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Desirability, challenges and options for launching a community health fund scheme in Tanzania: interview-based views from community members and health managers in Kagera Region and review of lessons from other CHF implementing districts.

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ABSTRACT

Objective: To analyze community and health managers' views about desirability of, and challenges to launching a community health fund (CHF) scheme in Kagera Region, Tanzania.

Methods: 301 household members in three districts were interviewed, preceded by interview of 191 same members as a baseline survey in another district, supplemented by health communications with health managers at regional and district levels. Additional data were obtained through review of reports from other districts regarding their experience with CHF implementation. Data were analysed using STATA software programme.

Results: About 73% of all respondents were involved in petty farming as their main occupation. All respondents acknowledged to have heard about the CHF scheme mainly through local health committee members and mass media. Nearly 54% of the respondents expressed a positive willingness to pay (WTP) Tanzanian Shillings (TZS) 10,000 premium rate per annum for their households to enrol into the CHF scheme. Only 28.1% perceived that their households would be able to pay immediately, the remainder include those who were uncertain or/indifferent about their ability to pay (ATP) and those unwilling. The mean and median WTP amounts were TZS 7,098 and TZS 6,500, respectively. Seasonal unreliability of cash intensified doubts about ATP of some households. Perceived households WTP was significantly higher among the respondents with formal education and those married than their counterpart groups. Some respondents urged the authorities to allow in-kind payments, however, critics were concerned about the acceptability of such payments to service providers and quality of care at healthcare facilities if a CHF scheme were launched. CHF scheme was viewed as a potential option alternative to out-of-pocket user-fees paid at healthcare service counters. The scheme has so far been operating in more than half of the districts throughout Tanzania, but rates of enrolment have remained lower than anticipated.

Conclusion: With proper public sensitization on health insurance issues and setting affordable premium rates and acceptable payment modalities, households' WTP to join CHF scheme would increase to minimize chances of healthcare payment difficulties at the onset of illness or injury.

***Keywords*.** Community, prepayments, health insurance, poverty, health financing, care reforms

INTRODUCTION

For a little more than two decades now, the national and international research and policy debates on Health Sector Reform (HSR) have focused on health-care cost sharing, efficiency and equity in financing, decentralization, accountability, responsiveness, good governance, and popular participation in priority setting in health programs [1]. There has been a renewed and increasing interest in health financing mechanisms that were considered potential for improving coverage and equity in access to essential health-care by poor, marginalized and vulnerable groups, although the ambitions seem to be higher than the reality on the ground because of the challenges confronted in schemes' practice [2]. In sub-Sahara Africa (SSA), the period between late 1980s and late 1990s marked the transition of healthcare financing reforms from largely user-fee based to compulsory national health insurance and voluntary prepayment systems [3-5].

The introduction of user-fee in public healthcare facilities (HFs) has inarguably enabled public healthcare departments to mobilize revenue to recover part of the service delivery costs, but it has raised critical debates about the implications for poor and vulnerable groups [4, 6]. Thus, critics continue advocating for other modalities of payment such as those implemented under the Bamako Initiative (BI) [7]. Theories and some field experiences show that community based insurance mechanisms offer an opportunity for the poor to mobilize resources, and reduce the adverse consequences of disease associated with user-fees collected at the time of healthcare utilization [5, 8]. Proponents for community health insurance schemes in East Africa, as elsewhere in the world, maintain that this financing strategy is a safety net for the members of the society as it pools and distributes costs of health risks based on acceptable premium prepayment for any unavoidable or emergent disease or injury that can face any person anytime [9].

The Tanzanian national health policy has always aimed at improving the health and wellbeing of all the people in the country with priority directed to those most at risk by ensuring that health services are available, accessible, affordable and equitable to all populations in the country. Amongst the strategies recommended towards attainment of this goal include ensuring that communities are involved in setting health priorities and healthcare financing including healthcare prepayment schemes [10]. Essentially, community health funds (CHFs) are part of the recommended prepayment mechanisms aimed at protecting the population at risk, contributing to improved quality, affordable and equitable healthcare services, fostering community empowerment, with particular emphasis on people found in the informal sector, throughout the year [11]. By simple definition, a CHF scheme in Tanzania is a voluntary pre-payment scheme, which offers a client (household) the opportunity to acquire a "health card" after paying contribution, and a household can be an individual or a family and is renewed after every 12 months [12].

Most of the financing reforms including user-fee and CHF schemes have begun in the last two decades in Tanzania [13]. As part of national health financing reform (HFR) processes, the CHF in Tanzania was

implemented in phases, starting in Igunga district in Tabora Region in 1996, followed by several districts [11] before being enrolled in other districts throughout the country including those in Kagera under the Act of Parliament [12]. When it was started in each of the stated districts of Tabora Region, household annual membership fee was TZS 5,000 while the same amount was contributed by the government to cover the estimated cost of member households' annual health-care service needs according to the existing service package [12]. This cost-sharing arrangement was much welcomed instead of the whole amount being paid by individual households [10, 14]. However, knowledge on the feasibility of the proposed financing approach under CHF is still inadequate due limited empirical evidence.

This paper combines evidence from a survey done to assess the desirability of and possible challenges to the introduction of a CHF scheme in Kagera Region, Tanzania from the perspective of household members and district council and successful(or is this meant to be successive) regional medical Officers (RMOs) for Kagera Region to assess the status of CHF implementation for the time being after the mentioned study. The latter study was commissioned by the Ministry of Health (MoH) with financial support from DANIDA and one of the deliverables was to come up with recommendations on potential mechanisms for fostering household membership to a CHF scheme using lessons learned also from other districts [10, 13-14].

METHODOLOGY

Conception and Design

The study in Kagera Region was in three phases, beginning with a baseline (pilot) survey of households in 2001 in Muleba District, followed by the main and actual survey of households between April and May 2002 in three districts (Karagwe, Bukoba Urban and Bukoba Rural), and later on, particularly between November 2011 and April 2012, telephone based interviews and personal communications with the RMOs for Kagera Region and several members of the district CHMTs in that Region. In the latter phase, the aim was to assess the status of CHF implementation for the time being, about 10 years after the feasibility study was carried out. The study was designed based on a simple conception or assumption that the structure, desirability and viability of any financing system in light of HFR could depend on such factors as household willingness to pay (WTP), ability to pay (ATP), perception of quality of care if they joined a financing scheme, experience with previous or current payment system, current or anticipated health-care needs, disease status, interpersonal relations including income ownership and power relations within the family/household, information and service providers accessibility, and organization and management of health services at different levels. These elements shaped the types of the study questions used.

Essentially, the need for this study evolved from Kagera Region in 2001 whereby the Regional Health Management Team (RHMT) in collaboration with the MoH through the Health Sector Program Support

(HSPS) II Unit defined the terms of reference and contacted the National Institute for Medical Research (NIMR) to develop a research proposal. The proposal submitted by NIMR was reviewed by the Kagera RHMT in collaboration with the MoH HSPS II officers and gave comments for incorporation in the revised version of the proposal/protocol. This was followed by a pilot survey of 191 households in Muleba district in Kagera Region as baseline for testing the relevance of the research instruments to be used later in the main survey in all districts throughout the Region. The main survey advanced in all the six districts - Bukoba Urban, Muleba, Bukoba Rural, Karagwe, Ngara and Biharamulo. Although this paper focuses on the quantitative data from household survey, multiple sources of information were used, including interviews with community-based health programme representatives among whom were local government leaders, healthcare workers (HWs), district health managers such as district and town Council Health Management Teams (CHMTs) and the RHMT.

Study areas

Located in north-western Tanzania, Kagera Region is bounded by Lake Victoria on the east and countries of Uganda (North) and Rwanda and Burundi (West). According to the national census of 1992 conducted by the National Bureau of Statistics, the Kagera Region had an estimated population of 1,853,942 and a total of 315,377 households in 25 divisions, and was characterised as a multi-ethnic region, dominated by the *Haya* residing mainly in Bukoba Uran, Bukoba Rural and Muleba districts, *Hangaza* (in Ngara), *Subi* (in Biharamulo) and *Nyambo* (in Karagwe). Farming has traditionally been the main occupation of the residents, the main food crops being bananas, sweet potatoes, yams and beans while the main cash crop is coffee and partly firewood mainly from the eucalyptus trees grown by a considerable proportion of the families. Malaria has been the major public health problem, but HIV/AIDS reported first from this Region in 1983 has been one of the major killer diseases among adult people [15-16].

Study population and Sampling Strategies

A multistage sampling approach was used towards selection of study households and household members, as applied elsewhere [17]. The study villages visited include Kangantebe, Muleba, Rubya, and Kyebitembe in Muleba; Kishao, Nyabusimbi, Karukwanzi and Bisheshe in Kaaragwe; Kanazi, Kashambya, Igombe, and Kassambya in Bukoba Rural; Kitendaguro, Bakoba, Bilele (Omukigusha), Kashai (Mafumbo A and B), Rwamishenye (Mtaa wa Kanisa), and Nshambya-Kijiji in Bukoba Urban. No household interviews were held in Biharamulo and Ngara districts due to time constraint for the study, but opinions were obtained from interview conducted with the District Executive Director at the village (in rural settings) level or streets (in urban settings, the members of households were identified through a simple random sampling approach. Attempt was made to select representative villages/neighbourhoods from different divisions, among which were those located closer to, and those located far away from health facilities (HFs). Focus on both private and public HFs was ensured as the respondents might have had different perceptions about this in relation to quality

and affordability of care elements. The private HFs include those owned by faith-based organizations (FBOs), commercial (popular as private-for-profit) and other voluntary/charity organizations.

Table 1. Sampling approaches – Kagera CHF study, 2002

Variable	*Sampling Technique*	*Selection Criteria*	*Sample Size*
Districts	Non-probability	Representation of ethnic groups dominantly residing in different districts	6
Divisions	Purposive	At least 1 division hosting a hospital – government, district designated hospital (DDH) or any other in each district	6
Villages/Streets	Multi-stage random	At least 2 settings representing rural/remote areas, others (at least 2) representing urban/peri-urban areas in each district.	24
Individual Household Members	Simple random	Adult heads of households or their representatives who knew household issues well. One household member, total 25 households per each of the 4 villages/streets selected per district	301

Data Collection

The particular areas where the data were collected in each district are presented (Table 2). The survey involved use of a structured questionnaire. The questionnaire had a few open-ended questions, the majority of the questions were closed-ended. Investigation was done about the respondents' stated/perceived willingness-to-pay (WTP) TZS 10,000 or a little less (e.g. 5-9 thousand TZS) per household in order for their households to register to a CHF scheme under which they could access health-care services throughout the year without having to pay out of pockets at the healthcare service counter. Questions also addressed the desired modalities of payment for CHF membership, including whether to pay cash promptly or by installment; issues related to quality of health-care services, eligibility of households to pay for CHF, frequency of episodes of illness among the household members in the past four months prior to this study, and intra-household power relations including

decision-making power for use of household income. Interviewees were also asked about how many times they failed to work due to illnesses in the last one year and implications of the illness episodes on the their ability to raise money for expenditure on basic needs including health-care. Their demographic characteristics were also assessed.

Data Handling and Analysis

Data entry was done using EPI-Info programme and were analysed using STATA 6 statistical software programme. One -way frequency distribution of the data from the individual questions were tabulated, followed by some cross-tabulations to compare the proportions of some of the responses obtained using Spearman's Chi-square ($\chi 2$) tests. Statistically significant associations was considered at a P-value$\leq$0.05. Regression analysis planned to be done before could not be possible due to eventual loss of the original data set after computer breakdown. The percentages expressed for the different results shown were calculated based on the number of the responses obtained for each individual question instead of overall sample of study interviewees.

Ethical Considerations

The respondents were asked for their consent to participate after being given explanation about the expected benefit of the study, their right to decide or decline voluntarily to participate without cohesion or intimidation anyhow, anonymity of the information they wished to be treated confidentially, time to be spent in the study without any monetary or material compensation, and plan for disseminating research findings to policy authorities and other potential audiences. They were also asked to sign an informed consent form if willing. The research proposal was approved by the national and regional bodies concerned.

RESULTS

Characteristics of household participants

The characteristics of the study households are as shown in Table 2 below. The mean and median ages of the 296 respondents who stated their age were 45.7 years and 42 years respectively, the range being 18-87 years. Nearly 90% of the respondents were Christians, the rest were Moslems. Ethnically, the Haya accounted nearly 70% of all respondents, followed by Nyambo who accounted about 24%); the rest were other tribes (Table 2). Of 299 respondents who specified their marital statuses, about 70% were married, 15.4% were widowed, 7.7% were single and the rest were either separated or divorced. The mean family size of 301 households was 6 people.

Table 2. Socio-demographic characteristics of 301 household participants in Kagera Region study

Characteristic	*n (%)*
(i) Gender: *Males*	157 (52.2)
-Religion: *Christians*	265(88.5)
-Ethnicity: *Haya*	207(68.8)
-Marital Status: *Married*	201(69.9)
-Households with children aged below 5 years (*under-fives*)	175(58.1)
-Households with *handicapped* family member(s)	30(9.9)
-Households with members who attained only *primary level education*	284(94.4)
-Households with members who attained education *higher than primary level*	96(31.9)
-Household respondents involved in farming/agriculture as main occupation	220(73.3%)
-Household respondents engaged in retail business as income raising activity	61(20.3%)
-Household respondents working as public/civil servants	24(7.9%)

Awareness about the CHF and perceived WTP for joining a CHF scheme

HFR as part of health sector reform (HSR) was generally perceived as a concept related to introduction of the user-fee system in the public HFs in the recent years for the services that were previously being delivered free of charge to all users irrespective of their incomes or ATP. All the respondents acknowledged to have heard about the CHF scheme either through local healthcare committee members or through the mass media especially the national radio. However, not all of them could explain well what it actually meant and how it was expected to operate.

Only a little more than half out of 301 household respondents expressed their perceived (hypothetical) WTP TZS 10,000 per household promptly for their households to be able to enroll into the CHF scheme if launched in Kagera (Table 3). The rest, i.e. 45(15%) were uncertain/indifferent of their WTP mainly because of not being sure of their ability to raise cash while 96(32%) were totally unwilling. Regarding those who had ever become ill in the previous four months, 205(68.1%) so affirmed, the rest denied. Only about 36% of the households with at least one member having suffered an illness and about 18% of those who did not have any household member who had faced an illness expressed a positive WTP. In contrast, about 24% of those who had faced illness and about 8% of those who had not, did express un-WTP.

Table 3. Perceived WTP TZS 10,000 among 301 households in order to register in a CHF scheme in Kagera

Household's WTP	*(a) Suffered in the last four month?*		*(b) Not suffered in the last four months*		*Overall answers (a+b)*	
	n	%	n	%	n	%
Yes	108	35.9	53	17.6	161	53.5
No	71	23.6	25	8.3	96	31.9
Maybe/Depends/Don't know	26	8.6	18	5.9	44	14.6
Total	205	68.1	96	31.9	301	100.0

Contrary to what was expected, the difference in the WTP between the respondents whose households had at least one member having had experienced illness episodes and those without any ill member in that period was not statistically significant. Of the 161 respondents who positively stated their WTP, females were 69(42.9%) and this was expected since the number of male heads of households who were involved in the overall study sample was greater than that of females, this indicating the culturally family-male dominated communities.

20(6.8%) out of 295 respondents who were asked to state the position of their households regarding WTP TZS 10,000 for registering in a CHF scheme at least through paying in installments if such a payment modality were allowed did not confirm so. For instance, they gave such answers as 'maybe', 'it depends', and 'don't know/not sure'. Meanwhile 35(11.9%) still expressed their un-WTP while only 83(28.1%) expressed a positive WTP.

During the pilot household survey in Muleba district, heads of households were asked to express the position of their households regarding WTP TZS 5,000 if their households were to join a CHF scheme. At the time, the official amount in other districts where the CHF scheme had started was TZS 5,000 annual rate, for example in Igunga [10, 14], although in other districts the rate started as high as TZS 15,000 [2011]. Of the 191 interviewees, 118(61.8%) had expressed a positive WTP, 53(27.5%) perceived their households to be un-WTP while the rest were uncertain on whether or not they would be willing. In the main/actual survey, the respondents were asked to state their perception as to whether or not their households would be willing to pay if the

premium rate were a little less than TZS 10,000. Clear answers to this question were obtained from 138 households among whom only 63(45.7%) were males. Out of 138 respondents, the males who expressed a positive WTP were 42(30.4%), 11(7.9%) indicated un-WTP, while the rest were uncertain. Females were 75(54.3%) out of overall 138 respondents, and those who expressed a positive WTP were 41(29.7%). Meanwhile, 24(17.4%) expressed un-WTP and the rest were uncertain/indifferent. The mean and median WTP amount by those who responded positively if the annual CHF premium rate were a little less than TZS 10,000 were TZS 7,098 and TZS, 6,500 respectively. Overall, 19.3% of the respondents suggested TZS 5,000, 4.7% TZS 2,000 while 2.7% TZS 1,000, the proposed rate having ranged between TZS 500 and 30,000, albeit the TZS 30,000 was suggested by only one respondent.

Proxies of ATP an annual premium of TZS 10,000 for CHF by each household

Disposable cash income

Regarding the cash incomes earned one month before the present study, the responses were obtained from 296 interviewees. A third of the households earned less than TZS 5,000 and about the same proportion earned less than TZS 15,000. Only 11% earned more than TZS 50,000, suggesting that the majority of households could be living below US$1 per day (Table 4).

Table 4. Estimated levels of cash income obtained by households in the past one month as stated by 296 household respondents Kagera Region (by 2002, TZS 950-970 = US$1)

Cash Income earned per month (TZS)	*n (%)*
<5,000	86 (29.1)
5,000 – 15,000	89 (30.1)
16,000 – 30,000	41 (13.9)
31,000 – 50,000	29 (9.8)
>50,000	32 (10.8)
Couldn’t estimate/remember	19 (6.4)

Furthermore, out of 296 respondents, 153(51.7%) were males of whom 44(28.8%) stated to have earned less than TZS 5,000, 51(33.3%) earned TZS 5,000-15,000, while only 12(7.8%) earned more than TZS 50,000 (Table 5).

Table 5. Estimated levels of cash income obtained by male and female household respondents (n=296) in the past one month in Kagera Region (by 2002, TZS 970 = US$1)

Cash Income earned per month (TZS)	*Male respondents*		*Female respondents*	
	n	%	n	%
<5,000	44	28.8%	42	29.4
5,000 -15,000	51	33.3%	38	26.6
16,000 – 30,000	27	17.6	14	9.8
31,000 – 50,000	12	7.8	17	11.9
>50,000	12	7.8	20	13.9
Couldn't estimate/remember	7	4.6	12	8.4
Total	153	100	143	100

Monthly cash budget expenditure on basic and non-basic needs of households

Understanding that sometimes people hesitate stating their actual incomes for various reasons some being social and some being associated with fear of being known by the tax authorities or thieves, one question was posed to measure households income indirectly. This was done by asking the respondents to state their household expenditures on a sample of their basic needs such as food and utilities and luxury needs such as smoking and alcohol so as to allow comparisons to be made between the stated incomes and the expenditures as the two are not always equal. Notably, the mean monthly expenditures on these exceed the amount they would be required to pay for joining a CHF scheme at TZS 10,000 per annum (Table 6).

Regional Officers commented that over-reliance on a single main cash crop – 'coffee' whose prices fluctuate in the domestic and world market regularly as well as the hunger contributed by a downfall of banana harvest – the chief and staple food crop in the region perpetuate poverty and has been one of the drawbacks to community members in enrolling into the CHF scheme.

Marital status

WTP a TZS 10,000 premium for CHF was also assessed by looking at the respondents who were currently married and living with spouses and those who were single (or ever married before). Out of 134 respondents of both sexes who expressed a positive WTP, 121(90.3%) were married, the rest were single. Even a greater proportion of those who expressed an un-WTP were married and this is because most of the interviewees were married (Table 1). The widowed were 38 in total and their answers indicated 16(42.1%) positively willing while 22(57.9%) were not willing. Of the 181 married, 121(66.9%) were positively willing while 60(33.1%) were unwilling, and in this case the observed difference was statistically significant ($\chi 2$ (1)=8.2; p=0.004).

Educational level

The perceived household WTP TZS 10,000 for CHF membership assessed relative to the level of education attained by the respondents indicated that a higher proportion of those with formal education indicated a positive WTP than those who never attended school (Table 7). The observed difference in this case was statistically significant ($\chi 2$ (1)=10.9; P=0.001).

Table 6. Monthly cash budget expenditure (in TZS) on basic and non-basic needs among 301 households in Kagera Region studied in 2002 (US$1 = 950-970 TZS)

Item	*Respondents n (%)*	*Mean Amount*	*Median Amount*	*Range*	*Remarks*
Kerosene	272(90.4)	1,717	1,000	40-12,600	Basic
Salt	289(96.0)	436	400	50-400	Basic
Big fishes	162(53.8)	2,870	2,000	100-20,000	Basic
Dagaa fish	247(82.1)	1,491	1,000	200-12,000	Basic
Meat	176(58.5)	3,672	800	300-30,000	Basic
Maize	129(42.9)	2,875	2,000	200-12,000	Basic
Rice	158(52.5)	3,106	2,000	2,000-16,000	Basic
Beans	90(29.9)	2,147	1,800	250-10,000	Basic
Bananas	79(26.3)	5,195	4,000	280-44,000	Basic
Break-fast bites	72(23.9)	2,705	2,000	100-16,800	Basic
Match-boxes	273(90.7)	227	160	20-1,600	Basic
Anti-malarial drugs	63(20.9)	1,073	1,031	100-5,000	Basic
Anti-worms	259(86.1)	2,140	685	20-2,400	Basic
Soap	271(90.0)	1,599		400-16,000	Basic
Mosquito coils	34(11.3%)	2,368		200-2,000	Basic
Wood charcoal	103(34.2)	4,065		100-2,000	Basic
Soda	68(22.6)	1,794		200-9,000	Luxury
Beer	40(13.3)	6,806		600-33,600	Luxury
Local brew *Rubisi*)	80(26.6)	1,405		150-8,750	Luxury
Cigarettes	27(8.9)	2,527		280-8,400	Luxury
Electricity	55(18.3)	2,891		200-10,000	Luxury

Table 6 about here

Table 7. Comparison of Perceived WTP TZS 10,000 in order to register in a CHF scheme: by level of education

WTP	*Yes*	*No*	*Maybe/Uncertain*	*Total*
	n (%)	*n (%)*	*n (%)*	*n (%)*
(i) Incomplete primary education	25(8.3)	27(8.9)	13(4.3)	65(21.6)
(ii) Full Primary education	132 (43.9)	61(20.3)	26(8.6)	219(72.8)
(iii) No formal education	4(3.0)	8(2.7)	5(1.7)	17(5.6)

Table 7 about here

Family dependants

It was assumed from the design of the study that having a child aged below five years in the household could increase the chance of the household concerned to have experienced illnesses (at least for malaria) in the past few months. This is because of the possible vulnerability of children aged below five years like the pregnant women to infectious diseases especially malaria. Thus, the respondents were asked about to confirm the presence of children under-five years (under-fives) in their households. Answers from 175 respondents indicated that 152 expressed a positive WTP TZS 10,000 for CHF membership, the rest denied. Those from households without under-fives who expressed a positive WTP were 61(58.1%) out of 105 respondents, the rest denied. No statistically significant difference was observed in the expressed perceptions in the latter case.

Mechanism/Modality of premium payment for CHF enrolment

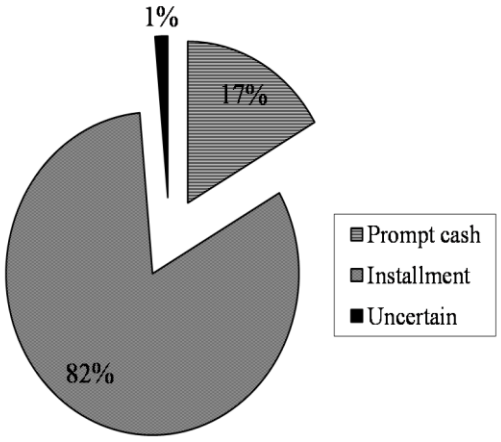
The question about the preferred modality of payment of the CHF premium was answered by 299 respondents and majority of these respondents preferred payment by installment to paying all the cash required promptly (Figure 1). Variations were noted between the perceived WTP in cash or in-kind. Of the 98 individuals who responded on this aspect in Karagwe district, 79(80.6%) suggested cash payments, 10(10.2%) suggested in-kind payments (e.g. cash crops, animals or casual labor), 5(5.1%) suggested either cash or in-kind depending on the situation, while the rest suggested no payment at all. A similar trend was observed in other districts e.g. Bukoba Urban whereby out of 103 respondents, 84(82.4%), 7(6.9%), 6(5.9%) and 5(4.9%) suggested cash , in-kind, either cash or in-kind, and no payment at all, respectively. Expressing their concern, a number of the respondents questioned: *'how many chickens have to be exchanged*

for a dose of anti-malarial drugs? *How many sacks of beans or coffee have to be exchanged for health services…..and will the service providers like these materials…likely not*! This view was similarly shared by the district and regional level officers who were sceptical about the acceptability of in-kind payments including the logistics to be involved in their mobilization and use when it comes to purchasing healthcare related services/materials.

Inability to work due to illness episodes

The mean number of the days lost due to illness or taking care of an ill family member was 22 days, range being 1-275 days per annum. Of the 300 respondents to the question posed, 297(99%) had their spouses or other relatives having had lost several working days, the mean number of the days lost being 5. Sixty seven (21%) reported their spouses to have had lost 1-4 workdays in the last one year taking care of their ill relatives. Most of the respondents viewed having a CHF scheme as a guarantor for receiving health care in the absence of disposable income.

Fig. 1. Preferred modality of 10,000 TZS as CHF premium payment among households in Kagera Region (n=299)



Control of household Income

Out of the 301 households visited, 247(82.1%) were headed by males while the rest by females. From the 300 clear answers to the question about who makes final decision on expenditure of cash incomes raised in the household, 261(87%) and 24(8%) mentioned men and women, respectively; the rest mentioned other family members (uncle, aunt, sister, brother, son, daughter, etc.). One male respondent in Bukoba Rural broke the silence by giving the following revelation:

> "*We know this is an era of women empowerment, so it will a shame if I say that I decide on my own. However, in reality it is we men who keep the money and even if the money is kept by a wife, she can't spend it without consent from her husband except on a few events such as illness and mostly if the husband is absent*"

He was, therefore, of the view that authorities need to sensitize men much more especially considering that they could be the main stumbling blocks when it comes to allowing their families register in a CHF scheme in Bukoba.

Preferences to alternative sources of healthcare before and after CHF introduction

Of the 300 individuals who responded to the question about types of healthcare most frequently sought by household members during illness episodes, 205(68.3%) identified formal HFs; traditional medicines (implying herbal or spiritual beliefs) were mentioned as well: 19(6.3%) and 68(22.7) pinpointed modern or traditional medicines, respectively, while 8(2.7%) said that the decision on where to seek care would depend on the nature and intensity (severity) of the illness.

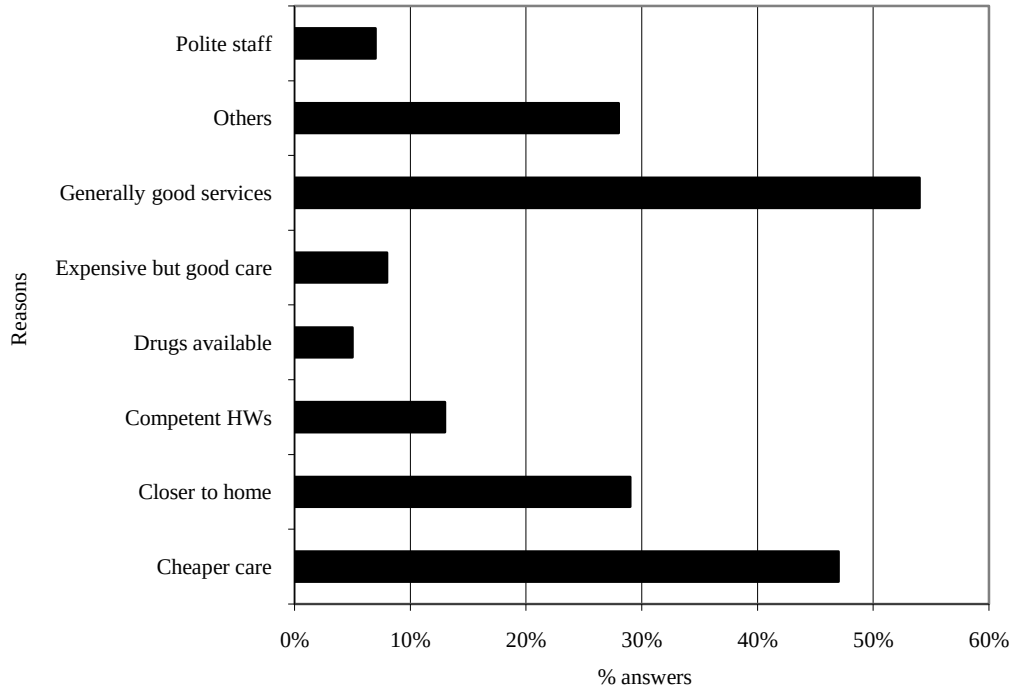
Another question regarding treatment option that would be taken if someone in the household fell sick was answered by 300 respondents. Among these respondents, 185(61.7%) said that they would go to hospital immediately, 34(11.3%) would go to a nearby local shop for buying medicines and would rush to hospital if the symptoms persisted, 25(8.3%) would use local herbs, 37(12.3%) would contact drug shops for medicines and then to hospital if the condition worsened; 1 respondent would go to hospital and then use drugs from retail shops if the treatment at hospital could not heal him; 15(5%) felt that it would depend on the severity of illness or availability of cash

in the household or power to make decision about use of the cash raised in the family.

While the running of the Designated District Hospitals (DDH) found in Ngara, Muleba and Biharamulo is shared between the central government and FBOs, some of the respondents thought that these hospitals were purely FBOs or publicly owned. Of 213 respondents who were asked about the HFs from which they had sought care in the last one year, 33(15.5%) having contacted commercial HFs (mainly dispensaries) three times or more while the same frequency was reported by 38(18.9%) of the 201 respondents who identified HFs run by FBOs. Overall, 86(40.4%) of 213 respondents reported having visited a commercial facility at least once while 98(48.9%) had visited facilities run by FBOs at least once.

Preferences and concerns were expressed about the quality of care at HFs even after the CHF would have been launched in the future. The majority - 177 of the respondents preferred government facilities to private (especially faith-based) facilities; 84(28.1%) preferred HFs run by FBOs to other kinds of facilities; 28(9.3%) suggested commercial HFs, and 15(5%) identified any HF delivering the acceptable quality and affordable services. Meanwhile, the majority acknowledged a higher availability of skilled HWs at hospital levels especially those owned by FBOs. The reasons stated by 301 respondents regarding why the latter types of HFs were preferred to others are mainly related to factors such as closeness of the facilities to their homes, low direct cost of care including user-fees imposed for services and opportunities for exemptions as well as better quality of care (Figure 2). As indicated (Figure 2), the responses obtained were overlapping or closely similar to each other, but due to multiple responses allowed, they have been categorized. For instance, the 'Others' category of the responses represents such reasons as '*It is the HF I have traditionally been using for many years and I am used to it', 'The services are provided more quickly* (short-waiting-time)', '*It depends on the financial position of the family*', and '*There are trustful/honest HWs*'. The '*Generally good quality of care*' response covered such aspects as availability of skilled personnel, laboratory diagnostic facilities, drugs, and no cost-sharing (meaning user-fee) system, toilets and other infrastructural conditions, beds for inpatients, food for inpatients, and possibility of operation (surgical) services .

Fig.2. Why HFs would be contacted as reported by household respondents in Kagera Region (N=301)



Status of CHF implementation in Kagera Region

A follow up made at the end of last year (2011) and the present month of April 2012 to the regional officers about the status of CHF implementation in Kagera revealed that the Scheme is already operating throughout the region, the rates paid by member household vary across districts, the common premium rate being TZS 5,000 per household per annum, communities continue seeing the rationale for CHF scheme, but the rates of enrolment across districts have generally remained slow due to low community awareness and deliberate reluctance to do so, among other factors as detailed in the findings presented below.

DISCUSSION

Acceptability of a CHF scheme and WTP assessment approach

It is generally evident from the present study that CHF is overwhelmingly desired in Kagera Region as most of the respondents viewed it as another option of healthcare payment alternative to user-fees paid at the counter. The uncertainty and concerns expressed regarding households perceived WTP in order to enroll in the CHF scheme if the stated premium rates were officially

approved are important given the uncertainty faced by some households in their attempt to raise cash. This finding or observation is consistent with what has been reported from elsewhere in Tanzania concerning low and unreliability of incomes contributing to low enrolment of household members to CHF schemes [18]. This means that even when people foresee the importance/benefit of a recommended health financing intervention, doubts about access to cash may be a limiting factor for their ability to participate, hence WTP is synonymous with ATP [19-20]. The present study reveals what was expected from the beginning of the design of the study that household WTP and ATP to join a CHF scheme would depend among other things on the premium rate proposed by the authorities concerned. Thus, it can be inferred from the results presented that unless consideration of alternative payment modalities were made, a considerable proportion of households would feel unable to pay TZS 10,000 prompt cash for CHF membership.

ATP indicators and alternative modalities of payments

Though proposed as an alternative financing option to cash payment for health-care, the in-kind payment system's acceptability to service providers as questioned by several respondents requires careful consideration before being instituted in the formal system. This is a challenge since similar concerns have been raised in other districts [21]. A financing system cannot be effective unless it is widely accepted by both the target payers and financial recipients. So far, there is no wide evidence from Tanzania about the practicability of the in-kind payment in relation to the CHF scheme issue, only a few examples are documented regarding HFs run by FBOs having been accepting such form of payments from people who failed to pay user-fees [22-23]. Due to cash shortage, installmental payments at different periods during the year sound encouraging as a possible option as proposed by some of the respondents to the present study, however, the logistics of allowing such form of payments may remain informal depending on the discretion of the service providers or revenue collectors [24]. Administering installmental form of payments is likely to involve some legal or policy enforcement so as to allow consistent and systematic collection of the debts without allowing leakage in the system. Unfortunately, any form of enforcement may not be positively perceived by everyone in the community and this could be a significant stumbling block to reaching HFs, and a disincentive even to trying to seek care [24-25]. At times, especially in a country like Tanzania where the system is not very transparent, the

chances of leakage in any financing system is unavoidable, for instance, already the latest report from an evaluation of CHF implementation in many districts in Tanzania show that leakage related to loss of fees/revenues collected is one of the major challenges [12] (also according to Dr. Alex Mwita, Regional Medical Officer for Kagera, per com.).

Argument can be made that the uncertainty of ATP the TZS 10,000 in cash at once for CHF as expressed by some of the households was just temporary; and that with sensitization of such households when cash was available, for instance during harvest/crop selling seasons, the concerned would possibly be willing and able to pay. This is supported by experience from similar community health financing projects in SSA which shows that although it is difficult to establish insurance schemes in rural settings, prepayment schemes organized through existing agricultural co-operatives and payments coinciding with harvest season, have been successful [5]. In Tanzania, however, the CHF policy guidelines despite allowing households to pay during harvest seasons, enrollment has remained low in many districts, and one of the contributing factors is low awareness of community members about the CHF scheme, poor quality of care, lack of accountability on the part of the CHF managers and inadequate community involvement and ownership [12].

Analysts contend that socio-economic status and ATP for health-care is one of the determinants of health of individuals and their household, a concern for health requires a concern for poverty, and the equity assessment needs to consider the impact of the reform across a range of socio-economic groups [26]. Apart from income earnings, indicators such as one's education and intra-household decision-making power relations are practically related to an individual's or household's ATP for basic needs. This is supported partly by evidence from the present study whereby a perceived positive WTP was significantly higher among the respondents who had obtained formal education than those who never went to school and most of the women who were widowers seemingly to perceive negatively their households' WTP than the married ones. Similar observations were made when comparing the perceived WTP expressed by the married respondents versus the unmarried ones even though the present analysis was not detailed enough to look at that and expound this. Moreover, the un-WTP expressed by those who considered the premium rate to be higher than expected due to unreliable/uncertain income earnings should be underrated since a review of the

evaluations conducted by other researchers before in other districts, for instance in Igunga, found that CHF enrolment was 60% among the rich and 33% among the poorest, and unreliable cash incomes contributing to low enrolment rate [12].

The issue of household ATP assessed too subjectively through a proxy of households expenditure on selected needs is subject to debate as it might have introduced biased inferences. However, that was probably the best means to do so, apart from using such other proxy indices as ownership of wealthy products including types of houses, means of transport e.g. vehicles, motorbikes and motorcyles, piece of farm/residential land, animals e.g. cows and chicken, etc. Evidence shows that people often avoid stating their actual incomes or expenditures which makes it difficult for the evaluators to know exactly the figure to include in the measurements especially in developing countries where the economy is predominantly informal (underground), hence not strange for people investigated to give false information about their earnings in fear of being noted e.g. by tax authorities [27]. Also, some people may pretend to be unable to pay for healthcare services even when able if they believe the government as being responsible for financing the public services alone regardless of people's ATP. A good example is the results from the present study indicating that some households were spending between TZS 1000-3000 on average per month on such luxury things like beer and cigarettes (Table 6).

Households may also avoid either intentionally or due to various factors to enrol into a CHF scheme at first but as time passes by they may realize the benefits enjoyed by those who joined the schemes from the beginning and therefore come to be attracted to join as well. That is possible if the quality of care is maintained to standards acceptable to the target community members, otherwise as reported from the evaluation made later in many districts implementing CHF scheme in Tanzania, the low quality of care together with low trust in the scheme's management system are likely to dissuade demand for services under CHF arrangements as they lead to considerable dropouts of those already enrolled [11-12, 18]. In the absence of a close example, it may sound strange for people to be told about something they are not familiar with since some social or personal behavior could be adopted from the environment in which a person is living including learning (or hearing) from friends or neighbours as time goes on. For instance, when the CHF scheme was launched in Igunga district, Tanzania in 1996, 243 (9.1%) households out of 2664

households were registered, but five years later the quorum of the registered members increased to 1,050(39.4%) out of the same 2664 households [10]. This implies that the households members who were indifferent about, or denied, their WTP did so because of either the bad experience they might have had regarding the quality of care delivered at the HFs they visited or lack of knowledge about the possible CHF benefits.

Alternative sources of care if CHF scheme is officially implemented

One would expect the HFs run by the FBOs to be preferred to the public or commercially owned ones because of the trust people normally have in HFs run by the FBOs in issues related to quality of care [23]. The present study reveals that most of the respondents preferred government HFs to private ones possibly because of considering that the former were charging patients lower fees for services than the latter that have been implementing user-fees almost since independence. Otherwise, the respondents might have pretended to please the researchers if the latter were considered to be government employees who went to explore the views of local communities on the services delivered at government HFs as compared to private HFs. However, it is imperative to appreciate that people often consider the value of their money when they pay for anything, thus for health-care the quality of care is weighed against its cost [28-29], and this applies regardless of who provides the services (Figure 2). Lessons of similar community financing arrangements could be learned from other SSA countries that ever implemented the BI [5, 7, 30] and Vietnam where remarkable success and approaches to mitigate the challenges have been adopted [8].

Strengths and limitations of the study

The advantage of the study is that it provided a good guidance to the Kagera RHMT to arrive at a decision of recommending TZS 5,000 premium rate for each household's eligibility to enrol into the CHF scheme after considering income levels and other socio-economic dimensions. This is a good example of research evidence contributing to policy decisions. Despite a useful insight about people's knowledge and expectations obtained from this study in relation to CHF mechanisms, more could have been learnt if additional analysis involving regression models and/or principal component analysis had been done to establish the likelihood of WTP for CHF among households with different socio-economic characteristics. Some questions requiring the respondents to state their WTA a little less or more than TZS 10,000 in order to register for CHF membership should be treated cautiously

with an understanding that different opinions/positions could be expressed possibly if a different rate were actually tested. However, this rate should be considered as a fair reference since studies in other districts reported by other evaluators reveal that communities were willing to pay different rates, for instance between TZS 4,500 and 6,500 in Mtwara according to Beraldes and Correras; TZS 3,000-10,000 in Lushoto according to Agyemang-Gyau while in Karagwe the authority had planned to set TZS 30,000 as some people were already paying TZS 15,000 as reported by the MoH in 2006 [18]. Moreover, the study was undertaken about 10 years ago and therefore at the moment the perceptions expressed might have changed, although, the actually introduced annual premium rate is TZS 10,000 per household and this rate is still operating (Kagera Regional Medical Officer, per comm., 11th April, 2012).

CONCLUSION AND POLICY IMPLICATIONS

Any officially recommended social service related payment system is likely to stimulate debates and to confront challenges and this does not only apply to developing countries since marginalized groups are everywhere in the world. It is useful to appreciate that even if the so-considered free health-care services were to be maintained for universal access intentions, some people would still find it hard/difficult to afford due to non-monetary barriers such as logistical hindrances e.g. waiting time for service or the services accessed would still be of unsatisfactory quality to meet the needs of the target populations [31]. We agree with other authors that user-fees alone (or other financing options such as prepayment mechanisms) may not achieve equity, efficiency and/or sustainability of the HSR objectives and instead they should be seen as one of the broader health-care financing packages that should include some form of risk-pooling in East African countries [32], and elsewhere in SSA [9]. The fact that CHF scheme is a potential healthcare financing alternative to user-fees system, holds. However, for this scheme to succeed in terms of efficiency, equity and sustainability, the following measures are crucial: continuous and scaling up advertisement of CHF along with other cost-sharing mechanisms to enhance public awareness, accrediting services to HFs drawing greater public trust in terms of quality of care delivery, accountability and responsiveness of the finance and accounting authorities on the management of the CHF; introducing co-payments for those who may demand extra services and as a way of combating moral hazards; periodically assessing clients' satisfaction with quality of services at

accredited HFs; and periodically reviewing the premium structures and sharing information about bottlenecks and potential remedial measures among the government and its partner stakeholders. Some of these suggestions are consistent with those given by previous evaluators [2, 9, 11-12, 18].

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CONFLICTS OF INTEREST. The authors declare no conflict of interests. Both have worked on and read the final version of this MS before its submission.

AUTHORS' CONTRIBUTIONS

GMM holds BA *(Econ*), MA *(Health Management, Planning & Policy),* Dipl (*Research Methodology*)*;* MBA *(Finance & Accounting),* and PhD (*Health sciences*). JB holds MD and MPH and was DANIDA Technical Adviser for Kagera Region. GMM was the Principal Investigator and was closely assisted by JB, and both of them conceived the study proposal, executed its implementation, report writing. GMM drafted the MS with substantial comments from JB.

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