

A Community-Based Feasibility Study of National Health Insurance Scheme in Ghana

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SUMMARY

In a community based study at Legon in 1997, a valuation method was used to assess the willingness of students on study leave to pay a percentage premium of their income towards a National Health Insurance Scheme (NHIS). Thirty-five percent of the respondents were aged 30-40 years, 97% were males, 45% were resident in Accra, 17% in Kumasi and 12% in Cape Coast. Respondents were 84% in formal public employment with 44% majority as teachers. Their monthly income was distributed as 33% earned below ₵200,000, 50% between ₵200,000 – ₵400,000 and 7% above ₵400,000. More than 74% were willing to contribute to the scheme with 38% and 37% willing to pay 1% and 2% of their income as monthly premium respectively. Those willing to pay 2% premium, 14 (n=33) earned below ₵200,000, 18 (n=50) between ₵200,000 – ₵400,000, and 5 (n=17) above ₵400,000. Malaria was the commonest disease with 86% incidence, however 30% of respondents revealed they did not spend money on hospital services except 39% who spent ₵20,000 – ₵100,000 on hospital laboratory services. Over 65% of respondents indicated they self financed their health expenditure. The premium level was found to be influenced positively by financier, sex, age, income, and negatively by health expenditure, but not occupation. In an elite community with inadequate infrastructure and water supply problems but probably with better personal hygiene and sanitation, although respondents hardly spend on health services they were willing to contribute 2% of their incomes as premium towards an insurance scheme.

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Introduction

Insurance is an arrangement by which persons exposed to a common danger such as illness contribute to a fund out of which the unfortunate victims of that danger are compensated. A person insured in a health scheme is able to replace an unscheduled and undesirable event by a more affordable expenditure in a form of premium payments. Health insurance is about sharing of risk and ensuring financial cover, should the individual need health care [1, 2]. There are two main categories of health insurance schemes: National and Private health insurance schemes. National health insurance schemes are usually compulsory for either certain segments or the whole community. They

are generally government-sponsored and premiums are not usually based on individual risk assessments. Private health insurance schemes are usually voluntary and individual risk assessments are generally used to determine the premium levels [3].

Financing health has been one of the policy issues confronting the Ghana government. Most Ghanaians cannot afford medical care as a result of high and escalating cost. Health services, whether preventive, curative or rehabilitative, now demand financial commitment which many people cannot meet from their own resources [4]. Consequently more and more people are denying themselves basic medical treatment [5, 6]. The Ministry of Health (MOH) has set-up

a National health insurance unit to spearhead activities aimed at establishing a scheme capable of meeting the health needs of Ghanaians. Pilot projects in four districts in the eastern region have been commissioned to further ascertain the feasibility and sustainability of the scheme. However, only little information is available on health insurance in Africa. In sub-Saharan Africa, there is no formal health insurance arrangement and the available schemes have low percentages of the insured population, ranging from 11.4% in Kenya to 0.0001% in Ethiopia in 1997 [7, 8, 9]. In Ghana, few studies have been reported on health financing and only three have suggested premium levels to health insurance [3, 10, 11]. None of the studies involved a cross section of a population residing in the different regions of Ghana. This work determines whether university students on study leave will join a national health insurance scheme, the premium they intend to pay and some parameters that influence premium levels.

Materials and Methods

Study area.

The study was conducted at Legon, the campus of the University of Ghana at Accra. Students who were working and have been sponsored for further studies were recruited for the study. The site was selected to reflect an intellectual community with representation from all regions of Ghana. Qualitative and quantitative research techniques were used [3].

Focus discussion and structure interviews.

Students were subjected to detail discussions and made to respond to structured questionnaire. Qualitatively each student was engaged in brief but in-depth discussion to obtain knowledge and altitude of respondents on the proposed national health insurance scheme. The uninformed were educated on the concept including the advantages and disadvantages, and presented with a well described but a hypothetical situation to understand. Quantitative approach by self-administered structured questionnaire was mainly used to collect data. The basic characteristics of respondents including age, sex

income, profession, was noted. A detailed description of the services, associated costs, terms and conditions of benefits under the NHIS scheme were explained to respondents. Structured questionnaires that allow prediction of individual's socio-economic characteristics and premium to pay were given to those who knew about resource-pooling scheme such as the auto-insurance. Those who had not heard about the scheme were presented with the maximum price (premium) that they will be prepared to pay for health insurance coverage. A bidding premium of 5% of salaries, calculated in exact amounts, was offered and respondents were asked whether or not they would enrol in the scheme. Those who declined were asked to reconsider a new offer by successively lowering the bid 1% until acceptance was obtained or the lowest bid of 1% was reached.

Analyses

An evaluation method was used to assess the individual willingness to pay insurance premium [3, 12]. An epidemiological information software (*Epi -info*) was also used to determine how certain factors influence premium levels.

Results

Basic characteristics

Most respondents were in the age group 25 – 40 years with a majority of 37% grouped 30-44 years and 29% grouped 25-29 years. The least of 1% were aged 20-24 years and 2% were grouped 45-49 years. Males formed 93% of the recruited students. Eighty-four percent of the respondents were in formal public employment and 11% and 5% were in formal and informal private respectively. Specifically 44% were teachers, 18% civil servants, 10% agriculturists, 6% nurses, 4% each accountants, administrators, research officers, 3% librarians, and 1% each banker, tax officer, lecturer. Respondents were resident in different parts of Ghana; a majority of 45% lived in Accra, 17% in Kumasi, 12% in Cape Coast, 9% in Koforidua, 6% in Sunyani, 4% in Ho, and the least of 2% each in Tema and Takoradi.

Income and Hospital Laboratory visits

Respondents were grouped into three based on their income as those i) below ₦200,000, ii) between ₦200,000- ₦400,000, and iii) above ₦400,000. Those who earned below ₦200,000 were 33%, ₦200,000 - ₦400,000 were 50%, and over ₦400,000 were 17%. Those who received medical care, defined as visits to medical laboratories, varied as 40% visited once yearly, 7% thrice, 6% four times, 2% five times, and 1% six times yearly. The relationship between receiving medical care as laboratory visits and income earned by respondents is shown in Table

1. Of the 40% respondents who visited laboratory once yearly, 20% earned ₦200,000 – ₦400,000, 17% earned above ₦400,000, and 13% below ₦200,000. Those visiting twice a year, a majority of 9% earned below ₦200,000 and the least of 4% above ₦400,000. A total of 64% (16/25) of those who did not receive medical care earned ₦200,000 – ₦400,000. Generally most respondents visited hospital once or twice a year but as many as 25% (n=100) did not receive any medical care.

Table 1: Respondent’s monthly income and number of visits to hospital laboratory

| No. of visits to Laboratory | Monthly incomes | | | |
|-----------------------------|-----------------|------------------|---------------|-------|
| | Below ₦200,000 | ₦200,000–400,000 | Over ₦400,000 | TOTAL |
| One Visit | 13 | 20 | 17 | 40 |
| Two Visits | 9 | 6 | 4 | 19 |
| Three Visits | 3 | 4 | 0 | 7 |
| Four Visits | 3 | 2 | 1 | 6 |
| Five Visits | 0 | 2 | 0 | 2 |
| Six Visits | 1 | 0 | 0 | 1 |
| Nil | 4 | 16 | 5 | 25 |
| TOTAL | 33 | 50 | 17 | 100 |

Table 2: Respondent’s age and percentage income contributions to the NHIS

| Age (years) | Percentage income contributions to the NHIS per month | | | | | | | |
|-------------|---|----|----|-----|-----------|-----|------------|-------|
| | 1% | 2% | 5% | 25% | Any Limit | Nil | Don’t Know | TOTAL |
| 20 –24 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| 25 – 29 | 10 | 14 | 0 | 0 | 3 | 1 | 1 | 29 |
| 30 – 34 | 11 | 15 | 4 | 0 | 6 | 0 | 1 | 37 |
| 35 – 39 | 10 | 3 | 1 | 1 | 2 | 0 | 0 | 17 |
| 40 – 44 | 5 | 3 | 1 | 0 | 1 | 0 | 0 | 10 |
| 45 – 49 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 4 |
| 50 – 54 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOTAL | 38 | 37 | 6 | 1 | 14 | 2 | 2 | 100 |

Table 3: Respondent's sex and percentage monthly income contributions to NHIS

| Sex | Percentage income contributions to the NHIS per month | | | | | | | |
|--------|---|----|----|-----|-----------|-----|------------|-------|
| | 1% | 2% | 5% | 25% | Any Limit | Nil | Don't Know | TOTAL |
| Female | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 7 |
| Male | 34 | 35 | 5 | 1 | 14 | 2 | 2 | 93 |
| TOTAL | 38 | 37 | 6 | 1 | 14 | 2 | 2 | 100 |

Table 4: Respondent's hospital laboratory expenditure and percentage income contributions to NHIS

| Laboratory expenditure / year | Percentage income contributions to the NHIS per month | | | | | | | |
|-------------------------------|---|----|----|-----|-----------|-----|------------|-------|
| | 1% | 2% | 5% | 25% | Any Limit | Nil | Don't Know | TOTAL |
| <5,000 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 6 |
| <6,000 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| <10,000 | 6 | 10 | 0 | 0 | 1 | 0 | 1 | 18 |
| <15,000 | 5 | 1 | 0 | 0 | 1 | 0 | 0 | 7 |
| <20,000 | 3 | 7 | 2 | 0 | 0 | 1 | 0 | 13 |
| <25,000 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| <30,000 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 5 |
| <40,000 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| <50,000 | 5 | 3 | 0 | 1 | 1 | 0 | 0 | 9 |
| <60,000 | 1 | 3 | 1 | 0 | 1 | 0 | 0 | 2 |
| <80,000 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| <100,000 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| <300,000 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Nil | 12 | 9 | 3 | 0 | 6 | 1 | 0 | 31 |
| TOTAL | 38 | 37 | 6 | 1 | 14 | 2 | 2 | 100 |

Table 5: Respondent's monthly income and percentage income contributions to NHIS

| Income (Monthly) | Percentage income contributions to the NHIS per month | | | | | | | |
|-------------------------|---|----|----|-----|-----------|-----|------------|-------|
| | 1% | 2% | 5% | 25% | Any Limit | Nil | Don't Know | TOTAL |
| Below 200,000 cedis | 12 | 14 | 1 | 1 | 2 | 1 | 2 | 33 |
| 200,000 – 400,000 cedis | 19 | 18 | 4 | 0 | 9 | 0 | 0 | 50 |
| Above 400,000 cedis | 7 | 5 | 1 | 0 | 3 | 1 | 0 | 17 |
| TOTAL | 38 | 38 | 6 | 1 | 14 | 2 | 2 | 100 |

Table 6: Respondents' occupation and percentage income contributions to the NHIS per month

| Occupation | Percentage income contributions to the NHIS per month | | | | | | | |
|------------------|---|----|----|-----|-----------|-----|------------|-------|
| | 1% | 2% | 5% | 25% | Any Limit | Nil | Don't Know | TOTAL |
| Accountant | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| Administrator | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 4 |
| Agriculturist | 4 | 3 | 0 | 0 | 2 | 1 | 0 | 10 |
| Banker | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Businessman | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Civil Servant | 6 | 9 | 0 | 0 | 3 | 0 | 0 | 18 |
| Foreign Servant | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Lecturer | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Librarian | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 3 |
| Nurse | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 6 |
| Research Officer | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 4 |
| Social Worker | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tax Officer | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Teacher | 16 | 15 | 2 | 0 | 8 | 1 | 2 | 44 |
| TOTAL | 38 | 37 | 6 | 1 | 14 | 2 | 2 | 100 |

Table 7: Financier of ill-health expenses and percentage monthly income contributions to NHIS

| Who Finances Ill-health Expenses? | Percentage income contributions to the NHIS per month | | | | | | | |
|-----------------------------------|---|----|----|-----|-----------|-----|------------|-------|
| | 1% | 2% | 5% | 25% | Any Limit | Nil | Don't Know | TOTAL |
| Self | 28 | 22 | 3 | 0 | 9 | 1 | 2 | 65 |
| Other Person | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 |
| Employer | 7 | 5 | 3 | 0 | 2 | 0 | 0 | 17 |
| Scholarship | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Self and Employer | 3 | 5 | 0 | 1 | 0 | 0 | 0 | 9 |
| Self and other person | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 6 |
| TOTAL | 38 | 37 | 6 | 1 | 14 | 2 | 2 | 100 |

Premium and its determinants

More than 95% of the respondents were willing to join and contribute percentage premium to the NHIS. Those willing to pay 1% of their income as premium were 38 (n=100) but a cumulative total of 58 were willing to pay 2% or more. Respondents willing to pay any amount or limit were 14 and the least of 1 will pay 25% premium. Four respondents will not join or could not decide on premium.

By epi-info analysis age was found to positively influence premium levels. Age group 25-29 and 30-34 years had more people, 14 and 19, willing to pay 2% than the 10 and 11 people willing to pay 1%. In contrast, age group 35-39 and 40-44 years had less people, 5 and 4, willing to pay 2% than the 10 and 5 people willing to pay 1% (Table 2). Males were more willing to contribute 2% of their income than females; 38% (35/93) of the males and 29% (2/7) of the females will pay 2%. Considering those who will pay 2% or more including any limit, then sex strongly influenced premium levels as 59% (55/93) of the males were willing to pay 2% or more (Table 3).

Health expenditure was found to negatively influence premium levels. As many as 25 (n=100) respondents did not pay any amount for medical laboratory services in a year. Of the 18 respondents that spent <10,000 yearly on

laboratory services, 10 and 6 were willing to contribute 2% and 1% as premium respectively. Those who spent <20,000 yearly had 9 and 3 willing to pay 2% or more and 1%. In contrast, those who spent <50,000 per year, 3 and 5 were willing to pay 2% and 1%, whereas those who spent <100,000 per year 1 and 2 will pay 2% and 1% as premium. The only respondent who spent the highest amount of <300,000 a year on health was willing to contribute any limit as premium (Table 4). Income exhibited an undefined pattern on premium levels but influenced slightly the levels when those paying any limit were considered. Twelve (n=33) respondents earning below <200,000 and 19 earning <200,000-<400,000 were willing to pay 1% as premium, whereas 18 earning below <200,000 and 22 between <200,000 - <400,000 will contribute 2% or more (Table 5). Those earning above <400,000, 7 respondents were willing to pay 1% and 6 will pay 2% or more.

Occupation did not influence premium levels. All other professions, except teachers and civil servants, had equal numbers willing to pay 1% or 2% or more. Out of the 44 teachers, 16 were willing to pay 1% while 17 will contribute 2% or more. Six of the 18 civil servants were willing to contribute 1% and 9 will pay 2%

(Table 6). Teachers and civil servants were insignificantly more willing to pay 2% or more of years of schooling, it influenced premium levels slightly. The 3 classes were i) lecturers, teachers, civil servants, agriculturists, ii) accountants, administrators, businessmen, and iii) banker clerk, research officer, social worker, tax officer. Respondents in group i) had many more respondents willing to pay 2% or more than those in group ii) or iii).

Majority of the respondents self-financed their medical expenditure, and of the 65 (n=100) total 28 and 22 were willing to pay 1% and 2% of their income as premium. However 9 of the self-financers were willing to contribute any limit (Table 7). The 17 (n=100) respondents whose health expenditure was employer financed, 7 were willing to pay 1% and 8 will pay 2% or more. A joint self-employer financed health expenditure had 3 persons willing to pay 1% and 6 willing to contribute 2% or more. Furthermore a joint self-dependent financier had all 4 persons willing to pay 2% or more. Generally, an employer, joint self-employer and self-dependent financiers (60%, 18/30) were more willing to pay 2% or more than self financiers (22%, 22/100).

Common diseases affecting respondents

Respondents indicated they suffered from a number of diseases and the disease frequencies were determined in the study group. Malaria was the commonest disease constituting 86% of all cases and cold was second with 3% cases. Other diseases with 1% cases each were typhoid, chest-pain, headache, dental problem, peptic ulcer, urinary tract infection (UTI), sore throat, and stomach upset. Respondents who hardly or did not suffer from any disease were 2%.

Discussion

The university community at Legon includes students who come from different regions of Ghana. The work was targeted at students on study leave who earn an income. Over 95% of the respondents indicated their willingness to join and contribute a percentage of their income towards the NHIS scheme. Only 2% of the respondents did not want to join the scheme and

as premium. However when occupation was grouped into 3 classes, based on the number another 2% could not decide on a premium. Though most of the respondents resided in Accra, others came from most of the regions of Ghana including Kumasi, Sunyani, Takoradi, Ho, and Bologataga. The NHIS scheme is likely to be accepted in all the regions of the country if implemented. It is worth noting that this is the only published study where willingness to join and pay premium to NHIS involves a cross section of the community from all regions of Ghana. Earlier studies have shown that about 97% of respondents were willing to join the NHIS but these studies were focused on either rural or urban people in specific towns or cities [3, 13].

Respondents were mostly in formal public employment with majority being teachers. Teachers are most likely the professional group with well established administrative procedures and salary structures that makes it easier to computerize and refer to. The other professions may have a secretive or non-established salary structure. This could probably explain why most teachers could join the study and make known all information including their salaries. Most respondents were public employees since it could be the likely sector where further education is sponsored. Students are more informed about diseases, personal hygiene and sanitation, and could be practising preventive measures against diseases. This could be the reason why most respondents indicated they spent either nothing or very little money on health care as determined by hospital laboratory services. However, the university community was not spared from diseases as malaria prevalence was high.

Most students spent an average of ₵10,000 per year on hospital laboratory services, an amount 12 times lower than the ₵10,000 per month proposed by the MOH and also estimated in our facility based study [4, 11, 13]. The differences could be the elite community in this study knowing of disease transmission, preventive measures, and self-medication but lack finance. Most respondents earned between ₵200,000 - ₵400,000 and only 33% and 17%

earned below ₵200,000 and above ₵400,000 respectively. This is not surprising since after many years of education even those in formal

an income of less than ₵300,000 is termed lower income [13, 14]. Most Ghanaians are in the lower income class and even the higher income group earn less than \$1 a day which is below the recommended amount by United Nations member bodies.

In spite of the low individual health expenditure in this elite community, respondents were willing to pay premium to the NHIS. A cumulative total of 71% (n=100) were prepared to contribute 2% or more of their income as premium. Percentage premium is advantageous over fixed premium since it is a good indexation factor against economic fluctuations and inflationary trend described earlier [13]. By estimation the 18 respondents willing to pay 2% and earning between ₵200,000-₵400,000 will contribute ₵4,000 -₵8,000 per month suggesting ₵48,000 -₵ 96,000 per year as individual contribution. This is far more than the average ₵10,000 per year most respondents spent on health expenditure beside fatal illness or catastrophies. The contributions to NHIS scheme in such a community will therefore not only meet the operation cost but create profits if managed properly. Such contributions will help immersely communities that are deprived.

Based on epi-info analysis premium levels were found to be influenced by factors such as the financier, health expenditure, age, income, sex and not occupation. Age was found to positively influence premium levels although slightly. The observation that more elder people aged 35-45 years were willing to pay 1% instead of 2% could be probably be an indirect link to dependency ratio. Older people are likely to have more children and other dependants, which may reduce their ability to contribute to the NHIS. The younger workers with less responsibility including minimal expenditure for immediate and extended families as well as other dependants will have extra to pay higher premiums. Though our sampling was unexpectedly biased with more males than females, sex had a significant positive influence

public sector are likely to earn a middle class salary. Based on individual expenditure from utilities, rent, health and other services in Accra

on premium levels. Males were more willing to pay higher premium levels than females since 14 males, but no female, were willing to pay any limit as premium to NHIS. In Ghana most males are income earners whereas females are mostly housewives.

As income increases people are willing to pay higher premiums. When income increased from below ₵200,000 to ₵200,000-₵400,000 more people were willing to pay higher premiums. The 11 willing to pay any limit as premium 9 earned ₵200,000-₵400,000 and only 2 earned below ₵200,000. Our study did not show a strong positive influence of income on premium levels probably because of the wide range of incomes grouped together; ₵200,000-₵400,000. Occupation did not influence premium levels since equal numbers of people from variant professions, except teachers and civil servants, will contribute either 1% or 2% of their income as premium. Teachers and civil servants are not necessary the most educated or highly paid profession among the others but they had more people willing to pay 2% or more as premium. It could be that they have i) alternate health scheme, ii) employer financed health expenditure, iii) more organised labour front with certain benefits related to health. Occupation when grouped by years of education had a slight influence on premium levels. Lecturers, agriculturists, teachers were willing to pay higher premiums than bank clerks, research assistants, social workers, and tax officers. Probably with many years of education people tend to have higher positions with better incomes and are more informed to understand the need to pay higher premium.

Health expenditure influenced premium levels but negatively. More people were willing to pay 2% premium when health expenditure was ₵20,000 or lower but as expenditure increased to ₵50,000 and above they were more willing to pay less, 1%. A university community has students who hardly spend on health since probably personal hygiene and sanitation has

reduced drastically disease incidence. An increase in the health expenditure may make people want to contribute little to NHIS so that will hardly benefit from it. Thirdly they may not trust the officials and may think that their contributions will not be managed properly. Many people have strong reservations about the government-owned Social Security and National Insurance Trust (SSNIT) which is likely to run the programme. A planned educative programme by trustworthy officials coupled with co-management of the scheme by both insurer and insured is necessary to remove these fears. The only person who spent over ₵300,000 on health in this study was prepared to pay any limit. This suggests that people in fatal illness or catastrophic medical care are willing to pay higher premiums. People were found willing to pay more when their health premium is co-financed by an employer or other relations. This shows the difficulty people have in paying health expenditure and premiums. Self-financiers of health care had 28 people willing to pay 1% against the 22 people willing to pay 2% premium. However some few self-employed were willing to pay any limit probably because they were in good business or had had fatal illness that require high expenditure.

Baseline data on NHIS in Ghana is limited and till now only 3 studies have proposed premium levels. The only study on factors that explain the premium levels indicated that dependency ratio, income, sex, difficulty in paying health care or not, health expenditure and education in that order influences premium levels [3]. In our study, premium level was influenced positively by financier, sex, age, income, and negatively by health expenditure but not occupation. Similar influence patterns for sex and income were observed between the two studies with a slight variation probably due to the different analytical methods used; log probit against epi-info. Income did not show a stronger influence because respondents were grouped with a wider range. Occupation did not influence premium in both studies although this study had respondents with different professions. It however slightly influenced premium when grouped into years of schooling, which also influenced premium in the previous

more money is available to pay off the expenditure. Respondents may think contribution to NHIS is a donation since they study. Health expenditure showed a negative influence on premium in this study in contrast to Asenso et al [3] probably because of the differences in the study communities. Further studies are needed to broaden the determinants of health expenditure since not all cases reported at hospital are referred to the laboratory.

The National Health Insurance Scheme was proposed in 1994 and five pilot schemes commissioned in the eastern region of Ghana in 1997. Till date the scheme has not started operation because of operational problems and other shortcomings. Private health insurance schemes are however emerging and five different mutual health insurance schemes have started in the eastern region. These are i) St. Roses School Health Scheme at Akwatia co-managed by the Parent Teacher Association (PTA), ii) St. Dominic Hospital Scheme at Akwatia, iii) Sawmillers Employers Credit Facility at Akim Oda, iv) Ghana GPRTU Mutual Health Scheme for Koforidua members, and v) Nkwa Ye Health Scheme by Agbonyo community at Addo Nkwanta (Daily Graphic, 2001). A total of 47 mutual health insurance schemes were operating in the country by December, 2001. In Ghana the first area-wide community insurance scheme was the Nkoranza District Scheme started in 1993. The scheme was insolvent in the first two years because of low participation and low premium against high cost of operation. The scheme was partly sponsored in the 3 and 4 years but with improved education on participation targeted at 400 people, the scheme broke even in 1998 and it is since viable [15].

Conclusion

An elite community at Legon campus, with respondents from most regions in Ghana, has indicated their willingness to join the NHIS. Although their health expenditure was as low as 10,000 a year with malaria as the commonest illness, they were willing to contribute 2% of their income as premium. The premium level was found to be influenced positively by

financier, sex, age, income and negatively health expenditure but not occupation.

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