

## KNOWLEDGE OF COMMUNITY HEALTH INSURANCE AMONG HOUSEHOLD HEADS IN RURAL COMMUNITIES OF ILORIN, NIGERIA

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### Abstract

**Background:** Knowledge of Community Health Insurance (CHI) has been found to influence enrolment in CHI which helps avoid catastrophic health care expenditure. The objective of this study is to assess the knowledge of Community Health Insurance among household heads in a rural community.

**Method:** This is a cross sectional descriptive study conducted among household heads in rural communities of Ilorin, Nigeria. A sample size of 360 was determined using Fishers formula and respondents were selected with multistage sampling technique. Questionnaire was semi structured, interviewer determined and data analysis was done using Epi-Info version 3.4.1. Frequency tables and cross tabulations were generated with statistical significance while P-value was pre-determined at less than 0.05.

**Result:** The mean age of respondents was 42.8 years with majority being within the age range of 30-39 years (30%). Respondents that were males were 84.2% while 15.8% were females. Most respondents had no formal education (40%), 6.4% had quranic education, 21.7% had primary education, 15.6% had secondary education and 16.4% of respondents had post secondary education. The average monthly income was N10, 007 ± 5,870 (60.0 ± 36.4 USD). Those that were aware of Community Health Insurance were 136 (37.8%) with source of information being Radio (34.2%), Friends (17.1%), Family (8.1%), Television (18.5%), Community member (12.4%) and through School (9.7%). However, 224 (62.2%) were not aware about CHI. Minority of the respondents were willing to join CHI while majority were not willing to join.

**Conclusion:** Knowledge of CHI in rural communities is low. To ensure that health care is accessible to all, CHI should be promoted and more people should be encouraged to join.

**Keywords:** Knowledge, Community, Insurance, Health.

### Introduction

In May 2005, the fifty eighth world health Assembly adopted a resolution that urged member states to ensure that health financing systems include a method for prepayment of financial

contributions for health care. This is aimed at sharing risk among the population and avoiding catastrophic health care expenditure and impoverishment of care seeking individuals.<sup>1,2</sup> These systems intend to respond to the goal of fairness in financing, in that beneficiaries are asked to pay according to their means while guaranteeing them the right to health services according to need.<sup>3</sup>

Most functional health Insurance schemes in Africa are associated with formal sector employment which requires regular contributions compatible with formal sector earning.<sup>4</sup> Such schemes do not cover individuals in the informal sector that predominantly live in the rural areas. Moreover, the poor form the bulk of those working in the informal sector.<sup>5</sup> In addition, about 60% of Nigerians live in rural areas.<sup>6</sup> Rural households tend to suffer disproportionately from higher level of ill health, mortality, malnutrition and inadequate health care.<sup>7</sup>

Community Health Insurance operates by risk pooling financed through regular premiums and is tailored to the poor people who would otherwise not be able to take insurance.<sup>8,9</sup>

Community health insurance has emerged in developing countries as a response to the existing challenges in the health financing system which include low economic growth, constraint on public sector and low organizational capacity.<sup>10</sup>

In several countries, community health insurance have proven to increase access to health care services, especially among children, pregnant women, rural household and informal workers, majority of whom are excluded from formal insurance.<sup>11</sup> CHI can also help to improve efficiency and quality of health care services by creating greater competition among healthcare providers<sup>12</sup> and increase the use of medical services.<sup>13</sup>

A study of the knowledge of National Health Insurance among surgical patient in Niger Delta region of Nigeria revealed an awareness of 3.06%<sup>14</sup> while a similar study among civil servants in Osun State revealed an awareness of 40%.<sup>15</sup> Also awareness of CHI in rural Cameroon was found to be 27.07%.<sup>9</sup>

This study aims to determine the knowledge of CHI among household heads in rural communities of Ilorin, Nigeria

### **Methodology**

The study was carried out in rural areas of Ilorin South Local Government Area, Kwara state, Nigeria. One of the neighboring local governments (Asa LGA) is currently involved in CHI Scheme under the Hygeia Community Health Plan in collaboration with Amsterdam Institute for International Development which is responsible for ninety-five percent of the funding.

The local government has an estimated population of 315,000 people with an estimated 195,300 living in rural areas.<sup>16</sup> There are 11 political wards with about 77 settlements in the LGA. The main type of payment in the health facilities in the LGA is private Out of Pocket financing.

This is a cross-sectional descriptive study to assess the willingness to pay for Community Health Insurance among household heads in rural communities of Ilorin South Local Government. The study population included household heads in the rural communities of Ilorin South Local Government of Kwara State. The minimum sample size for this study was determined using the Fisher's Formula. A sample size of 360 was derived and surveyed. While multistage sampling technique was used. One of the three political wards that have rural communities was selected by simple random sampling by balloting method. Five of the rural communities were selected from the randomly selected ward by simple random sampling by balloting method. Proportional allocation of the sample sizes was done to the five selected communities based on the population of each of the five randomly selected communities. The houses in each selected community were enumerated and the number of houses needed selected by simple random sampling by balloting without replacement in each community based on the number of respondents needed in each community. The list of all households in each house (where there are more than one household living in a building) was generated and one of them was selected from the list by simple random sampling for questionnaire administration. A household is a group of persons who live together and eat from the same pot. The household head is the person responsible for leadership and financial decisions in the household.

Pre-tested semi-structured interviewer administered questionnaire was used to generate quantitative data. The questionnaire was adapted from the Community Health Plan – Kwara Central Survey 2009 Questionnaire developed by a collaboration of Amsterdam Institute for International Development, PharmAccess Foundation, Center for Poverty-Related Communicable Diseases, University of Amsterdam and University of Ilorin Teaching Hospital. The questionnaire was pretested in Oke-ose, a rural community of Ilorin East LGA about 30 kilometers from the study area. Household heads above the age of eighteen and those who are not currently on any insurance scheme in the last one year were included in the study. Those that were eighteen and below and those who were currently on any insurance scheme were excluded from the study.

In eliciting willingness to pay (WTP), Double-Bounded Dichotomous Choice variant of Contingent Valuation Method was used. This was supported with open-ended question for those who do not pick a 'yes' for either the first or second option. This will enable respondents to pick lower amounts (as low as zero) or higher amounts (higher than the stated options in the DBDC-CV Method)

The analysis was done using EPI INFO version 4.3.1; and frequency tables and cross tabulations was generated. Chi-square test was used to determine statistical significance of observed differences in cross tabulated variables. Level of significance was predetermined at a p-value of less than 0.05.

Clients' consent was obtained before interview. The nature of study, participation status, benefits of the study and confidentiality issues were made clear to the respondents before obtaining their consent.

### **Result**

Total number of household heads interviewed was 360. The mean age distribution of respondents was  $42 \pm 12.90$  with majority of respondents being male (84.2%) while females were 15%.

Most of the respondents had no formal education (40%), 6.4% had quranic education, 21.7% had Primary education, 15.6% had Secondary education while 16.4% had post secondary education. The average monthly income of respondents was N  $10,007 \pm 5,870$  ( $60.0 \pm 36.4$  USD), with the majority earning between N 10,001 and N 20,000 per month.

One hundred and thirty six (37.8%) of respondents were aware of Community Health Insurance with source of information being Radio (34.2%), Friends (17.1%), Family (8.1%), Television (18.5%), Community member (12.4%) and through School (9.7%). However, 224 (62.2%) were not aware about CHI.

Few of the respondents (2.5%) had good knowledge of principles of Community Health Insurance, 24.2% had fair knowledge while the majority (73.3%) had poor knowledge. Few (6.7%) did not know any principle of CHI, 15.7% believed that it is pulling of funds, 12.8% said it is mutual fund, while to others, it is Informal sector (18.8%), not for profit (27.2%) and Community investment (18.8%).

Forty seven respondents (13.1%) were willing to be involved in Community Health Insurance, while 313 (86.9%) were not willing to be involved. The knowledge of respondents about CHI influenced their willingness to join CHI and insure all their household members.

Those with good knowledge were also willing to pay more for CHI with mean willingness to pay of 740. This is statistically significant with P value of 0.00.

### **Discussion**

The findings of this study showed that awareness of CHI is low (37.8%), with major source of information being radio (37.8%). Earlier studies done in rural Cameroon found awareness to be 27.07%.<sup>9</sup> However, a study done in Eastern Nigeria found knowledge of CHI to be 11%<sup>5</sup> and another carried out among surgical patients in Niger Delta region of Nigeria revealed an awareness of 3.06%.<sup>14</sup> These results might be due to the general low level of knowledge about health insurance systems. However, a study of the knowledge of national health insurance among civil servants in Oshogbo revealed an awareness of 40%.<sup>15</sup> This was obviously higher than what was obtained from studies from Eastern Nigeria and the Niger Delta region. This wide disparity may be because the Oshogbo study was done among civil servants. The civil service comprised more of educated and enlightened people who have more access to information. This may also be a pointer to the possible correlation between level of education and awareness of health insurance. A relatively higher level of knowledge was also observed in the results from a study done in Jos, Nigeria where 71% of the respondents had good knowledge of CHI.<sup>17</sup> This was attributed to campaigns in the media as more than half of the respondents in that study said their main source of information was the mass media.

Majority of the studied population (73.3%), in this study have a poor knowledge of understanding of the principles of CHI. This contrasted with the result from a study conducted among staff of Ministry of health and District health officers in Uganda who had good knowledge of the principles.<sup>18</sup> However, it was found out that those with good knowledge of CHI in this study were willing to join CHI and insure their entire household with mean willingness to pay of N740.

Knowledge of CHI in rural communities is low and this may be due to a dearth of information and low awareness of CHI in such communities. To ensure that health care is accessible to all, CHI should be promoted and more people should be encouraged to participate. A robust awareness plan should be drawn and implemented in rural areas to dispel false rumors about CHI and enlighten the public about its merits.

**Table 1: Socio-demographic Characteristics of Respondents**

<b>Variables</b>	<b>Frequency (%)</b>
<b>Age</b>	
18-29	54 (15.8)
30-39	108 (30.0)
40-49	81 (22.5)
50-59	60 (16.7)
≥60	57 (15.8)
<b>Total</b>	<b>360 (100)</b>
<b>Mean</b>	<b>42.88 ± 12.90</b>
<b>Sex</b>	
Male	303 (84.2)
Female	57 (15.8)
<b>Total</b>	<b>360 (100)</b>
<b>Education</b>	
No formal	144 (40.0)
Quranic	23 (6.4)
Primary	78 (21.7)
Secondary	56 (15.6)
Post-Secondary	59 (16.4)
<b>Total</b>	<b>360 (100)</b>
<b>Monthly Income (Naira)</b>	
≤5,000	76 (22.2)
5,001-10,000	149 (43.4)
10,001-20,000	96 (56.6)
>20,000	22 (6.4)
<b>Total</b>	<b>343 (100)</b>
<b>Mean</b>	<b>10,007 ± 5,870</b>

**Table 2.** Awareness about Community Health Insurance and source of Information

<b>Variables</b>	<b>Frequency (%)</b>
<b>Awareness</b>	
Aware	136 (37.8)
Not aware	224 (62.2)
<b>Total</b>	<b>360</b>
<b>Source of information</b>	
Radio	102 (34.2)
Friend	51 (17.1)
Family Members	24 (8.1)
Televisiony	55 (18.5)
Community Member	37 (12.4)
School	29 (9.7)
<b>Total</b>	<b>298</b>
<b>Knowledge of Principles of CHI</b>	
Pooling of fund	47 (15.7)
Mutual fund	38 (12.8)
Informal sector	56 (18.8)
Not for profit	81 (27.2)
Community Investment	56 (18.8)
Don't know	20 (6.7)
<b>Total</b>	<b>298</b>
<b>Distribution of respondents by No of principle of CHI they know</b>	
Don't Know	19 (14.0)
1	21 (15.4)
2	51 (37.5)
3	36 (26.5)
4	6 (4.4)
5	3 (2.2)
<b>Total</b>	<b>136</b>
<b>Rspondent's willingness to be</b>	

<b>involved in CHI</b>	
Willing	47 (13.1)
Not willing	313 (86.9)
<b>Total</b>	<b>360</b>

**Table 3.** Scores of respondents on Knowledge of Principles of CHI they know N=136

	<b>Score</b>	<b>Frequency (%)</b>
<b>Good Knowledge</b>	4-5	9 (2.5)
<b>Fair Knowledge</b>	2-3	87 (24.2)
<b>Poor Knowledge</b>	0-1	264 (73.3)
<b>Total</b>		<b>360 (100)</b>

**Table 4:** Knowledge and Willingness to join Community Health Insurance

	<b>Knowledge of Community Health Insurance</b>		
	<b>Poor</b>	<b>Fair</b>	<b>Good</b>
<b>Willingness to Join</b>			
NO (%)	228(87.0)	75(85.2)	0(0.0)
YES (%)	34(13.0)	13(14.8)	10(100)
	$X^2 = 1.732,$	$df=2,$	$P \text{ value}=0.184$
<b>Willingness to Insure all Household Members</b>			
NO (%)	199(76.0)	65(73.9)	0(0.0)
YES (%)	63(24.0)	23(26.1)	10(100)
	$X^2 = 1.732$	$df=2$	$P \text{ value}=0.00$
<b>Mean Willingness to pay for CHI</b>			
Mean(SD)	427.15(234.10)	672.67(412.91)	740(189.74)
NO	228	75	10
	$ANOVA=16.67$		$P \text{ value}=0.00$



**Table 5:** Age, sex, income, education and knowledge scores about CHI

	Sample size	Mean	Variance	Standard Deviation
<b>Age</b>				±
18-29	54	1.17	1.69	1.30
30-39	108	1.19	2.04	1.43
40-49	81	0.62	1.19	1.09
50-59	60	0.83	1.12	1.06
>60	57	0.11	0.17	0.41
ANOVA= 9.89		P-value=0.00		
<b>Sex</b>				
Male	303	0.80	1.43	1.20
Female	57	0.95	1.77	1.33
Student's t= 0.77		P- value= 0.08		
<b>Education</b>				
No Formal	144	0.37	0.60	0.77
Quranic	23	0.35	0.51	0.71
Primary	78	0.12	0.18	0.43
Secondary	56	1.63	1.40	1.18
Post Secondary	59	2.31	1.80	1.34
ANOVA=72.77		P-value-0.00		
<b>Monthly income( Naira)</b>				
<_ 5000	76	0.20	0.05	0.67
5001-10,000	149	0.72	0.14	1.08
10,001-20,000	96	1.16	1.78	1.33
>20,000	22	2.23	2.37	1.54
ANOVA= 22.59		P-value=0.00		

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