

Original Research

The Contribution of the Improved Community Health Fund on the Utilization of Outpatient Healthcare Services in Singida Municipal Council

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Abstract

Introduction: The government of Tanzania established the Community Health Fund (CHF) in 1996 and the improved Community Health Fund (iCHF) in 2018 to provide financial protection for outpatient healthcare services for rural and informal-sector populations. However, utilization of outpatient healthcare services remains a challenge in Tanzania. This study aimed to assess the contribution of the iCHF on the utilization of outpatient healthcare services and associated factors in the Singida Municipal Council.

Methods: A sequential mixed-methods design was employed to conduct a before-and-after outcome evaluation of the iCHF. The questionnaire was used to collect quantitative data, while key informant interviews were used to collect qualitative data. A Chi-square test was used to assess the association between iCHF and outpatient healthcare service utilization. Thematic analysis approach was used to analyse health facility factors contributing to outpatient healthcare service utilization among iCHF members.

Results: The utilization of outpatient healthcare services has increased by 7% compared to the period of CHF. Age ($p=0.047$), sex ($p=0.000$) and level of education ($p=0.015$) were significantly associated with increased utilization of outpatient healthcare services. Availability of a clear

framework for the enrollment procedure, an advanced information system, a broadened benefit package, availability of essential medicines, medical equipment and implementation of clients' retention mechanisms were the contributing factors to the utilization of outpatient healthcare services.

Conclusions: The findings highlight an increase in healthcare services utilization following the introduction of iCHF and the factors associated with this change. However, healthcare services utilization among iCHF members remains relatively low due to low enrollment. Therefore, efforts are needed to increase iCHF enrollment to improve outpatient healthcare.

Keywords: *Improved Community Health Fund; Healthcare services; Utilization; Outpatient*

Introduction

Utilization of outpatient healthcare services is among the important elements in ensuring a good health status among the population living in rural areas, particularly in Low and Middle-Income Countries (LMICs) (1). Globally, about 400 million people do not utilize basic health services and 6% of people living in LMICs experience extreme poverty as a result of payments for health services (2). In sub-Saharan Africa (SSA) and Southern Asia, only 5-10% of people are covered under social health insurance, while in middle-income countries, coverage rates range from 20% to 60% (2). In LMICs such as Tanzania, healthcare systems depend heavily on Out-Of-Pocket (OOP) payments due to limited resources available to support the health system (3). Efforts have been made to explore diversified and sustainable healthcare financing mechanisms to bridge funding gaps, such as health insurance, community health financing and cost-sharing (4).

Community-Based Health Insurance (CBHI) has been introduced to low-income countries over the past two decades to overcome healthcare financial difficulties of the poor and informal sector employees through a risk-pooling mechanism (5). CBHI plans provide significant financial protection and extend the utilization of outpatient healthcare services to a large number of rural and low-income populations (6).

In Tanzania, the CHF started in 1996 as a voluntary and locally-based pre-payment scheme to finance basic health services and complement public investments in health (7). Since the introduction of CHF, several studies have been conducted and reported an increase in outpatient service utilization. However, an evaluation of CHF has shown that its implementation faces a range

of challenges (8,9). These challenges were based on its design and operating system, whereby most of the councils did not reach the targeted enrollment rate of 85% (5). In Singida, the enrollment was only 27.2% of the targeted population between 2008 and 2012 (10,11). Despite the low enrollment, the dropout rate has continued to be high among CHF members (12). Dropout needs to be examined from the utilization side (demand side) to address retention in the health insurance schemes (10-12). Furthermore, several studies have been conducted on different factors contributing to low enrollment (13-16). Among others, poor quality of public health care services, long waiting times, limited benefit packages and a lack of provider choice have been reported to contribute to low enrollment, enhancing low utilization of health care services among enrolled members (5,16-18).

In efforts to address enrollment and drop-out in CHF, an improved Community Health Fund (iCHF) scheme was introduced in 2018 (19). The introduction of iCHF aimed at strengthening the health financing system through improved management and operation (governance), enrollment of members at the community level and broadening of the benefit package (5,7,20–22).

Pooling funds at the regional level was an immediate plan for the iCHF to tackle the problem of poor management of the funds. All members of iCHF are permitted to utilize the services available up to the regional hospital level following the referral system, subject to an exclusion list comprised predominantly of specialized procedures and drugs (23). These efforts aim to improve the protection and utilization of health care services for people who are in the informal sector and rural dwellers (24).

However, some notable challenges have remained about the utilization of outpatient health care services, including low quality of services provided, management of enrollment procedures, delivery of benefit packages, and contextual factors (health system and socio-political context) (7,24). Factors contributing to this situation are scantily documented, and it has not been established yet as to why the same challenges which were experienced in CHF are being experienced in iCHF. This raises a question as to whether iCHF fulfils what is intended to do compared to CHF, regarding the utilization of outpatient health care services (7,16,25). Therefore, this study aimed to assess the contribution of the iCHF on the utilization of outpatient healthcare services and associated factors in the Singida Municipal Council.

Methods

Study setting

This study was conducted between May and June 2022 in the Singida Municipal Council, Singida Region, Tanzania, with an estimated population of 199,223 (26). The council has 18 wards, 69 streets and 30,380 households (27). The Municipal Council currently has 23 health facilities, of which one is a regional hospital, two are health centres, 18 are dispensaries, and two are specialized clinics. A total of 13 public health facilities provide services to iCHF beneficiaries (28). The iCHF involves enrolling a family with a maximum of six members with an annual membership premium of 30,000 TSH per household (29,30). An enrolled member can utilize medical services up to regional referral hospitals across regions (30).

Study design

A sequential mixed-method design was employed to conduct a before-and-after outcome evaluation of iCHF. The design was appropriate for this study, which is described as a two-phase research approach where one type of data is collected and analyzed first, followed by another approach to build upon the initial results (31). This study started with a quantitative approach to establish the contribution of iCHF to utilization of outpatient health care services, and then a qualitative approach was conducted to explore health facility factors contributing to it. For the quantitative data, the study population involved all iCHF members who utilize outpatient departments (OPD) services based on service statistics and adult iCHF members in the selected households within the study area. For qualitative data collection, the health facilities in charge and iCHF coordinators from the selected health facilities were involved.

Sample size and sampling techniques

Quantitative

The minimum estimated sample size was 551 iCHF members. The estimated sample was based on a 95% confidence interval and a design effect of 1.5. The following formula was used to calculate the sample size:

Yamane (1967) (32) formula

$$n = \frac{N}{1 + N(e)^2} \times 1.5,$$

Whereby:

n = sample size,

N = population size 4570 iCHF members-IMIS (26),

e = level of precision (0.05),

10% of possible non-response was adjusted among expected participants.

Therefore:

$$n = \frac{4570}{1+4570(0.05)^2} \times 1.5 = \frac{4570}{12.425} \times 1.5$$

$$= 551$$

The minimum estimated sample size was 551 iCHF members. The estimated sample was proportionately distributed to the four villages involved in this study. A multi-stage sampling technique was used to select iCHF members. First, the Singida Municipal Council was purposively selected. Second, two of the 18 wards were randomly chosen. Third, four villages (two with high and two with low iCHF enrollment) were randomly selected from these wards, followed by the random selection of one hamlet per village to identify households. In each household, one adult was randomly selected for interview. Individuals with valid health insurance cards at the time of interview were classified as insured under iCHF.

Qualitative

The purposive sampling technique was used to identify study participants by virtue of their positions and responsibilities concerning iCHF. The key informants included all health facility in-charges and iCHF coordinators from the selected facilities within the study area. One health centre, which functions as a referral facility for primary health care facilities and serves a large number of patients, was purposively selected. Additionally, four dispensaries located in the selected villages were purposively selected, including two with high enrollment rates of iCHF members and two with low enrollment rates. Thematic saturation was reached after interviewing nine key informants.

Variables***Dependent variable***

The dependent variable in this study was the utilization of health care services (OPD), defined as whether a respondent had visited and received services from OPD at a health facility within the specified reference period preceding the survey. The variable was measured as a binary outcome

(Yes/No), where ‘Yes’ indicated at least one OPD visit during the reference period of one year before the survey and ‘No’ indicated no OPD visit.

Independent variables

The independent variables were age (18-25, 26-35, 36-45, 46 and above years), sex (male and female), marital status (single, married, separated, divorced, widow(er)), level of education (no formal education, primary education, secondary education and post-secondary education) and monthly income of the respondents (20,000-100,000, 101,000-200,000, 201,000-300,000, 301,000-400,000, >401,000 TSH).

Data collection methods

Quantitative

Different data collection methods were employed to gather quantitative information for this study. This includes data abstraction and questionnaires. Data were collected on the utilization of health care services in OPD among iCHF members via a retrospective record review of individual factors associated with utilization of health care services through administering questionnaires. Data abstraction involved the extraction of data from the OPD register, whereby all the CHF members who utilized OPD services one year before the introduction of iCHF in 2017 and those who utilized OPD services one year after the introduction of iCHF (2020) were included. The proportion change in utilization of OPD health care services following the introduction of iCHF compared to the CHF was used to measure the contribution of iCHF on utilization of health care services. A structured questionnaire was used to collect the individual factors associated with the utilization of health care services among iCHF members. The questions sought information on age, sex, marital status, level of education, income level and whether they have ever utilized healthcare services since enrollment.

Qualitative

The key informant interviews were used to collect data from nine participants. The study participants were selected purposefully. The questions on the key informant interview guide focused on factors contributing to the utilization of health care services. All interviews were conducted in the Kiswahili language and recorded using a digital voice recorder. The interviews took between 30 and 60 minutes and were carried out in quiet and private rooms. The principal researcher was accompanied by a research assistant who took notes during the interviews.

Data management and analysis***Quantitative***

The field data were managed by an abstraction form and questionnaires were given codes to facilitate data analysis. The data were stored in a file and placed where only the principal investigator has access. Data from the OPD register were extracted and analyzed.

A regular review of data was done by the researchers every time before aggregating into the statistical analysis tool. This was checked against the total number from OPD registers to ensure that the records were collected without bias. Microsoft Excel was used for entering data and cleaning to check for duplicates and missing information. The cleaned data were exported to SPSS version 23 (IBM Corp., Armonk, NY, USA) for data analysis. A descriptive analysis was conducted to summarize the frequency distribution of social-demographic characteristics of the participants. The Chi-square test was used to analyse the association between the contribution of iCHF and the utilization of outpatient health care services among the iCHF members. A p-value of <0.05 was considered statistically significant.

Qualitative

Recorded interviews were transcribed verbatim and translated into English to facilitate analysis and extraction of illustrative quotations. Data were analyzed using an inductive thematic analysis approach (33), a widely used method for identifying, analyzing, and reporting patterns within qualitative data (34).

The analysis process began with repeated reading of interview transcripts, field notes, and other relevant documents to gain familiarity with the data. Meaning units were identified and manually coded based on their manifest content. Similar codes were then grouped into sub-themes, which were further organized into broader themes according to their similarities and differences. Throughout the process, the coding framework was reviewed and refined through discussions among all authors until consensus was reached. The final themes were interpreted and presented narratively, with representative participant quotations used to illustrate and support the findings.

Ethical considerations

Ethical clearance was obtained from the MUHAS Institutional Review Board in June 2022 (Ref. No.REC.06-2022-1184). Permission for field data collection was granted by the Municipal Directors of Singida. Participants were duly informed of the purpose of the study and their rights. Individual written consent was obtained from each respondent before data collection.

Results

Social demographic characteristics of the study participants

Quantitative

A total of 551 iCHF members in the Singida Municipal Council participated in the study. The socio-demographic characteristics of the study population are summarized in Table 1. Most of the participants, 190 (34.5%), were aged between 26 and 35 years. More than half, 295 (53.5%), were female. Most of them had primary education, 283 (51.4%), while 378 (68.6) were married. More than half, 320 (58.1%) of the participants had an average income ranging between 20,000 and 100,000 Tanzanian shillings.

Table 1: Socio-demographic characteristics of iCHF members (N=551)

Variable	Frequency (n)	Percentage (%)
Age group (years)		
<25	82	14.9
26-35	190	34.5
36-45	155	28.1
46 and above	124	22.5
Sex		
Male	256	46.5
Female	295	53.5
Marital status		
Single	123	22.3
Married	378	68.7
Separated	10	1.8
Divorced	20	3.6
Widow(er)	20	3.6
Level of education		
No formal education	39	7.1
Primary education	283	51.4
Secondary education	214	38.8
Post-secondary education	15	2.7
Monthly income (TSH)		
20,000–100,000	320	58.2
101,000–200,000	128	23.2
201,000–400,000	84	15.2
>401,000	19	3.4

Results from this study show that among 551 iCHF members who participated in the study, only 492 (89.3%) utilized health care services. Of the participants who utilized healthcare services, 143

(92.3%) were aged between 35 and 45 years. Males utilized services more than females, where 244 (95.3%) males utilised healthcare services compared to 248 (84.1%) females. Service utilization was highest among participants with no formal education, with all 39 (100%) reporting use of the services. High utilization was also observed among participants with secondary education, with 197 (92.1%) and those with primary education (244, 86.2%). Regarding income, participants earning between TZS 20,000 and 100,000 demonstrated the highest level of service utilization, with 288 (90%) reporting use of the services compared with participants in other income categories (Table 2).

Table 2: Sociodemographic characteristics and utilization of health care services (N=551)

Characteristics	Utilization of health care services		Total (%)
	YES n (%)	NO n (%)	
Age group			
<25	70 (85.4)	12 (14.6)	82 (100)
26-35	162 (85.3)	28 (14.7)	190 (100)
36-45	143 (92.3)	12 (7.7)	155 (100)
46 and above	117 (93.9)	7 (6.1)	124 (100)
Total	492 (89.3)	59 (10.7)	551 (100)
Sex			
Male	244 (95.3)	12 (4.7)	256 (100)
Female	248 (84.1)	47 (15.9)	295 (100)
Marital Status			
Single	108 (87.8)	15 (12.2)	123 (100)
Married	334 (88.4)	44 (11.6)	378 (100)
Separated	10 (100)	0 (0.0)	10 (100)
Divorced	20 (100)	0 (0.0)	20 (100)
Widow(er)	20 (100)	0 (0.0)	20 (100)
Education			
No formal education	39 (100)	0 (0.0)	39 (100)
Primary education	244 (86.2)	39 (13.8)	283 (100)
Secondary education	197 (92.1)	17 (7.9)	214 (100)
Post-secondary education	12 (80)	3 (20)	15 (100)
Monthly income (TSH)			
20,000–100,000	288 (90)	32 (10)	320 (100)
101,000–200,000	111 (86.7)	17 (13.3)	128 (100)
201,000–400,000	74 (88.1)	10 (11.9)	84 (100)
>401,000	19 (100)	0 (0.0)	19 (100)

Individual factors associated with the utilization of health care services

There was a statistically significant association between utilization of outpatient healthcare services and age ($p=0.047$), sex ($p=0.000$) and education ($p=0.015$). Marital status and income did not influence the utilization of outpatient health care services among the iCHF members. With regard to age, the age group 36-45 years had the highest number of people utilizing outpatient health care services, whereby among 155 respondents, 143 (51.4%) utilized outpatient health care services ($p=0.047$). Results on education also revealed that a total of 283 (51.4%) of all respondents were in standard seven, and out of 551, 244 (86.2%) utilized outpatient health care services ($p=0.015$). Concerning sex, the majority of the respondents were female, 295 (53.5%), and among them, 344 (88.4%) utilized outpatient health care services ($p=0.000$) as indicated in Table 3.

Table 3: The utilization of outpatient health care services by selected sociodemographic characteristics

Characteristics	Utilization of outpatient health care services		χ^2	P-value
	YES n (%)	NO n (%)		
Age group				
<25	75 (87.2)	11 (12.8)	9.621	0.047
26-35	156 (85.2)	27 (14.8)		
36-45	146 (91.8)	13 (8.2)		
46 and above	115 (94.3)	7 (5.7)		
Sex				
Male	244 (95.3)	12 (4.7)	18.126	0.000
Female	248 (84.1)	47 (15.9)		
Marital Status				
Single	108 (87.8)	15 (12.2)	6.624	0.157
Married	334 (88.4)	44 (11.6)		
Separated	10 (100)	0 (0.0)		
Divorced	20 (100)	0 (0.0)		
Widow	20(100)	0(0.0)		
Education				
No formal education	39 (100)	0 (0.0)	10.537	0.015
Primary education	244 (86.2)	39 (13.8)		
Secondary education	197 (92.1)	17 (7.9)		
Post-secondary education	12 (80)	3 (20)		
Monthly income (TSH)				
20,000–100,000	288 (90)	32 (10)	3.459	0.326
101,000–200,000	111 (86.7)	17 (13.3)		

201,000–400,000	74 (88.1)	10 (11.9)
>401,000	19 (100)	0 (0.0)

Qualitative

The information on the health facility factors was collected through key informant interviews from 9 participants. These participants were asked about the health facility factors that contribute to the utilization of health care services among iCHF members. Five major themes emerged related to the health facility to contribute to the utilization of outpatient health care services among iCHF members. These themes include simplified enrollment procedure, availability of an advanced information system, broadened benefit package, availability of essential medicines and medical equipment and implementation of retention mechanisms.

Simplified enrollment procedure

Most of the participants stated that simplified enrollment procedures and availability of enrollment resources are important components contributing to the utilization of outpatient health care services. The participants further added that the enrollment process is conducted electronically using smartphones connected to the Insurance Management Information System (IMIS).

“...But also, this registration is simply conducted by using mobile phones and the registrars pass through the household....They start by educating participants, followed by registering new members of the scheme. During registration, they take pictures using mobile phones and enter all information into the system, including payment of the premiums....” (P 08, Male, 42 years old).

Availability of an advanced information system

Participants reported that the availability of an information system for registration, treatment and the existence of a claim and payment system for services provided to members have been among the factors contributing to the utilization of outpatient health care services. Additionally, they narrated that this allows members to receive referrals from one level of health facility to another due to the availability of an advanced information system, as every member of the scheme is recognized at each level.

“...So this improved one (iCHF) compared to the previous one, which is CHF, has come up with a system called IMIS, which now enables a member to receive referrals from one level of health facility to another level. Furthermore, since the iCHF members enrolled in the IMIS scheme, the system will help them to be active members wherever they go to get treatment in the different levels of health facilities in Tanzania,

compared to CHF, whereby members were not allowed to access health services outside the health facilities they registered...” (P 03, Female, 39 years old).

Broadened benefit package

Participants stated that public health facilities throughout the region and up to the regional referral hospital level. This has been reported to improve access to outpatient health care services and expand the scope of services.

“...Oh, due to current premiums compared to the premiums which were charged before the CHF being improved, now the members of the iCHF scheme can get the service from dispensaries, health centres, district hospitals, and regional referral hospitals. The scope of access to the service has been much wider...” (P 01, Female, 34 years old).

Availability of essential medicines and medical equipment

Participants reported that the iCHF scheme has increased the availability and accessibility of essential medicines and medical equipment in health facilities. They explained that a proportion of the funds received from services provided to iCHF members is allocated to the procurement of medicines and medical supplies, thereby strengthening the capacity of health facilities to maintain adequate stocks. Additionally, participants noted that the availability of essential medicines is among the important criteria considered by community members when deciding to enroll in or continue using the iCHF scheme.

“...The iCHF has significantly improved access to medicines. Under the previous CHF scheme, only a limited number of medicines available at health facilities were covered, and some essential medicines were excluded from the scheme. However, the current iCHF scheme covers almost all essential medicines ...” (P 09, Male, 41 years old).

Implementation of the retention mechanisms

Participants reported that sensitization and health education campaigns conducted through radio programs, community rallies, and religious institutions played an important role in raising awareness about the importance and benefits of the iCHF. They explained that the education provided encouraged scheme members to utilize healthcare services and maintain their membership in the scheme. Furthermore, sensitization activities were reported to motivate non-members to enroll in the iCHF and encourage existing members to renew their membership.

Participants further noted that positive experiences in accessing healthcare services through the iCHF increased community awareness and trust in the scheme, which subsequently enhanced outpatient healthcare service utilization. These efforts were also perceived to improve member retention and reduce dropout rates among scheme beneficiaries.

“Regarding awareness and understanding of the scheme, we continue to provide education to the community because some household members still do not fully understand the benefits of the iCHF scheme. We have conducted several sensitization activities through public meetings, radio programs, and other community forums, which have helped to increase awareness about joining and remaining in the scheme. However, we understand that there is still a need to strengthen our efforts in providing information and raising community awareness about the scheme.” (P 06, Female, 44 years old).

Discussion

This study aimed to assess the contribution of the iCHF on the utilization of outpatient health care services in the Singida Municipal Council. This study revealed a proportional change of 7% in the utilization of outpatient health care services following the introduction of iCHF. The change in utilization found in this study has a positive sign that enrollment in community-based health insurance can positively influence the uptake of health care services. The findings conform to other studies conducted in Tanzania and Ghana (16-18) that investigated the effect of health insurance and utilization of outpatient health care services. For example, a study done in Tanzania by Tungu et al. (35) reported a significant association between health insurance and utilization of both outpatient and inpatient services after adjusting for socioeconomic and demographic factors and healthcare needs. Similar findings have been reported in studies conducted in Ghana, whereby being insured in any health insurance was significantly associated with utilizing both outpatient and inpatient health services (21,36,37).

Contrary to the previous studies (38,39), this study found that men utilized more outpatient health care services compared to women. Perhaps this is because most of the people involved in this study are in the informal sector, and the main economic activity in Singida is agriculture, where most of the men are involved in agricultural activities. The nature of the occupation may have exposed men to occupational hazards compared to women.

Moreover, this study revealed that the presence of advanced information systems increases the chance of utilization of outpatient healthcare services. This is similar to what was found in other

studies, which showed that the availability of reliable systems is an important precursor in utilizing services (40-42). Possibly, it simplifies the enrollment procedure and ensures the availability and precision of information on the insured person during service provision. Also, it is in line with other studies that the availability of the system provides information, ensures efficient claim management and increases the speed of operation for the provision of outpatient healthcare services (43-45).

The broadened benefit package under iCHF, as revealed in this study, corroborates the findings of a study conducted in Rwanda (41). The study found that the beneficiaries of the CBHI in Rwanda are entitled to the packages provided at public health facilities, health centres, district and tertiary hospitals. Beneficiaries can use health facilities out of their catchment areas in the case of an emergency, to the referral hospital level (35,41,44). This implies that the introduction of iCHF increased the utilization of outpatient healthcare services by adding more health facility levels within the district.

The process of implementing the benefits package broadens the scope of access to health care services for iCHF members. It has been reported that insurance is more attractive if it covers higher-cost referral services rather than primary care, which is generally inexpensive due to the exemption policy (11). However, its implementation could be hindered by a shortage of medicines and other medical supplies, which discourages many iCHF members from re-enrolling in the scheme. This increases the chances of a high drop-out rate, hence decreasing utilization of outpatient health care services. For the implementation of the expanded scope of services, providers and purchasers of the service need to collaborate to improve the provider payment system that enables facilities to generate enough funds from iCHF to increase the budget for medicines and medical supplies (46,47).

Furthermore, the availability of essential medicines and medical equipment plays a major role in enabling individuals to access and utilize the outpatient health care services. This is in line with other studies conducted elsewhere (5,11,20,42,48). For example, a study conducted in Tanzania revealed that a lack of drugs and diagnostic equipment at primary level facilities is among the factors constraining the utilization of services and enrollment (11). While a study conducted in Ghana reported that the willingness of people to pay even higher premiums should also be based

on the quality of health service provision and not on affordability (48). It is important to provide quality health care services to satisfy the beneficiaries and make them utilize the service more (20). Sensitization for the enrollment procedure and provision of iCHF education through radio, rallies, and religious institutions have been revealed as a mechanism for raising awareness of the importance of iCHF. This was in line with the findings from Dodoma, which showed that awareness of the iCHF contributes to enrollment into the iCHF and is a significant determinant of the scheme uptake and retention of members, because through information, people can be inspired and make decisions to be enrolled into the scheme and reduce dropout (16). Another study conducted in Tanzania showed that religious leaders play a role in creating awareness about health insurance schemes among their believers (17). However, the information provided to members should be consistent and accurate to improve the awareness and acceptability of health insurance, hence increasing utilization of outpatient health care services (49,50).

Strengths and limitations of the study

This study has provided valuable information that will contribute to factors that have led to an increase in the utilization of outpatient healthcare services following the introduction of iCHF. However, this study was only conducted in the Singida Municipal Council, which may limit the generalizability of the results reported in this study. Nevertheless, the complementarity of the quantitative and qualitative approaches in data collection and analysis adds to the depth of information obtained.

Conclusions

The findings highlight an increase in the utilization of outpatient healthcare services following the introduction of iCHF. They further reveal the factors for the increased utilization of outpatient health care services due to the introduction of iCHF. These factors include a simplified enrollment procedure, the availability of an advanced information system, a broadened benefit package, the availability of essential medicine and medical equipment and the implementation of retention mechanisms. Therefore, concerted efforts should be made by the government, through the Ministry of Health, to increase enrollment in the iCHF, alongside equipping facilities to meet clients' expectations. Further research is needed to understand the perceptions of beneficiaries and non-beneficiaries of the iCHF on the quality of care they receive at the health facility.

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Author's contribution

JJB planned the study, developed study methods, interview guides and conducted the data collection, developed an analysis plan, analyzed the data and drafted the manuscript. NS and MT supervised the planning and development of the methods, analysis plan, and data analysis and contributed to and reviewed the manuscript. All authors read and approved the final manuscript.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Consent for publication

This manuscript does not contain any individual data, so consent for publication is not applicable.

Competing interest

The authors declare that they have no competing interests.

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