 household sample survey, wealth was strongly associated with enrolment in NHIS with some indication of adverse selection, thus those with poorer health status were more likely to enroll than healthier individuals (Ghana Demographic and Health Survey, 2008; Chankova et al., 2009).

People use health care services for many reasons. Health care utilization can however be appropriate or inappropriate, of high or low quality, expensive or inexpensive Bernstein at al., (2003). Socio-economic status has long been associated with health status (Rutstein and Johnson, 2003; Berkman and Epstein, 2004; Berkman and Epstein, 2008). In this study, the wealth index was used as an indicator of SES. The development of measuring health outcomes by SES can be credited to work started by Shea Rustein in the mid 1990s who later

joined forces with Kiersten Johnson, Davidson Gwatkin of the World Bank and others to develop wealth indexes for several countries and produce a set of poverty health indicators Rutstein and Johnson, (2003).

In low- and middle-income countries (LMICs), better-off people tend to use health services more frequently and to a greater degree than the poor. They often demand more private sector and public sector care WHO, (2006). This supports the inverse care law first described by Julian Tudor Hart in 1971. It suggests a perverse relationship between the need for health care and its actual utilization. In other words, those who most need medical care are least likely to receive it. Conversely, those with least need of health care tend to use health services more and do so more effectively Appleby and Deeming (2001). This is worrying considering evidence pointing to a higher prevalence of illness among poorer communities as compared to the less poor ones Ghana Living Standards Survey (GLSS-5) (2008).

In Ghana, considerable efforts have been made to identify barriers to accessing health care with the aim of increasing rapid access to health care in the public sector by those in need. Potential barriers include perceived quality of service, socio-cultural factors, availability of health services, perceived cause of the disease and the arrangements for payment (Ansah at al., 2009; Asenso-Okyere et al., 1998). There is evidence that health care costs may plunge households into poverty and that the likelihood of a poor household ever being able to move out of poverty diminishes when confronted with illness-related costs Whitehead et al., (2001). A study in Ghana showed that insured individuals were better protected than out-of-pocket clients (Hatt et al., 2009), but even those insured incur associated participation costs like transportation and loss of time Meessen et al., (2006).

Multiple forces determine how much health care people use, the types of health care they use and the timing of that care. Some studies on health care utilization identify predisposing, enabling, and need determinants of care. Predisposing factors include the propensity to seek care, such as whether an individual's culture accepts the sick role or not, and what types of care are preferred for specific symptoms. Enabling factors include depth and breadth of health insurance coverage and its affordability, location of services and other factors that allow one to receive care. Need for care also affects utilization, but need is not always easily determined without expert input.   Barriers to needed care, such as availability or supply of services, ability to pay, or discrimination have an impact on utilization Bernstein et al (2003).   As suggested by the WHO, in order to assure people's right to health, governments must ensure the availability of functioning health care facilities, goods and services, as well as programmes in sufficient quantity WHO (2007).

Access problems can cause a drop in utilization rates and delays in seeking care (Asenso-Okyere et al., 1998; Bour, 2003). Additionally, self-treatment using allopathic or traditional medicines available at home, or from a drug seller or traditional healer at a relatively lower cost than at public facilities may be opted for to minimize or avoid costs McIntyre et al., (2004).

The 2009 Annual Health Report of the Ga-East District indicated that those not covered by health insurance use public health facilities more than the insured. There was also a higher use of private facilities as compared to public ones. Consistently low out-patient visit per capita have also been reported in the district: 0.67 (2007), 0.672 (2008) and 0.6 (2009) Ga-East Annual Health Report, (2009).   What accounts for these low utilization patterns is unknown.   Utilization of health services data are however required for health services planning and prioritization of service. The aim of this study was therefore to determine the utilization of health care facilities and its OPD treatment costs among households in the Madina Township.

2. Methods
2.1 Study Area
The study was a population-based, cross-sectional household survey. It was carried out in the Madina township in the Ga-East District of Greater Accra Region. The district has four health sub-districts: Madina, Danfa, Taifa and Dome. Madina has the highest number of modern medical health facilities (over 60%) in the district. Madina is also the most populous sub-district with an estimated population of 113,613 as at 2009 [25]. A sample size of 400 households selected randomly was arrived at using the population proportion of the   non-insured (61%) as reported in the Ga District Mutual Health Insurance Scheme Operational Report for 2009 [26].

2.2 Sampling
The minimum sample size obtained was 366 using the formula:

$$n = \frac{Z^2 P(1-P)}{d^2}$$

at a 95% confidence interval and a margin of error of 5%;

where n = sample size, P = estimated proportion of non-insured households, d = margin of error (standard value of 0.05) and Z = confidence level (standard value of 1.96).
Each community in Madina was allotted a proportion of the total sample based on its population. The first house

was randomly located after which houses were systematically covered until the required sample was obtained. Household heads or an adult above 18 were interviewed.   In houses with more than one household, one was chosen by balloting.

2.3 Analysis

The study employed structured questionnaires using a two-week recall period to collect data. Interviewers were selected from the community and trained.   Data entry was done using EpiData software and analysed using Stata and Microsoft Excel softwares. Respondents were grouped into socio-economic classes using the wealth index as a tool. The wealth index is a composite measure of the cumulative living standard of a household. It is calculated using data on a household's ownership of selected assets such as televisions, bicycles, radio, access to utilities, etc. Each household asset is assigned a weight or factor score generated through a statistical technique called the principal components analysis (PCA) Measure DHS, (2010). Generally, a variable with a positive factor score is associated with higher SES, and conversely a variable with a negative factor score is associated with lower SES Vyas and Kumaranayake, (2006). The statistical software Stata is frequently used to perform the factor analysis as was done in this study. The PCA places individual households on a continuous scale of relative wealth. The resulting asset scores are standardized in relation to a standard normal distribution and used to create break points that divide the sample into population quintiles as lowest, second, middle, fourth, and highest. Individuals are ranked according to the total score of the household in which they reside Measure DHS, (2010). Utilization rates were calculated based on number of household out-patient visits made and analyzed by type of facility, SES and NHIS status of respondents. Direct costs may include consultation fees, drugs, laboratory investigations, food, transportation and others depending on type of facility used. Indirect costs include travel and waiting time, and work days lost.

2.4 Study limitations

Though the study used a two-week recall period, respondents could have had difficulty in remembering all the details asked, especially, those regarding expenditure on health services.

Despite the fact that respondents were informed of the purpose of this study and assured of confidentiality, they still might have been uncomfortable disclosing some information about their ownership of household assets. Consequently, responses provided for related questions may possibly be inaccurate.

3. Results

3.1 Demographic characteristics

Out of a total of 400 households, 378 (94.5%) were completely interviewed. Twenty-two questionnaires were excluded from data analysis due to non-completion/inconsistencies. The demographic characteristics of the 378 household heads are shown in Table 1. Fifty-nine percent of household heads were women.   About 65% of the households had 1 – 4 members, and reminder was over 5 persons.   About 70% of the respondents were aged 18 – 39 years and 26% were between 40 – 59 years.   Thirteen percent of the households each had no education and tertiary education respectively. Household unemployment rate was about 5% and it is relatively high among women (i.e. about 4%).   Most household heads (45%) were engaged in trading. Only 27.5% (104) of household heads were enrolled on the NHIS with valid cards at the time of the study.

3.2 Out-patient visits in the two weeks preceding survey

About 27.3% (103) reported an illness in the two weeks preceding the survey. Out of this 96.1% (99) of households reported using OPD services within those two weeks. Figure 1 illustrates health service utilization by patients.

The insured constituted 27.5% of patients. Among the insured, public health facilities were the most used by the various socio-economic classes followed by CHAG facilities. For the non-insured patients however private facilities were most patronized followed by public health facilities.

Only a small proportion of the poor and poorest socio-economic classes practiced self-medication among the insured.   Self-medication was however prevalent among all non-insured socio-economic quintiles and found to be more pronounced among the poorest/poor.

3.3 Reason for choice of health facility

Perceived quality of service was the most common reason given for choice of health service used with a total of 37.4%. Of this percentage, the non-insured contributed 25%. The second most important reason was household perceived severity of illness (24.2%) where the non-insured contributed the more with 19%. Perceived proximity of health facilities however ranked relatively low with a total of 16.2% with the insured's contribution being only

4% as shown in Figure 2.

3.4 Direct Costs of OPD visits by socio-economic status

Table 2 shows that for all socio-economic classes, the non-insured incurred a higher mean direct cost than the insured in terms of medical costs except among the poorest and poor who self-medicated. The non-insured rich/richest classes incurred the highest mean cost of GH¢52.75. The lowest mean direct medical cost of GH¢3.70 was incurred by the poor/poorest who utilized private health services.

3.5 Indirect costs

3.5.1 Mean travel and waiting times of patients and caregivers

The mean travel time for the insured and non-insured patients was 56.1 minutes and 41.7 minutes respectively. The mean waiting times was 107.6 minutes for the insured and 85.7 minutes for the non-insured.   The mean carer accompanying time (travel and waiting time) was higher among the non-insured (i.e., 3 hours 23 minutes) as compared to 2 hours 10 minutes for the insured.

3.5.2 Mean work days lost by patients and caregivers

In the main, insured patients lost 3 days whilst non-insured ones lost 4 days as a result of being ill.   However caregivers of the insured reported losing about 7 days as compared to 4 days for the non-insured caregivers.

4. Discussion

The study shows that, only 27.5% of household heads were enrolled in the NHIS with valid membership cards. Out of a total of 103 households that reported an illness within the two weeks preceding the survey, 26.2% made out-patient use of health services. The insured however, constituted less than a third of patients. Considering evidence indicating that insured individuals are better protected from burdensome out-of-pocket expenditures (Hatt et al., 2009), it is surprising that enrolment rates among households continue to remain low.

Generally, private health facilities were most patronized regardless of socio-economic class. This may apparently be due to their predominance in the locality. A significant observation however was that despite the fact that self-medication was more prevalent among lower socio-economic classes, the practice was reported in all socio-economic classes for the non-insured whereas it was limited to only the poor and poorest socio-economic classes of the insured. These disparities may be due to the observation that insured individuals are better protected from out-of-pocket expenditures (Hatt et al., 2009) thus allowing them to make use of other forms (possibly facility-based) of health services.   Additionally, the higher prevalence of self-medication among the poor may be indicative of evidence that poorer households are more likely to look for less costly alternatives in terms of both money and time if financial barriers to health care remain a challenge Mcyntyre et al., (2005).   This also supports the inverse care law Appleby and Deeming, (2001).

Furthermore, household preferences and perceptions appeared to have a bearing on type of health service used as supported by other studies which mentioned perceived quality of service, socio-cultural factors, availability of health services, perceived cause of the disease and the arrangements for payment as potential barriers (Asenso-Okyere et al., 1998; Ansah et al., 2009).   Also, the fact that households sometimes determine how severe an ailment is in order to choose a treatment source may be problematic since need is not always easily determined without expert input Bernstein et al., (2003).

The insured generally incurred less direct costs, which was mainly due to the patronage of public and private health facilities.   They may also have been selective in the usage of these facilities depending on the perceived severity of illness, since they have two main sources of treatment – public with insurance card and private with "cash and carry" or health insurance where available.   The poor and poorest socio-economic classes incurred significant amounts of direct costs regardless of their insurance status though the costs were relatively lower compared to households in higher socio-economic classes. The poor therefore appear to continue to be burdened by health care costs Whitehead et al., (2001).

The insured tended to spend more travel and waiting times. Higher waiting times for the insured may suggest procedural delays inherent in the processing of NHIS clients or possible preferential treatment given to patients who make point-of-service payments at health facilities to the disadvantage of insured clients The Ghanaian Times, (2006). This may serve as disincentive to prospective NHIS members or discourage current members from renewal of membership.

5. Conclusion

The level of enrolment in the NHIS realized in this study was significantly low and indicates a long way from

Ghana's goal of universal coverage. The higher use of self-medication among the poor and uninsured may have been encouraged by the need to find less costly remedies.

Operational challenges that confront service users especially the insured while accessing health services such as delays and other quality indicators must be addressed if increased and sustained enrolment will be realized.

This descriptive cross-sectional study shows low NHIS coverage in the community and high self-medication among the poor.   Furthermore, the insured incurred the least direct cost of health care services possibly due to their selective treatment choices.

Acknowledgement

References

Ansah EK, Narh-Bana S, Asiamah S, Dzordzordzi V, Biantey K, Dickson K, Gyapong JO, Koram KA, Greenwood BM, Mills A and Whitty CJM (2009) Effect of Removing Direct Payment for Health Care on Utilisation and Health Outcomes in Ghanaian Children: A Randomised Controlled Trial. *PLoS Med* 6(1): e1000007. doi:10.1371/journal.pmed.1000007.

Appleby J and Deeming C (2001) Inverse Care Law. *Health Service Journal*, Vol. 111, 5760:37

Asenso-Okyere W., K., Anum A., Osei-Akoto I., and Adukonu A., (1998). Cost recovery in Ghana: are there any changes in health care seeking behaviour? *Health Policy and Planning* 13: 181–188.

Berkman L. and Epstein A. M., (2008). Beyond Health Care — Socioeconomic Status and Health. *The New England Journal of Medicine, 2008: 358;23*

Bernstein AB, Hing E, Moss AJ, Allen KF, Siller AB and Tiggle RB, (2003). Health Care in America: Trends In Utilization. Hyatsville, Maryland, National Centre for Health Statistics.

Bour D, (2003) Analysing the primacy of distance in the utilization of health services in the Ahafo-Ano South district, Ghana. *International Journal Of Health Planning and Management Vol.18: 293–311*. [online]Available at at http://onlinelibrary.wiley.com/ (8th April, 2011).

Chankova S, Sulzbach S, Hatt L, Snider J, Garshong B., Gyapong J,   Doamekpor L, (2009).   An Evaluation of the Effects of the National Health Insurance Scheme in Ghana, Bethesda, Abt Associates Inc.

Consolidated Statutes of Ghana - Act 650 (2003) [online] Available at *www.ilo.org/gimi/* on 6th January, 2011

Cutler DM, Lleras-Muney A., Vogl T. (2008) Socioeconomic Status And Health: Dimensions and Mechanisms. Working Paper 14333, JEL No. I1.) [online] Available at http://www.nber.org/papers/ (5th April, 2011).

Ga District Mutual Health Insurance Scheme, Operational Report, (2009). Ghana Health Service, Greater-Accra

Ga-East Annual Health Report, (2009). Ghana Health Service, Greater-Accra

Ghana Demographic and Health Survey, (2008). Ghana Statistical Service. Ghana Health Service, Accra.

Ghanaian Times (2006) *Nanumba: Hospital Staff Accused Of Sabotaging NHIS* . Tuesday, October 17th, 2006   ) [online] Available at http://nanumbanorth.ghanadistricts.gov.gh/?arrow=nws&read=2249 (18th April, 2011).

Ghana Living Standards Survey of the Fifth Round (GLSS-5), (2008). Ghana Statistical Service. Accra.

Hatt L., Garshong B., and Chankova S., (2009). National Health Insurance in Ghana: Effects on Health Care Seeking and Expenditures) [online]Available at   at http://ihea2009.abstractbook.org/presentation/1542/ (21st March, 2011)

Meessen B., Van Damme W., Tashobya C. K. and Tibouti A., (2006). Poverty and user fees for Public Health Care in Low-income Countries: Lessons from Uganda and Cambodia. *Lancet*; 368: 2253–57.

Millennium Development Goals Report, (2009). United Nations.) [online] Available at http://unstats.un.org/ on (22nd June, 2011)

McIntyre D, Gilson L and Mutyambizi V (2005). Promoting equitable health care financing in the African context: Current challenges and future prospects. Regional

Measure DHS, *Methodology: The Wealth Index*   [online]Available at *http://www.measuredhs.com/topics/wealth/methodology.cfm   (11th February, 2011).*

Network for Equity in Health in Southern Africa. *Equinet Discussion Paper Number 27*.   October 2005.) [online] Available at http://www.equinetafrica.org/ (15th November, 20011)

Pearson M, (2004). Issues Paper: The Case for Abolition of User Fees for Primary DFID Health Systems Resource Centre.

Rutstein SO, and Johnson K, (2004). The DHS Wealth Index. Calverton, Maryland, ORC Macro.

Vyas S. and Kumaranayake L., (2006). Constructiong Socio-economic Status Indices: How to Use Principal Component Analysis. *Health Policy and Planning,* 21(6):459-468 [online] Available at http://heapol.oxfordjournals.org/content/21/6/459.full on (12th May, 2011).

Whitehead M., Dahlgren G., Evans T., (2001). Equity and Health Sector Reforms: Can Low Income Countries Escape the Medical Poverty Trap? *Lancet* 358: 833-836.

Witter S and Garshong B, (2009). Something Old or Something New? Social Health Insurance in Ghana.   *BMC International Health and Human Rights*, 9:20.

World Health Organization, (2003). Social Health Insurance, Report of a Regional Expert Group Meeting, New Delhi. [online]Available at http://www.searo.who.int/ on   (2nd April, 2011).

World Health Organization (2006). Health Financing: A Basic Guide. [online] Available at http://www.wpro.who.int/ on (15th May, 2011).

World Health Organization, (2007). The Right to Health. Fact Sheet No 323.

Tables

Table 1: Background Characteristics of Respondents

	Males	**Females**	**Total**
Sex	155 (41.0%)	223 (59.0%)	378 (100.0%)
Household size:			
1 – 4	100 (26.5%)	145 (38.4%)	245 (64.8%)
5+	55 (14.6%)	78 (20.6%)	133 (35.2%)
Age groups (years):			
18 – 39	110 (29.1%)	153 (40.5%)	263 (69.6%)
40 – 59	39 (10.3%)	58 (15.3%)	97 (25.7%)
60+	6 (1.6%)	12 (3.2%)	18 (4.7%)
Level of Education:			
No education	9 (2.4%)	40 (10.6%)	49 (13.0%)
Primary	10 (2.6%)	34 (9.0%)	44 (11.6%)
Middle school/JSS	55 (14.6%)	75 (19.8%)	130 (34.4%)
Secondary/SSS/SHS/TEC	62 (16.4%)	44 (11.6%)	106 (28.0%)
Tertiary	19 (5.0%)	30 (7.9%)	49 (13.0%)
Main Occupation:			
Unemployed	3 (0.8%)	14 (3.7%)	17 (4.5%)
Professional	20 (5.3%)	22 (5.8%)	42 (11.1%)
Sales/trading	36 (9.5%)	134 (35.4%)	170 (45.0%)
Manual work	80 (21.2%)	37 (9.8%)	117 (30.9%)
Other	16 (4.2%)	16 (4.2%)	32 (8.5%)
NHIS status (2010):			
Insured	42 (11.1%)	62 (16.4%)	104 (27.5%)
Non-insured	113 (29.9%)	161 (42.6%)	274 (72.5%)

Table 2: Direct mean cost by treatment source, NHIS and socio-economic status

Treatment Sources/SES	Direct Mean Cost			
	Insured		Non -insured	
Private***:	Medical Cost* (GH¢)	Non-medical** (GH¢)	Medical * (GH¢)	Non-medical ** (GH¢)
Poorest/poor	3.70	0.64	11.94	0.81
Middle	0.00	0.00	10.78	1.40
Rich/richest	10.88	0.00	13.38	1.25
Public:				
Poorest/poor	8.10	25.20	32.19	1.75
Middle	10.00	0.00	46.75	15.00
Rich/richest	21.42	3.88	52.75	2.00
CHAG:				
Poorest/poor	17.13	1.33	22.83	3.33
Middle	0.00	0.00	0.00	0.00
Rich/richest	0.00	0.00	25.38	1.33
Self-medication:				
Poorest/poor	5.00	0.00	2.80	0.00
Middle	-----	-----	2.75	0.00
Rich/richest	-----	-----	3.50	0.00

* Medical cost consists of the drug cost, consultation and laboratory investigations

** Non-medical cost is made up of food, transportation and others

*** Private facilities may include hospitals/clinics, pharmacies/chemical shops/, spiritual/herbal centres

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Figure 1: Health service utilization by Patients
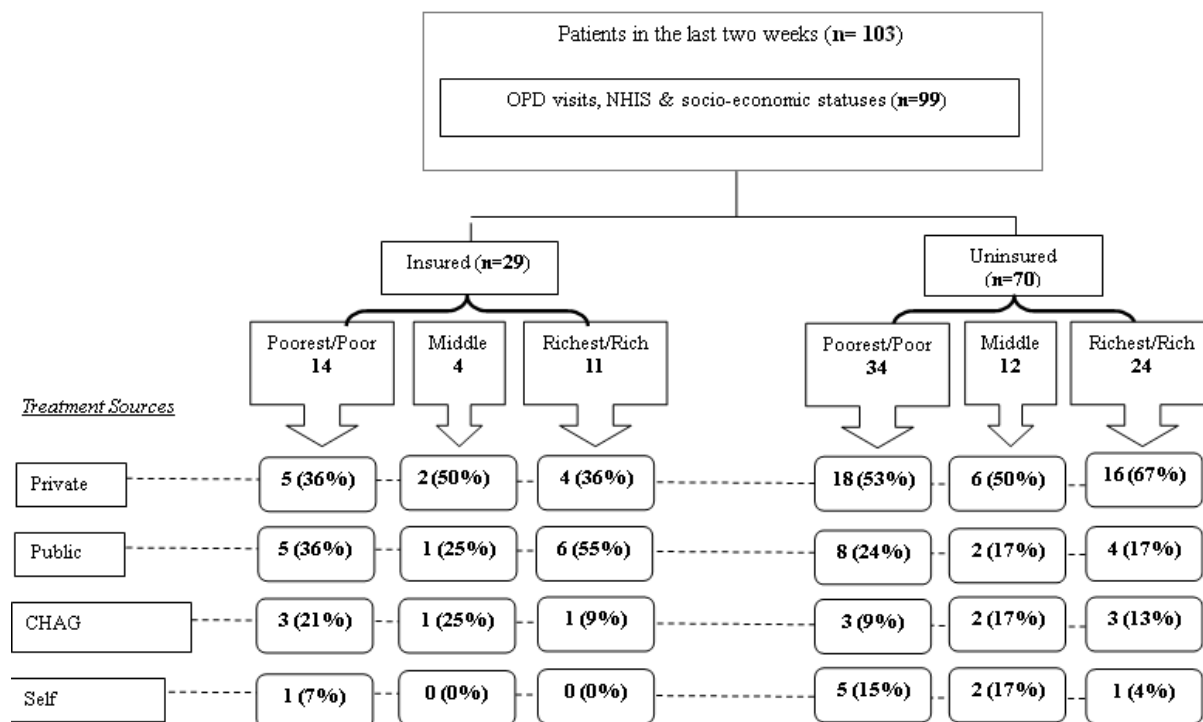
Figure 2: Reasons for choice of health facility by NHIS Status