

The Wedge Between Need and Access to Healthcare: Does Health Insurance Improve Utilization for People With Non- Communicable Diseases?

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Abstract

Background

With progress towards universal health coverage (UHC) the disease burden of non-communicable diseases (NCDs) in LMICs is increasing while inequalities in healthcare access exist. We aimed to investigate whether health insurance enables people with NCDs to utilize health services more than their counterparts without insurance.

Methods

Using a quantitative research method and data from the Zambia Household Health Expenditure Utilization Survey (ZHHEUS, 2013) conducted in 2013, we focussed on the people who recalled visiting a health facility a month prior to the survey, 8,146 of whom said yes. Approximately 2247 had an NCD while 229 were covered by health insurance. Only women age 15-49 and men age 15-59 who were interviewed for information regarding themselves and other members of the household. The survey included questions on demographics, health status (self-rated health); illness experiences, healthcare utilization (visits, admission, type of providers sought, health expenditure); and insurance cover. Specifically, individuals were asked if they had visited a health facility in the 4 weeks preceding the survey.

Results

We find that NCDs are associated with an increase in healthcare use (5.4 percentage points (pp); 95% CI -0.28 to 0.09; $p < 0.001$). Utilization increases further for those with NCDs by having health insurance (6.4pp; 95% CI -0.18 to 0.05; $p = 0.285$) though the association was not statistically significant. Having health insurance itself, regardless of NCD status, is associated with a higher utilization (6.4pp; 95% CI -0.13 to 0.0005; $p = 0.048$).

Conclusions

Our results suggest that health insurance may play an important role in improving access among people with chronic conditions, and since they mainly affect poorer households, health insurance may have a strong equity result in a low- and middle-income country context.

Background

Many low- and middle-income countries (LMICs) are experiencing an increasing double burden of disease where non-communicable diseases (NCDs) are rising with an already high level of communicable diseases. In addition to being overwhelmed by the high burden of disease, health systems are poorly funded which threatens the goal of providing access to all who need them without exposing them to financial risk. In order to move towards this goal, espoused in the Sustainable Development Goals (SDGs) under the universal health coverage (UHC) principle, most LMICs are moving towards introducing national

health insurance systems (NHI). Evidence has shown that NHI results in an increase in coverage for NCDs with a subsequent reduction in mortality rates.¹ In the United States of America the Affordable Care Act (ACA) coverage expansion resulted in improved patient outcomes through having a usual source of care,^{2,3} providing greater access to primary care,⁴ more ambulatory visits and an increase in the use of prescription medications⁵ with better adherence.⁴ NHI in LMICs such as Thailand and the Philippines⁶ resulted in wide coverage and social inclusion incorporating indigents and the poor in society to give them access to essential health care.⁷ African countries like Kenya and Tanzania implemented social health insurance (SHI) which has increased the use of health care services among members of the population⁶ with an improvement in service quality and an improvement in the stocking of essential drugs.⁶ SHI may improve access to care and reduce catastrophic health expenditure (CHE). Yet questions remain on whether these increases in utilization occur among people who really need the services. There has been a long-standing debate that generous insurance may pose a risk of moral hazard, which occurs when one party has an incentive to use more resources than otherwise would have been used because another party bears the cost.⁸ Moral hazard may be worsened when people take less care of their health because they know that they will not bear the full cost of care when they fall sick or are injured.⁹ There are suggestions however that moral hazard is more likely for acute rather than chronic illnesses, such as NCDs,¹⁰ and that over time, chronically ill patients may experience treatment fatigue, which may lead them to reduce the use of health services.

Another important aspect is the consideration of whether health insurance improves utilization for those who need care. While a rich literature has demonstrated that health insurance itself improves utilization, there is limited evidence in LMICs on whether this increase occurs among people who really need it, such as those who have verifiable sickness like chronic conditions. Chronic conditions such as NCDs have been associated with a high financial burden in LMICs, and evidence suggests that this burden is highly underestimated.¹¹ The burden is unequally borne by poorer households, who are more likely to experience catastrophic expenditure when seeking care. It is important how health insurance is associated with use of healthcare among those with chronic conditions. Does having a chronic condition imply higher use of healthcare? Does this use increase if they have access to health insurance? We explore these questions using nationally representative household data from Zambia.

Context

Zambia has a population of about 17 million with approximately 6% of the population above 55 years of age.¹² Approximately 12% of the population suffer from NCDs and deaths from chronic illnesses is as high as 33% of all deaths countrywide.¹³ Studies have also shown that the major modifiable risk factors for NCDs are concentrated among the elderly who live in rural areas.¹³ The public health system in Zambia is structured as a pyramid with primary health care in peri-urban and rural areas as the first point of contact. Primary health facilities offer basic health services such as health promotion and basic curative care (eg, treatment of simple malaria, oral rehydration therapy for diarrhoea, etc) and are manned by clinical officers, unlike tertiary referral hospitals in urban areas that offer advanced testing such as CT

scans, provide intensive care and are staffed with specialist physicians.¹⁴ Despite privately owned medical schemes ensuring access to high quality care, only 3% of the population who are younger and in the highest wealth quintile are subscribed because of the high premiums that are out of reach for the poor.¹⁵ Affected families forgo care as they would spend on average 40% of household income on required care compared to only 3.4% spent by the rich.¹⁴ Furthermore, Zambia's high debt servicing costs have limited public health spending to only 5% of GDP¹⁶ and health financing is primarily dependent on donor funding (42%), followed by public revenue (25%), out-of-pocket payments (27%), and private employer-based medical schemes (5%).¹⁴ For LMICs, Zambia included, donor funding remains volatile and very low. Only 2-3% of overall development assistance is allocated to the reduction in NCDs.¹⁷ The low funding and organisation of the health system coupled with poor infrastructure and drug shortages disadvantages the poor.¹⁸ In order to strengthen the health system and mitigate the growing mortality and morbidity rates the Zambian government began to look to domestic resource mobilization as an alternative source of funding and to improve access to quality care. The government of the Republic of Zambia passed a bill endorsing NHI in April 2018 as a means to achieve UHC through risk pooling with a reduction in out of pocket payments (OOP) and CHE.^{19,20}

Increasing coverage among people with NCDs may be an important move towards UHC by increasing access and thereby mortality due to NCDs, given that NCDs are expensive to manage. It is not known whether individuals with NCDs access health services more and whether health insurance would allow them to use services even more.

Methods

Study Design, Population and Sample

The study employed a quantitative research method using secondary data from the Zambia Household Health Expenditure Utilization Survey (ZHHEUS, 2013) conducted in 2013.

The ZHHEUS was conducted by the Central Statistical Office and the Department of Economics at the author's institute. The survey sampled a cross-section of households in all 10 provinces of Zambia using a sampling design which was aimed at achieving national representativeness. The Central Statistical Office, with support from the Ministry of Health, Lusaka, Zambia and the author's institute, conducted the survey, yielding a total of about 12,000 households, including some 59,500 individuals, in all 10 provinces of Zambia. A two stage stratified cluster sample design was used. In the first stage, standard enumeration areas were selected within each stratum using the probability-proportional-to-estimated-size procedure to select a total sample of 599 clusters (primary sampling units, psu) from each of Zambia's 10 provinces of which 250 were from urban areas and the rest from rural areas. A full listing of all households in each psu was conducted prior to sampling of sample households. In the second stage, a fixed proportion of 20 households were selected from each psu using a systematic random sampling procedure. Thus, the sample size was powered to be representative at the cluster, provincial and national levels. At each sampled household, all members were enumerated, however only women age 15-49 and

men age 15-59 who were either permanent residents of the households or visitors present in the households on the night before the survey were eligible to be interviewed for information regarding themselves and other members of the household. The survey included questions on demographics, health status (self-rated health); illness experiences, healthcare utilization (visits, admission, type of providers sought, health expenditure); and insurance cover. Specifically, individuals were asked if they had visited a health facility in the 4 weeks preceding the survey. We focussed on the number of people who responded to the question of whether they visited a health facility in the month prior to the survey, 8,146 of whom said yes. Of these, approximately 2247 had an NCD and 229 were covered by health insurance (CSO, 2013).

Study Variables and Data Analysis

The dependent variable was Utilization, while the independent variables were age, sex, marital status, religion, education level, employment status, insurance cover, monthly expenditure, NCD status and self-rated health. The definition of variables was as follows;

Dependent : Utilisation - Visit to health centre in last one month

Independent : Age-5 year age group, Sex- Biological sex, Marital status- Marital status, Religion- Religion, Education-Level of education , Employment-Employment status, Self health-Self -rated health, Insurance- Insurance cover , Expenditure-Total monthly household expenditure, NCD- Suffering from NCD or not.

To approximate the effect of health insurance on utilization of health services, we employed the following linear probability regression equation

$$\text{Utilisation} = \beta_0 + \beta_1 \text{NCD} + \beta_2 \text{INS} + \beta_3 \text{NCD} \cdot \text{INS} + \dots \beta_k X_k + \varepsilon$$

where NCD is non-communicable disease, INS is health insurance, X is all other variables, ε is the error term, β_1 the association between having an NCD and utilization, β_2 the association of health insurance and utilization and β_3 the difference in utilization of services between an individual with an NCD and insurance, and an individual with an NCD but without insurance. The analysis was clustered at household level and carried out using STATA 14 software (Stata Corp: College Station, TX, USA).

Results

Sample description

In the sample (N=13,150), only about 327(3%) of respondents had health insurance, approximately 5,302(40%) were under 15 years old, and 7,833(60%) were 15 or older. Approximately 747(10%) of the people in the sample were employed, 2,725(35%) were self-employed, and 4,356(56%) were either unemployed or reported having other forms of income. Approximately 1444(87.25%) spent less than

K1000 per month, 208(12.57%) spent K1000-4999 per month and the remainder 3(0.18%), spent K5000 and above. See table 1 Characteristics of respondents.

Bivariate analysis

Among the sampled population, 62% (8,146) used health care services in the 30 days prior to the survey. Approximately 12% (1,655) of the sample had a NCD and 89% (11,479) did not suffer from any NCD, while 9.6% reported having other health conditions. Approximately 21% (2,693) of individuals assessed their health as very good, 52% (6,273) assessed their health as good, 11% (1,417) as poor. The highest number of health care visits reported was one at 97.4% (7927) (Table 2). While 87.3% (6538) of respondents felt that a health visit improved their health status, the remaining 13.7% (948) felt a visit made no difference to their health status. See table 2 Bivariate analysis of background characteristics of Respondents who participated in the Zambia Household Health Expenditure Utilisation Survey, 2013(ZHHEUS, 2013).

Multivariate Regression

The effect of NCDs on health utilization: Having an NCD was a significant predictor of health services utilization. People with NCDs used services 5.7 percentage points (pp) (95% CI -0.28 to 0.09; $p < 0.001$)

The effect of health insurance on utilization for people with NCDs: Similarly, health insurance increased the use of services for people with NCDs by about 6.4 pp (95% CI -0.18 to 0.05; $p = 0.285$) despite the result being statistically insignificant.

The effect of health insurance on utilization: People without health insurance were 6.4 pp (95% CI -0.13 to 0.001; $p = 0.048$) less likely to use a health service than those with insurance.

Other factors and health utilization: People who rated their health as poor were 9 pp (95% CI 0.03 to 0.14; $p = 0.001$) more likely to visit a health centre than people who felt their health was very good. Similarly people who were married were 3.6 pp (95% CI 0.0003 to 0.07; $p = 0.052$) more likely to visit a centre than people weren't married, and people with secondary education were 2.2 pp (95% CI 0.005 to 0.05; $p = 0.103$) more likely to visit a centre than those with primary education though this was not significant. People who were unemployed were 4 pp (95% CI 0.08 to 0.05; $p = 0.084$) less likely to use a health service compared to those employed though the results were not statistically significant. After adjusting for all variables, household expenditure was not a significant predictor of health care utilization. See table 3 Multivariate regression.

Discussion

The study found that people with health insurance used health services more than those without insurance. Analysis showed that not having insurance reduced the likelihood of using a health service by about 6.4 pp. This was in keeping with the notion that having health insurance improves access to health

care services.²¹ Health insurance increases the number of visits to a health centre and therefore improves disease outcome.^{22,21} Adjusted analysis showed that having an NCD increased the likelihood of utilizing a health service by about 5.73 pp when controlling for all other variables. In adjusted analysis, when considering the population suffering from NCDs and the difference insurance had on their utilization of services, having insurance increased the likelihood of using a health service by about 6.4 pp though the results were not statistically significant. This may in part have been due to the small sample size as only 3% of the population had health insurance reducing the power of the study to detect its effect on utilization. The findings revealed the older population among whom NCDs were concentrated were unemployed, uneducated and uninsured and required more frequent use of health care services than people without a chronic illness. This imbalance between health and wealth status can possibly be corrected by SHI that increases access to health services. The situation in Zambia is similar to China where the majority of people with health insurance are younger, in better health, have a higher income and are more educated than the older population.²³ It may not be enough to simply implement a policy without raising awareness in the intended beneficiaries. Policy for the deliberate sensitization of the elderly to register for coverage with incentives such as comprehensive differential care may help raise the coverage rates for the elderly. In Indonesia for example, SHI has been used to fund health promotion programs targeted at people with chronic illnesses²⁴ as they are prone to treatment fatigue over time²⁵. Furthermore people with NCDs felt that they were in relatively good health which contrasted with the mortality of 33% of all deaths in the country showing that either access to services is low, existing service quality is poor, or adherence to treatment given is poor. Measures such as NSHI can improve awareness and help raise the standard of care in order to improve population health.

The inequality that exists between the different socioeconomic groups and people of different ages may be altered by the introduction of health insurance that has affordable premiums, and that caters for the entire population regardless of disease or socioeconomic status, with focus on those with the greatest need. Insurance provides coverage for regular care,² increased number of prescriptions,⁵ and more preventive care interventions that are out of reach for the poor.²⁶ For the elderly finding employment and attaining higher education may be out of their reach and an unreasonable expectation. However if shocks in health expenditure are shouldered by the general population through risk pooling, there is still a great possibility for an improvement in their health. Countries such as the United States of America have opted to abolish co-payments for the elderly while providing them with quality continuous care through SHI.⁴ In China for example, the introduction of NHI improved utilization of services by 3.8 pp, and reduced OOP experienced by the middle-aged and elderly.²⁷ This can serve as an example to LMICs such as Zambia on how to adopt and implement SHI.

NCDs and their associated risk factors were concentrated among the elderly, and people living in rural areas¹³ where insurance is lacking and access to tertiary care is unavailable,^{19,20} whereas in urban areas it is much easier to access. This is an inequity as people with the exact same health needs have differential care according to socioeconomic status. It follows that their health will be poor and the likelihood of developing complications and mortality is high. Despite being only about 12% of the

population, deaths due to NCDs accounted for as many as 33% of deaths nationwide²⁸ which means that in Zambia, people who need health services are not accessing them as they should.

In Zambia the implementation of National Social Health Insurance (NSHI) will require a consistent upgrade in health infrastructure nationwide, training of more health staff and allocation of funds towards catering for the rural hard to reach populations in order for the insurance to achieve its intended purpose to create equity in health for all through UHC. Countries such as China that have implemented SHI provide health insurance and tertiary health care in rural areas²⁹ and people such as migrant workers from various provinces are not at a disadvantage in accessing quality care compared to the rich members of the population.

In adjusted analysis, when considering the population suffering from NCDs and the difference insurance had on their utilization of services, health insurance increased the likelihood of using a health service by about 6.4 pp though the results were not statistically significant. However the narrow confidence interval suggests a moderate effect. Furthermore the increase may have not been significant because the sample size for both NCDs and people covered by insurance was relatively small, that is approximately 11% and 3% of the sampled population respectively. This may have reduced the power of the study to detect the interaction effect of having insurance and an NCD on utilization of services, and this was one of the limitations of the study. Younger individuals self-select into insurance and are already in better health and therefore the true effect of insurance in improving health may not have been estimated. Furthermore accounting for the heterogeneity, which is the difference made by benefits packages that vary according to schemes would yield more precise and informative results.

Caution has to be taken when charging premiums for the poorest populations. In Senegal for example, health insurance remains out of reach for the poorest of the poor as premiums are unaffordable.³⁰ A study in Guinea revealed that since implementation, SHI was still out of reach of the poorest of the poor because of the high premiums attached.⁶ In order to have full coverage, premiums must be within the reach of the majority of the population and various barriers such as high premiums, and registration requirements that hinder acquisition of insurance be removed.

Having shown that insurance increases the use of services among people with chronic illness, one may ask the question, would the improved access be misused just because another party is bearing most or all of the cost of care? For chronic illness, no moral hazard has yet been demonstrated. This is because of the nature of chronic diseases. They are high in risk but low in demand of health services¹⁰ and because of long term care, with time patients tend to poor adherence to specialist care despite its availability.²⁵

This may explain the lack of statistical significance in the finding that health insurance increases service use for people with NCDs, as the demand for services lessens with time, possibly due to treatment fatigue.²⁵

Despite the potential benefits of insurance no specific packages have been created according to the need, which is the disease an individual may have, in the health insurance now available in the country. Creating a specific benefits package for people with chronic illnesses would be beneficial for both the patient and the health care system as efficiency in health service delivery would improve. Insurance packages should be aimed at and tailored to people with NCDs with the provision of essential medicines and specialist care.⁵ Other factors influencing health-seeking behaviour besides insurance status such as perception of illness and the health system, attitude, awareness, distance from a health centre and preferences of treatment have to be explored and addressed in order to have a holistic approach to improving health.³¹ Additionally, for PHI, premiums offered to patients with NCDs should consider their need and be charged lower than premiums offered to the rest of the population to improve health and reduce morbidity and mortality.

Conclusions

In conclusion, the study found that while health insurance and NCDs independently increase health care utilization, health insurance may have no significant association with utilization of health services among people with NCDs in Zambia. Further studies, perhaps qualitative, looking into the perception of the Zambian population towards illnesses, attitude to the health system and service provision, distance from health centres and insurance type may provide more insight into the disparity of utilization of health services that exists between the health and wealth status in the population.

Abbreviations

ACA- Affordable Care Act

CHE-Catastrophic Health Expenditure

LMICs- Low and middle income countries

NCDs - Non communicable diseases

NHI- National Health Insurance

NSHI- National Social Health Insurance

OOP- Out of pocket expenditure

SDGs- Sustainable development goals

SHI- Social Health Insurance

UHC- Universal Health Coverage

UNZA- University of Zambia

Declarations

Ethics approval and consent to participate: Access to the ZHHEUS survey secondary data was granted by the Department of Economics, at the author's institute. The de-identified anonymous dataset was used for the analysis. Ethical clearance and consent waiver for this study was sought and granted from the University of Zambia (UNZA) Research Ethics Committee, with ethical clearance reference number 012-08-18. Permission was granted from the Department of Economics, UNZA for use of the data from the ZHHEUS under the provisions of the Census and Statistics Act Number 127 of the Laws of Zambia. All methods were carried out in accordance with relevant regulations and guidelines.

Consent for publication: Not applicable

Availability of data and materials: The data that support the findings of this study are available from Central Statistics Office, Zambia but restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available. Data are however available from the authors upon reasonable request and with permission of Central Statistical Office, Zambia.

Competing interests: The authors declare that they have no competing interests

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Authors' contributions: A.N, P.H and M.B analysed and interpreted the data. A.N contributed to writing the manuscript and prepared the tables and figures. P.H and M.B contributed in editing the manuscript. All authors read and approved the final manuscript.

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Tables

Table 1 Characteristics of respondents

N=1655	Number	[Percent]
Characteristics		
Insurance (1=Yes, 0=No)	327	[3.69]
Age group (in Years)		
0-14 Years	208	[12.57]
15-24 Years	163	[9.85]
25-49 Years	586	[35.4]
50 Years and above	698	[42.18]
Total	1655	[100.0]
Self Health Rating		
Very good	129	[7.79]
Good	544	[32.87]
Satisfactory	541	[32.69]
Poor	441	[26.65]
Total	1655	[100.0]
Education Level		
Pre/Primary	770	[59.46]
Vocational	10	[0.77]
Secondary	428	[33.05]
Tertiary	87	[6.72]
Total	1295^a	[100.0]
Employment Status		
Employed	125	[8.64]
Not employed	679	[46.92]
Self Employed	555	[38.36]
Other	88	[6.08]
Total	1447^a	[100.0]
Monthly Expenditure		

0-999	1444	[87.25]
1,000-4,999	208	[12.57]
5,000-9,999	3	[0.18]
10,000 and above	0	[0.0]
Total	1655	[100.0]
Sex		
Male	564	[34.08]
Female	1091	[65.92]
Total	1655	[100.0]

Table 2 Bivariate analysis of background characteristics of Respondents who participated in the Zambia Household Health Expenditure Utilisation Survey, 2013(ZHHEUS, 2013)

N=13,150					
	Yes		No		P-Value
Characteristics	N	[%]	N	[%]	
Age group (in Years)					<0.001*
0-14 Years	3454	[65.1]	1848	[34.9]	
15-24 Years	1277	[59.6]	866	[40.4]	
25-49 Years	2264	[59.9]	1515	[40.1]	
50 Years and above	1151	[59.8]	775	[40.2]	
Sex					0.002*
Male	3634	[60.5]	2371	[39.5]	
Female	4512	[63.2]	2633	[36.8]	
Educational Level					0.503
Pre/Primary	3723	[60.9]	2392	[39.1]	
Vocational	35	[66.0]	18	[34.0]	
Secondary	1675	[61.3]	1056	[38.7]	
Tertiary	240	[64.3]	133	[35.7]	
Marital Status					0.002*
Never Married	1433	[56.6]	1099	[43.4]	
Married/Cohabiting	2938	[60.4]	1923	[39.6]	
Divorced/Widowed/Separated	773	[61.2]	490	[38.8]	
Employment Status					0.059
Employed	482	[64.2]	269	[35.8]	
Not Employed	2463	[59.7]	1659	[40.3]	
Self Employed	1602	[58.7]	1127	[41.3]	
Other	142	[58.9]	99	[41.1]	
Insurance Cover					0.004*
Yes	229	[69.6]	100	[30.4]	
No	7917	[61.75]	4904	[38.25]	
Self-Health Rating					0.002*

Very good	1629	[60.5]	1064	[39.5]
Good	4124	[61.3]	2599	[38.7]
Satisfactory	1450	[63.0]	851	[37.0]
Poor	936	[66.1]	481	[33.9]
Don't Know	7	[43.7]	9	[56.3]
Have Non-Communicable Disease				0.002*
Yes	1794	[64.5]	988	[35.5]
No	6352	[61.3]	4016	[38.7]
Monthly Expenditure				0.075^b
0-999	7437	[61.7]	4609	[38.3]
1,000-4,999	705	[64.5]	388	[35.5]
5,000-9,999	4	[40.0]	6	[60.0]
10,000 and above	0	[0.0]	1	[100.0]
Religion				0.282
Christian	7963	[62.1]	4861	[37.9]
Muslim	28	[56.0]	22	[44.0]
Traditionalist	56	[56.6]	43	[43.4]
Atheist	37	[53.6]	32	[46.4]
Other	62	[57.4]	46	[42.6]

Note: *b. Statistically Significant at P-Values obtained using Fishers exact*

*p<0.05

Table 3 Determinants of Health Services Utilisation (Multivariate Analysis)

N= 13,150	Adjusted Probability	P-Value	95% C I
Characteristic			
Age group (in Years)			
0-14 Years	Ref.		
15-24 Years			
25-49 Years	-0.033	0.066	[-0.068, 0.002]
50 Years and above	-0.036	0.110	[-0.08,0.008]
Sex			
Female	Ref.		
Male	-0.073	<0.0001*	[-0.0977,-0.044]
Marital Status			
Never Married	Ref.		
Married/Cohabiting	0.035	0.052*	[0.0003,0.071]
Divorced/Widowed/Separated	0.027	0.310	[-0.025,0.08]
Education			
Pre/Primary	Ref.		
Vocational	0.042	0.548	[-0.095,-0.18]
Secondary	0.022	0.103	[0.005,0.050]
Tertiary	0.025	0.43	[-0.038,0.089]
Employment Status			
Employed	Ref.		
Not Employed	-0.039	0.084	[-0.083,-0.052]
Self Employed	-0.030	0.175	[-0.08,0.01]
Other	0.004	0.919	[-0.09,0.08]
Religion			
Christian	Ref		
Muslim	-0.09	0.252	[-.024,0.06]
Traditionalist	-0.02	0.979	[-0.15,0.14]
Atheist	-0.076	0.272	[-0.21,0.06]

Other	0.041	0.533	[-0.09,0.17]
Insurance Cover			
Yes	Ref.		
No	-0.064	0.048*	[-0.13,0.0005]
Self-Health Rating			
Very good	Ref.		
Good	0.002	0.908	[-0.033,0.034]
Satisfactory	0.034	0.105	[0.0072,0.076]
Poor	0.084	0.001*	[0.033,0.14]
Have Non-Communicable Disease			
No	Ref.		
Yes	0.057	<0.0001*	[-0.28,0.087]
Monthly Expenditure			
0-999	Ref.		
1,000-4,999	-0.007	0.725	[-0.05,0.034]
5,000-9,999	-0.14	0.407	[-0.48,0.19]
10,000 and above	-0.54	0.265	[-1.49,0.41]
Interaction Terms			
Insurance Cover * Having Non-Communicable Disease			
Yes/Yes	0.064	0.285	[-0.18,0.05]

**p<0.05*