Factors Influencing Community Health Fund Enrollment: A Case of Modified Communnity Health Fund in Dodoma Municipality

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Abstract

This paper presents the results of a study on factors influencing Community Health Fund (CHF) enrollment, using a case of Modified CHF in Dodoma. The study was carried out in 11 wards in Dodoma municipality for three months, from December 2013 to February 2014. Specific objectives of the study were to examine trend of enrollment in modified CHF, to identify factors influencing modified CHF enrollment and to evaluate weaknesses and strengths of modified CHF enrollment. Cross section design was used in the study. Snow ball sampling was used to obtain 152 CHF members. Primary data were collected using questionnaire where as secondary data were obtained from CHF documents in Dodoma municipality office and publications from the internet. Data analysis was done using logistic regression to determine factors that influence CHF enrollment. The results revealed that household size, medical expenses and marital status significantly influence decision to enroll. The level of risk and availability of alternative health insurance affect the decision to enroll.

Key words: Community Health Fund, Community, Health Insurance, Enrollment

1. Introduction

Poverty eradication has been a priority in many development plans and strategies in many Least Developed Countries (LDCs), Tanzania being one of them (URT, 2003). In order to achieve the set development objectives, there are reforms made in various sectors of the economy, including the health sector. Public Service Reform Program (PSRP) aims at ensuring effective service delivery within priority sectors including the health sector (Nhembo, 2010). One of the reforms in the health sector is the introduction of user fees and service charges. User fees and service charges are normally done as post payments and make health services unavailable to majority of community members. To make health services available to majority, an alternative mechanism for contributing for health services in terms of pre-payment was introduced in many counties worldwide (Shaw, 2002).

In most developing countries, the pre-payment as an alternative to user fees is implemented through the Community Health Fund (CHF). This is a voluntary annual contribution scheme which gives opportunity to members of a household to get pre-paid medical services for a period of 12 months (Shaw, 2002; Sendoro, 2007).

CHF in Africa has a proper backup of the policy as well as plans and strategies at all levels from international to national levels. The major shortcoming observed is the mechanism used in enrolling members in the scheme. Efforts to reach the poor are minimum and they are under-represented among the insured. In Bukina Faso in Nouna district, in 2004, only 11% of the insured were poor (Morestin and Ridde, 2009).

Insurance requires its members to pay premium, having the understanding of the importance of healthy nation, countries such as Rwanda provided subsidy to the premium contributed by its people for health insurance. This could not be effective since 74% of the total population by 2006, could not enjoy the subsidy (Morestin and

Ridde, 2009).

In 1994/95, the Government of Tanzania collaborated with the World Bank to design an approach to improving the financing and provision of health care. The Ministry of Health (MOH) introduced CHF to make health care affordable and available to the people in rural areas and those who are employed in the informal sector. This is done through voluntary prepayments from households. The scheme started in 1996 in Igunga as the pilot district, and by the year 2013 it had expanded to other districts. In Tanzania, health financing for the poor in the form of CHF maximizes inclusion of the poor and marginalized (Mtei and Mulligan, 2007). This scheme ensures pooling of risk among the poor and, thus, manages to get health services throughout the year.

Further, in Tanzania, the community is informed about CHF, this is mainly through sensitization done by CHF officers in various districts as well as through the mass media. In a study to investigate desirability, challenges and

options for launching CHF scheme in Kagera district, 70% of the respondents acknowledged to have heard about the scheme (Mubyazi and Borg, 2012). This suggests that there is adequate understanding of CHF among Tanzanians(Mubyazi and Borg, 2012).

However, CHF faces various challenges among them are inadequate management skills among CHF coordinators, poor quality of care and lack of accountability to the community. Further, leakage and loss of fees collected and misuse of membership cards are also setbacks to the willingness of community members to be enroled (Sendoro, 2007).

After observing the challenges facing membership enrollment as clarified by Sheuya (2010), Dodoma region improvised a modified CHF (CBHI, 2013). Enrollment in modified CHF is done electronically whereby members are registered and details conveyed to the database using mobile phones. Members are identified using numbers

and names as per registration during enrollment and can be recognized and served in any health facility having CHF service within the district of registration. This kind of enrollment minimizes cost and saves time for processing cards for the members. Although Dodoma region introduced the modified CHF (CBHI,2013), there is no evidence that this scheme provides a true opportunity for high membership enrollment. In Dodoma municipality the enrollment in the modified CHF for the year 2013 was observed to be at an average of 67 members per month. This was below the target of enrolling 150 members per month, in same year there were 2890 members (CBHI, 2013).

The study, therefore, determined factors that influence the enrollment on CHF members and the specific objectives of the study were to examine trend of enrollment in modified CHF, to identify factors influencing modified CHF enrollment and to evaluate weaknesses and strengths of modified CHF enrollment.

2. Study Area and Methodology

The study was carried out in peri urban and urban wards of Dodoma municipality. The urban wards were Kikuyu South, Kikuyu North, Viwandani Hazina and Kizota. Peri urban wards included in the study were Ntyuka, Ng'ong'ona, Msalato, Miyuji, Chigongwe, Mkonze, wards of Dodoma municipality. These wards had members of CHF and those who were non-members. A total of 152 household heads from 11 wards of Dodoma municipality were interviewed. They were obtained by non-probability sampling technique which was snowball sampling. The sampling technique was used because CHF members were scarted and in order to get them for interview, a member was used to locate fellow member who was aware of CHF. Both descriptive and inferential statistical analyses were carried out using STAT software. STATA was used to run logistic regression model determine the factors that influence enrollment. The model was as follows:

$$y = \beta_0 + \beta_1 healins + \beta_2 adv + \beta_3 medex + \beta_4 hhi + \beta_5 hhs + \beta_6 occ + \beta_7 mar + \beta_8 edu + \beta_9 age + \varepsilon$$

Where;

y is decision to enroll (given as, 1 = enroll and 0 = not enroll)

β_0 is the intercept

β_1 to β_9 are parameters estimated

ε is the error term

The characteristics investigated to probably affect decision to be enrolled in CHF were, having alternative health insurance (HEALINS), frequency of advertisement (ADV), medical expenses (MEDEX), household monthly income (HHI), household size (HHS), occupation (OCC), marital status (MAR), number of years of studying (EDU) and age.

3. Results and Discussion

3.1 Social, Economic and Demographic Characteristics Affecting Decision to Enroll

Basing on the results in Table 1, it is revealed that medical expense, household size and marital status were significant in explaining the decision of non-members to be enrolled in CHF. Basing on their coefficients, medical expenses and household size

affect positively the decision to enroll while marital status affects negatively the decision to enroll.

Table 1: Regression results

Variable	Coef.	Std. Err.	P>|z|	Odd Ratio
HEALINS	-7.763248	8.137319	0.340	.0004251
ADV	.104178	.1296972	0.422	1.109798
MEDEXP	.0000252	.0000146	0.085*	1.000025
HHI	-9.49e-07	1.60e-06	0.554	.9999991
HHS	.1688561	.0922294	0.067*	1.18395
OCC	-.7335189	.487834	0.133	.4802162
MAR	-1.255338	.501594	0.012*	.2849794
EDU	.1128658	.0789661	0.153	1.119482
AGE	.0053402	.0194532	0.784	1.005354

* Significant at 10%

From the results in Table 1, household size (β = 1.184, p-value 0.067),does notinfluence CHF enrollment.CHF members incur less medical costs as compared to non-CHF members. Thus, household size does not necessarily increase the chances of people to decide to enroll in CHF.

The results suggest that being a CHF member reduces the cost incurred for health services and people not enrolled in CHF experience high medical expenses. This because, a membership fee of TZS 10,000 is paid once in a year and covers all medical expenses for the year. This makes medical costs cheaper for CHF

members as compared to non-CHF members who pay more than TZS 10,000 for their medical costs annually in terms of user fees and service charges. In addition, medical expenses are associated with the household size, such that the larger the household the higher the level of medical expenses provided that all members have the same chance to get ill.

Marital status (β = 0.285, p-value 0.012), hinders the decision to enroll to CHF. This is because income of the married is secured compared to the income of the unmarried, thus, the unmarried are attracted to enroll in CHF in order to be able to meet medical expenses at a lower price of TZS 10,000. paid as the annual CHF membership fees. Further, if the married and the unmarried have the same number of dependents in their households, the burden of medical costs for the unmarried is heavier as compared to the burden of the married. Thus, the unmarried enroll in CHF to decrease the burden of medical costs. Thus CHF enrollment is negatively

influenced when people are married.

These results are similar to those obtained by Oriakhi and Onemolease (2012), who observed that household size (β = 0.507), medical expenses (β = 0.316) and income (β = -0.410) were significant in explaining the willingness to be enrolled however, Mubyazi and Borg (2012) observed opposite results on the willingness to be enrolled as an influence of marital status. Their study showed that, married people were willing to join CHF as compared to the unmarried. This difference can be caused by the analysis model used since this study used logistic regression model while Mubyazi and Borg (2012) used frequencies and percentages in explaining their results.

3.2 Level of Risk
The level of risk of being ill has influence on decision to be enrolled to CHF and can be explained in terms of type of disease and frequency of suffering. Types of diseases in the study were airborne diseases (Tuberculosis and Flue), waterborne (Amoebic dysentery, Cholera,

diarrhea) diseases and vector transmitted diseases (Malaria and Trachoma). The groups were made depending on how a disease is transmitted from one person to another.

Results of the study revealed that, 61.8% of community members suffer from vector transmitted disease mainly malaria as shown in Table 2.

Table 2: Types of diseases

Type of disease	Frequency	Percentage
Airborne	20	13.2
waterborne	38	25.0
Vector transmitted	94	61.8

This implies that people are at risk; however, the cost of treating malaria is relatively cheap as compared to other diseases. This is because malaria symptoms are known and medicines to treat malaria are available in almost all pharmacies at an affordable price (URT, 2013). Thus in explaining the decision to be enrolled basing on the influence of risk, frequency of suffering is more effective as compared to type of disease.

Table 3: Frequency of suffering

Variable	Frequency of suffering in a year		
	Frequent	Less frequent	Total
Willingness to be enrolled	5 (3.28)	97 (63.85)	102 (67.10)
Not willing	11 (7.24)	39 (25.66)	50 (32.90)

Figures in brackets are percents

Table 3 shows that, 63.9% of people who suffer less frequently are not willing to be enrolled in CHF. This is mainly caused by low cost of medical expenses they incur in a year. This is opposite to those who suffer frequently; they have more medical expenses and thus willing to join CHF. This implies that enrollment to CHF depends on the level of risk. The higher the level the likely the decision to be enrolled is made.

The results of the study are similar to what is explained in the expected utility theory by (Scheneider, 2004), that; when there is high level of risk people decide to have insurance. Thus, basing on the expected utility theory, people with high suffering frequency will experience higher

utility when insured as compared to those with low suffering frequency.

3.3 Availability of Alternative Health Insurance Services

In Tanzania, there is another health insurance service apart from CHF. This insurance is National Health Insurance Fund (NHIF) that offers health insurance to government employees and it is a compulsory scheme. The availability of an alternative health insurance scheme causes people not to be enrolled to CHF.

The study revealed that, people who are insured by another health insurance are not willing to be enrolled in CHF. The implication of the results is that, alternative health insurance services decreases the rate at which people enroll to CHF. Basing on consumer theory (Jehle and Reny, 2011), NHIF can be taken as substitute of CHF, to people insured by NHIF. These face a low cost of substitute and thus tend not to consume CHF.

4. Conclusion

Decision to enroll to CHF is influenced by medical expenses and household size, while marital status has negative influence. Also the higher the level of risk in term of frequency of suffering from diseases, the more people become willing to enroll to CHF. Further, availability of alternative health insurance services makes people not to decide to be enrolled to CHF.

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