Does the National Health Insurance Scheme improve access to health care for the vulnerable in Ghana?

Although the National Health Insurance Scheme (NHIS) was instituted as a broad system level social strategy to improve access to health care for low income households to protect them against catastrophic health care financing, there is a strong body of work that suggests that the NHIS benefits more affluent people than deprived low-income households. While these studies acknowledge the inequities associated with health care access in the country, there is little scholarly focus on the intra-regional disparities associated with healthcare. These broad observations obscure the complex population dynamics that may hinder access to care within a regional context. For example, there are different population sub groups within a region who may have different challenges with respect to health access. Mapping out the complex and diverse challenges associated with access to care produces a more nuanced representation of the challenges to care and has the potential to offer better information to improve the quality of access than broad generalizations previously reported. This study explores access to care amongst women using data from the Volta region of Ghana. The Volta region is one of the poorest and most deprived regions with a strong kinship system which is essentially patrilineal. We explore access to the National Health Insurance in a cultural context which provides little opportunity for women to own a means of production.

The study used a cross sectional research design. A two-stage sampling procedure was adopted. Predominantly rural Enumeration Areas (EA) were randomly selected by the Ghana Statistical Service for the study. EAs were assigned to district based on population proportion to size. A complete household listing was developed from the EAs selected. Women were randomly selected from the household for the survey. A binary logistic regression was applied because the dependent variable was whether a respondent had an active health insurance or not.

Table 1: Sociodemographic Characteristics by Access to a Valid National Health Insurance Card

	Valid NHIS		
	No n=7021 n (%)	Yes n=4180 n (%)	p-value
Age			
15-19	1504 (66.4)	760 (33.6)	0.000
20-24	1041 (58.6)	734 (41.4)	

25-29	1029 (59.0)	715 (41.0)	
30-34	942 (58.8)	632 (40.2)	
35-39	858 (63.8)	486 (36.2)	
40-44	747 (65.2)	399 (34.8)	
45-49	900 (66.5)	454 (33.5)	
Education (highest level)			
No Education	2676 (69.3)	1186 (30.7)	0.000
Primary	1680 (64.7)	917 (35.3)	
JHS	2180 (59.0)	1514 (41)	
SHS	434 (49.0)	452 (51.0)	
Tertiary	39 (26.7)	107 (73.3)	
Other	12 (75.0)	4 (25.00)	
Religion			
No religion	462 (72.5)	175 (27.5)	0.000
Christianity	5486 (60.8)	3536 (39.2)	
Traditional Religion	787 (74.8)	265 (25.2)	
Islam	286 (58.4)	204 (41.6)	
Ethnic group			
Akan	157 (54.7)	130 (45.3)	0.000
Ga Dangme	209 (60.1)	139 (39.94)	
Ewe	4067 (61.0)	2610 (39.1)	
Konkomba	1621 (68.0)	763 (32.0)	
Other			
Marital Status			
Never Married	2167 (66.1)	1112 (33.9)	0.000
Married/Living together	4208 (60.8)	2714 (39.2)	
Divorced	646 (64.6)	354 (35.4)	
Occupation			
No Occupation	914 (58.2)	656 (41.8)	0.000
Student	1218 (66.5)	613 (33.5)	
Farming	3128 (68.0)	1474 (32.0)	
Trading/Selling	1257 (57.5)	928 (42.5)	
Skilled Labour	383 (52.2)	351 (47.8)	
Other Occupation	121 (43.4)	158 (56.6)	

Variables	**Odds Ratio**	**Std. Err.**	**z**	**P>|z|**	**[95% Conf. Interval]**	
Age	1.01	0.00	2.21	0.027	1.00	1.01
Educational Status						
No formal Education (RC)	1					

Primary	0.84	0.05	-2.82	0.005	0.75	0.95
Middle School/JHS	0.68	0.04	-6.6	p<0.001	0.61	0.76
SHS/SSS	0.43	0.04	-9.64	p<0.001	0.36	0.51
Tertiary	0.20	0.04	-7.31	p<0.001	0.13	0.31
Religious Affiliation						
No religion (RC)	1					
Christianity	0.76	0.07	-2.84	0.005	0.63	0.92
Traditional religion	1.14	0.13	1.13	0.26	0.91	1.43
Islam	0.64	0.09	-3.17	0.002	0.49	0.84
Ethnicity						
Ewe (RC)	1					
Konkomba	1.07	0.06	1.15	0.249	0.95	1.20
Akan	0.99	0.13	-0.06	0.951	0.78	1.27
Ga/Dangbe	0.98	0.11	-0.19	0.851	0.78	1.23
Other	1.27	0.09	3.45	0.001	1.11	1.46
Marital Status						
Never married (RC)	1					
Married/living/together	0.58	0.04	-8.1	p<0.001	0.51	0.66
Divorced/Separated/Widowed	0.68	0.06	-4.03	p<0.001	0.57	0.82
Occupation						
None(RC)	1					
Student	1.29	0.10	3.17	0.002	1.10	1.51
Farming	1.30	0.09	3.69	p<0.001	1.13	1.50
Trading/Selling	1.08	0.08	0.98	0.33	0.93	1.25
Skilled labour	0.81	0.08	-2.29	0.022	0.67	0.97
Other occupation	1.15	0.18	0.92	0.355	0.85	1.56
Wealth Status						
Poorest (RC)	1					
Poorer	1.29	0.08	3.94	p<0.001	1.14	1.46
Middle	1.39	0.09	5.04	p<0.001	1.22	1.58
Richer	1.51	0.10	6.22	p<0.001	1.33	1.72
Richest	1.60	0.11	7.1	p<0.001	1.41	1.83
_cons	2.03	0.29	4.89	p<0.001	1.53	2.69

Results

Table 1 shows sociodemographic characteristics of respondents by their access to a valid national health Insurance card. The total sample used for the analysis was 11,201 women of reproductive age. Compared to women with a valid NHIS card, those without the valid NHIS card were mostly not educated (69.3%), were affiliated to the traditional religion (74.8), were Konkomba (68%), were currently divorced (64.6) and were farmers (68%). A high proportion of women with valid NHIS cards were older (15-29 years), had attained tertiary education, were affiliated to the Islamic religion, were Akan, were currently married or living together and were farmers by occupation. These characteristics were significantly associated to the women's access to a valid NHIS card ($p<0.001$)

We applied both quantitative and spatial modelling technics to a sample of 11,201 women. The results revealed that only 36% of the women had access to an active health insurance whilst the vast majority of women did not have access to NHIS. The spatial analysis further revealed that rural communities within the largely poor Volta Region were least likely to have access to care. Initially, it had been suggested that lack of access to care indicated by non-active health insurance was mainly because poorer households did not have the means to continually renew their health insurance, the results of the analysis however reveals that having an active NHIS is some deprived areas confers little benefit. A large proportion of rural households are served by CHPS compounds. CHPS represents Ghana's lowest level of health care administration in Ghana and also the main programme for achieving the universal health coverage. CHPS is however, tightly focused on reproductive health and child welfare needs within the localities. Community health care health needs outside these broad thematic areas often received little attention. Possessing a valid NHIS card did not always result in access to care in deprived rural communities where health care was generally restricted. Community members did not commit limited resources to health insurance when it does not really yield meaningful results in the event of health crisis. Access to a valid NHIS must correspond to actual provision of health.