PHARMA COLLEGE SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF PUBLIC HEALTH

COMMUNITY BASED HEALTH INSURANCE SERVICE PROVISION QUALITY AND ASSOCIATED FACTORS AT DARA WOREDA PUBLIC HEALTH FACILITIES, SIDAMA REGION,SOUTHERN ETHIOPIA.

BY: GESESE GEMECHU GEBISO (HO)

OCTOBER 2023

HAWASSA, ETHIOPIA

PHARMA COLLEGE SCHOOL OF GRADUATE

STUDIES, DEPARTMENT OF PUBLIC HEALTH

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A THESIS PROPOSAL SUBMITTED TO PHARMA COLLEGE SCHOOL OF PUBLIC HEALTH, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC HEALTH

OCTOBER 2023

HAWASSA, ETHIOPIA

DECLARATION

I hereby declare that this proposal is my original work and has not been submitted and presented for any academic degree award in any other university and college, and all sources of material used for this proposal have been fully acknowledged.

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Name of Student Signature Date

Place:Pharma College, Hawassa campus

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ADVISOR APPROVAL SHEET (Submission sheet -I)

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This is to certify that the proposal entitled "**community based health insurance service provision quality and associated factors at daraworeda public health facilities, sideman region, southern Ethiopia**" submitted in partial fulfillment of the requirements for the degree of Master of Public Health in the Graduate Program of the School of Graduate Studies and has been carried out by **GESESE GEMECHU GEBISO**under our supervision. Therefore, we recommend that the student has fulfilled the requirements and hence hereby can submit the proposal to the department.

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Gesese Gemechu _____ _____

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ACKNOWLEDGEMENTS

God! No one is like you. All the ups and downs in the journey of my proposal writing turned into success by your mercy and grace. Thank you Almighty God, as this is the only word you seek from me for all your priceless gifts.

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ABBREVIATIONS AND ACRONYMS

CBHI----------community based health insurance

CI----------Confidence Interval

EHSTP----------Ethiopian Health Sector Transformation Plan 2

FMOH---------- ----------Federal Ministry of Health

LIC----------Low income countries

NGO----------Non-governmental Organization

OOP----------Out of pocket payments

OR----------Odds ratio

SDG----------Stainable development goal

SHI----------Social Health insurance

UHC----------universal health coverage

ABSRACT

Background: - Community-based health insurance (CBHI) systems are usually voluntary and characterized by community members pooling funds and protecting themselves against the high costs of seeking medical care and treatment for illness. It is an emerging strategy for providing financial protection against health-related poverty. Satisfaction with health service provision during the implementation of health insurance schemes has often been neglected.

Objective: This study aimed to assess Community Based Health Insurance service provision quality and associated factors at Dara woreda public health facilities, Sidaman region,Southern Ethiopia. 2023.

Methods: -Institutional based cross- sectional study was conducted on randomly selected sample of 419 beneficiaries in the Dara woreda. Descriptive statistics was employed to describe the characteristics of the participants. Trained data collectors were collected the data using a pre-tested and structured face-to-face interview. The data were entered into EpiInfo 7 software, and exported toSPSS version 25 for further analysis. A bivariable and multivariable binary logistic regression analyses was performed. During bivariable logistic regression analysis variables with p-value less than 0.2 was transferred to multivariable logistic regression for final analysis. Finally, a p vale ≤0.05 was used to declare statistical significance. The odds ratio (crude and adjusted) was calculated with a 95% confidence interval

Result:-In this study, the participants who get qualified service with the community based health insurance was found to be 46.3%. Age between 40 to 49 years(AOR= 0.55, 95% CI: 0.31, 0.96), being happy with CBHI regulations(AOR= 1.96, 95% CI: 1.12, 3.46), thinking got the right drug for disease(AOR= 1.77, 95% CI: 1.08, 2.93), getting immediate care (AOR = 4.95, 95% CI: 2.72, 8.98), presence of adequate medical equipment's(AOR= 1.65, 95% CI: 1.02, 2.69) and adequate qualified health personnel in the health facilities(AOR =1.89, 95% CI:1.12, 3.20) are identified as factors significantly associated with qualified service with the community based health insurance.

Conclusion and recommendation: - The findings of this study revealed that less than half of the study participants were getting qualified service. Study participants who agreed with the presence of valid CBHI regulations, who think they got the right prescribed drug and participants

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who got immediate care, agreed that the health facilities have adequate medical equipment's, adequate qualified health personnel are factors significantly associated with qualified service with the community based health insurance

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Keywords:- community based health insurance, quality, dara woreda, service provision

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1. INTRODUCTION

1.1 Background

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Definition Community based health insurance (CBHI) is voluntary, non-profit health insurance. It helps to mobilize additional resource to the health sector(1). It will reduce the lack of medical service due to unaffordability. CBHI applies principles of insurance, which include principles of resource pooling, paying premium, sharing risks between members, deal with partners in the health system to improve access to care, financial protection and responsiveness of the health service(2).

CBHI uses principles of insurance, members pay fees to the insurance scheme and in return their health service coast is covered by the scheme. Unlike other microfinances, in CBHI members pay premium to the insurance scheme which can only occur when there is trust and solidarity within the community. This is why social capital, which is the existence of trust and solidarity in the community is the basis for successful implementation of CBHI(3, 4)

CBHI to achieve universal health care Achieving UHC (universal health coverage) is part of the SDGs (sustainable development goals) which is to be achieved by all members of United Nations. UHC is about being able to get health service despite of having the financial capability when in need of health service. One way of making health service available and accessible for all is dealing with unaffordability by using health insurance mechanism(5).

Low-income countries (LICs) face substantial challenges in financing healthcare. Health services are unaffordable and even unavailable to the majority of poor people in these countries. Health spending via out-of-pocket payments (OOPs) is difficult for many people and millions of people fall into poverty due to the need to pay for healthcare. As a result, the poor people in LICs still suffer and die from health-related problems particularly in settings that lack effective health insurance policies(6).

Financial ability to pay for health service is the main issue when it comes to using health institutions. Lack of secure financing system is the main reason millions of people die from treatable medical conditions. Out of pocket, expenditure is one of the main causes for poverty due

to a certain illness. In over 60% of countries with incomes below $1000 per capita, out of pocket payment constitutes more than 40% of health expenditure(7).

Ethiopia allocated around 8.04% of total government expenditure in 2016/17 G.C, which is lower than average of 8.7% for low income countries. An absence of a system that provides financial protection can lead to extreme poverty. Out of pocket, payment covers about 31% of health care expenditure in Ethiopia. In addition, the government's spending on health accounts for 32% of the total health spending:- whereas NGOs contribute 35% of the total health spending(6).

Countries have different systems to finance their health system. This includes tax-based system, social insurance systems or mixed systems. Community-based health insurance (CBHI) is a new way of supporting the health care financing. CBHI applies all the principles of insurance system except that it is not meant for profit. Many countries are making CBHI as their health care financing system in order to have additional financing source, increasing health seeking behavior of citizens by removing the fear of not having enough money to spend on health care(8).

CBHI refers to a health insurance system where people become members voluntarily and is not for profit. It applies principles of an insurance system like risk pooling, risk sharing and financial protection. This in turn will ensure that access to health care, protection from financial insecurity and responsiveness of the health system is maintained. The main goal of the health sector is to make sure that everyone who needs health care is able to have one without undue hardship(7, 9).

Thus, moving away from out-of pocket charges for health care at the time of use is an important step towards averting the financial hardship associated with paying for health care service. To overcome financial hardships associated with out-of-pocket payments, the Ethiopian government has introduced two types of health insurance schemes since 2010. The first kind is CBHI and the other one is social health insurance (SHI). The SHI intends to cover 10.46% of the population who are engaged in formal sectors. CBHI, on the other hand, intends to cover 83.6% of the populations of Ethiopia who are engaged in the informal sectors(10).

The government of Ethiopia is working to narrow the existing wide gap between community demand for health care and financial constraints in the health sector by implementing the CBHI scheme in rural areas. Currently, CBHI scheme is being implemented over 161 districts and recent

evaluation shows improvements in health service utilization among districts implementing CBHI scheme. CBHI enrollees expect better quality of care(8, 10).

In Ethiopia, easily preventable communicable diseases are still a major public health problem. However, health seeking behavior and access to modern health care is low in rural areas. One of the reasons for low utilization of modern health care services is the user fee charges. User fees can present a substantial psychological and financial burden to the families. It is one of the barriers to healthcare use, especially for poor households who are themselves likely to be particularly vulnerable to ill health(8, 9).

1.2 Statement of the problem

Health care financing is a major problem in many low- and middle-income countries where the disease burden is high, and people must spend from their pocket to be treated. People in different parts of the world may not use modern health service for many reasons; one of these reasons is the inability to afford the service available(6, 11).

This is even a serious a problem in poor countries was the condition of living itself exposes to ill health. The lack of access to health service, poverty and expenditure are strongly associated with out-of-pocket spending to get a health service. Many African countries rely on out-of-pocket payment (30% - 85% of total health spending) to cover health expenses of their citizens. This pushes people living in this continent to poverty(2, 6).

Due to lack of financial capability to afford a health care people with low income have poor access to health service. These people contribute to 80% of the global death from communicable diseases and 68% of death from injuries. The health care financing in Ethiopia is mainly characterized by low government expenditure (6.2% of total public budget and 1.8% of GDP in 2000) and out of pocket (OOP) from citizens(12).

Ethiopia's health care financing depends on the government expenditure (31%), out of pocket expenditure from users (user fee 31%) and donor's contribution (37%). FMOH mentioned that the out of pocket spending has increased from 31% in 2000 to 37% in 2010(13).

To tackle the problem brought about by high out of pocket spending, the Ethiopian government introduced CBHI in 2011G.C nationally and in 2016 G.C in Addis Ababa. Low enrolments are a

big challenge in low- and middle-income countries. This is a threat not only in keeping the scheme sustainable but also in future enrolment of members and dropouts(11, 14).

In addition, low adhesion rate, limited resource mobilization and poor scheme sustainability are the major challenges in sub- Saharan countries(15). Low attitude towards CBHI, lack of awareness about CBHI, inability of health institutions to provide promised health services in the benefit package, absence of proper referral system, lack of clients to comply to prescribed treatments and professional moral hazard are some of the challenges faced when implementing CBHI in Ethiopia(4).

Thus, the proposed study will examine the level of quality and its associated factors in study area. This study will also emphasize on the major implementation challenges of the scheme on the quality of service provision. Thus, the current study will take in to account such important factors into consideration.

1.3 Significance of the study

This study will try to assess the level of quality of CBHI members found in Daraworeda and factors that contribute.

This will fill in the information gap and point direction of action that should be taken to help sustain the scheme. In addition to this, this research will also address the information gap on the effectiveness of scheme design and major challenges of the scheme.

This will help in reviewing the system in order to increase its performance. On the other hand, the findings of this research will add the current knowledge and be used as an input for the still ongoing implementation of CBHI.

2. LIRATURE REVIEW

2.1 Service provision Quality of CBHI

In low and middle-income countries, out of pocket spending for health service is the main cause for economic deterioration of households. Community based health insurance is now a new means to make health service accessible and affordable in low and middle-income countries. Community based health insurance decreases out of pocket spending and increases cost recovery. Community based health insurance schemes in different parts of the world share common principle of risk sharing among members and provision of financial risk protection. Voluntary membership, payment schedules which are inflexible, limited benefit packages, are some of the common features of CBHI in different countries(1, 9)

Ethiopia's health care financing depends on the government expenditure (31%), out of pocket expenditure from users (user fee 31%) and donor's contribution (37%). FMOH mentioned that the out of pocket spending has increased from 31% in 2000 to 37% in 2010(1)

Recently about 20 million people Part of the population found in Ethiopia who are eligible for CBHI are members of the scheme. The main features of the Ethiopian community-based health insurance include voluntary membership on a household level, financing the poor, general and targeted subsidy, benefit package and community involvement in the management of the scheme. The CBHI scheme is established at the woreda level in regional states and at sub city level in Addis Ababa(16).

Recently woredas, which have not implemented have begun the implementation process. (From a report of AARHB CBHI directorate) Community based health insurance members expect to get better quality of service. Their satisfaction is important in order to stay enrolled in the scheme(16).

The implementation of CBHI in Addis Ababa was started in 2016/2017 G.C. It was first started in ten woredas found in ten sub cities; one pilot woreda in each sub city, then later got up scaled to additional 30 woredas. Recently woredas, which have not implemented have begun the implementation process(5).

Community based health insurance members expect to get better quality of service. Their satisfaction is important in order to stay enrolled in the scheme(6). Study done at Anilemo district of Hadiya zone which found the satisfaction of CBHI members to be 54.1 %(17).

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Though the health insurance satisfaction study is an ongoing, some studies show that level of satisfaction varies from region to region. A study in Nigeria shows that less than half (42.1%) of enrollees were satisfied with health insurance scheme in 2011(18). However, a high level (91.38%) of household's satisfaction to CBHI was reported in Ethiopia in 2016(8).

A study conducted in Sheko district of south west Ethiopia found that 54.7 % of the members who participated in the study were satisfied with the scheme(2)

In another study done in in Damotwoyde district in SNNPR Ethiopia, reported that the satisfaction with CBHI to be 61.38 %. Another study done in Anilemo District of Hadiya zone, Southern Ethiopia found 54.1% of CBHI members were satisfied(4, 9).

2.2 Factors associated with service provision quality of CBHI

2.2.1 Socio demographic factors

Different studies have reported different factors associated with the quality of CBHI. These included factors like age of members, their family size, and laboratory service and health service provider friendliness (1, 3).

Another studies show that socio-demographic characteristics such as sex, age, marital status, educational level, occupation, and family size affect enrollee's quality to health insurance (5, 6).

A study done in Sheko district found that age and educational status were strongly associated with satisfaction(18)In the other study conducted in Damotwoyde district age, estimated annual income and family size were strongly associated with quality.Accordingly, as age increased by one-year satisfaction increased while increased family size decreased the quality. A study done in Tehuledere on complying with requirements of CBHI, age was found to be a significant contributor (11, 18, 19).

2.2.2 CBHI Scheme process and management related factors

In addition to this CBHI opening hours, affordability of premium, card collection process, waiting time after paying for membership, type of health facility visited, length of enrolment in the scheme are some of the major factors that influence satisfaction of members. In addition to this,

inconvenient paying model and renewal period were reported as important factors affecting member's compliance to CBHI requirements (12, 13).

In a study done in Damotwoyde households who paid premium three times were less satisfied than those who paid more than three times. The study done in Sheko district indicated that length of enrollment and the type of health institution visited (hospitals or health centers) in the scheme affected the level of quality of CBHI (14, 19).

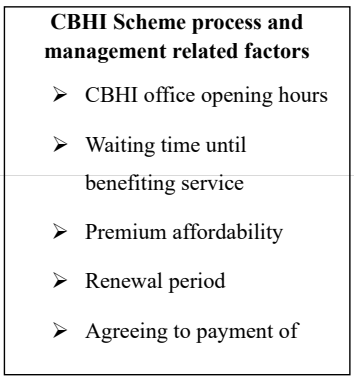
2.2.3 Health service-related factors

In addition to other factors, health service related factors also influence enrollee's quality to CBHI. Satisfaction to CBHI is positively associated with enrollee's perception of good laboratory service provision; health provider's friendliness; availability of doctors and medicines (6).In addition to that district which had been agreed with the laboratory service provision and friendliness of health service providers were strongly associated with quality (11).

2.2.4 Knowledge and Perception of participants towards CBHI

Furthermore, studies in developing countries have shown that quality of the health insurance scheme is influenced by the enrollee's knowledge of health insurance benefit packages (6). Study in Nyanza district of Rwanda found that knowledge satisfaction of members to CBHI. (11).

2.3 conceptual framework



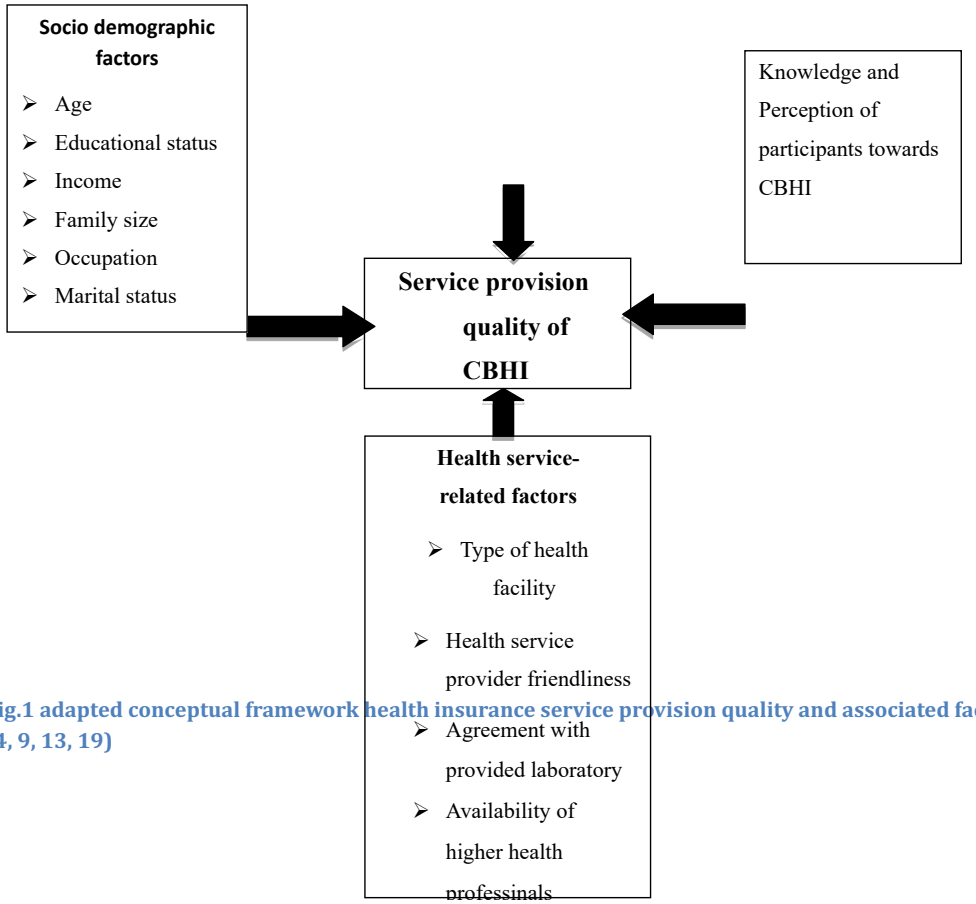


Fig.1 adapted conceptual framework health insurance service provision quality and associated factors (4, 9, 13, 19)

3. OBJECTIVES

3.1 General objective

- To assess community based health insurance service provision quality and associated factors at Daraworeda public health facilities, Sidamaregion,Southern Ethiopia. 2023

3.2 Specific objectives

- To assess community based health insurance service provision quality at Daraworeda public health facilities, SidamaRegion, Southern Ethiopia. 2023
- To identify associated factors of community based health insurance service provision quality at Daraworeda public health facilities, Sidamaregion,Southern Ethiopia. 2023

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4. METHODOLOGY

4.1 Study area

This study was conducted at Dara_woreda. The woreda is one of woredas in sidama regional state, Ethiopia. According to the report from Ethiopian statistics agency in 2022G.CIt has an estimated population of over 127,190. Females are larger in number than males (64,867 male and 62323 females).

The woreda_has a total of 22 public health institutions. From this one is hospital, three are health centers and 18 are health posts. This study will be conducted on hospitals and healthcenters which are found in woreda. Hence all one hospital and three health center, in woreda, was included in the study(1).

4.2 Study design and period

An institutional based cross-sectional study design was used with from April 1- April, 30 2023.

4.3 Source and study population

4.3.1 Source population

CBHI members registered as members in woredaa during2023.

4.3.2 Study population

Study population was selected community-based health insurance members who are found in woreda and are utilizing the service being provided in the hospitals and health which have deal with the scheme.

4.4 Eligibility criterias

4.4.1 Inclusion criterias

All population member CBHI and using health service in selected health center was included

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4.4.2 Exclusion criterias

Those who are critical sick and cannot communicate

Those who come from out of the study area

Those who are not voluntary to give consent.

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4.5 Sample size determination

For objective 1: the sample size is determined using single population proportion Formula. Considering the proportion of 54.7% obtained from previous study done in Sheko district (19), 95% CI and maximum discrepancy of 5% between the sample size and the underlining population. The following single population formula: 380.8 than by adding 10% non-response rate, the final sample size becomes 419.

$$n=(Z\alpha/2)^2 p\,(1-p)/d^2:$$

For objective 2: The sample size for the second objective of this study is determined by considering various variables that was significantly associated with the outcome variables (See table 1).

Table1: Second objective sample size determination toassess community based health insurance service provision quality at Daraworeda public health facilities, Sidamaregion,Southern Ethiopia.

S.no	Variable	CI	Power	Outcome among unexposed	AOR	Ratio	Sample size	10% NR	Final sample size	Reference
1	Educational status	95%	80%	25%	2.78	1	353	35	388	7
2	Type of health facility	95%	80%	7.8%	3.04	1	275	28	303	8
3	Monthly income	95%	80%	20%	3.56	1	249	25	274	18

4.6 Sampling techniques and procedures

A systematic random sampling technique was used to select study participants. The sample of the study was from CBHI members found inworeda. Respondents of the study was members of CBHI in each of the woreda who are utilizing service provided at hospital and healthcenter in deal with CBHI scheme of their respective woreda. Sample size was allocated to each health facility using proportional allocation. The daily average flow of clients in the facility was calculated from their previous monthly report of CBHI beneficiaries. This was divided by their respective sample size to determine Kth -Interval and allowing the samples to be picked every kth client. The first clients was picked by lottery method. Health workers working at OPDs will be responsible for tallying the number of CBHI members visiting the facility and conducted the interview until they achieved the final sample size.

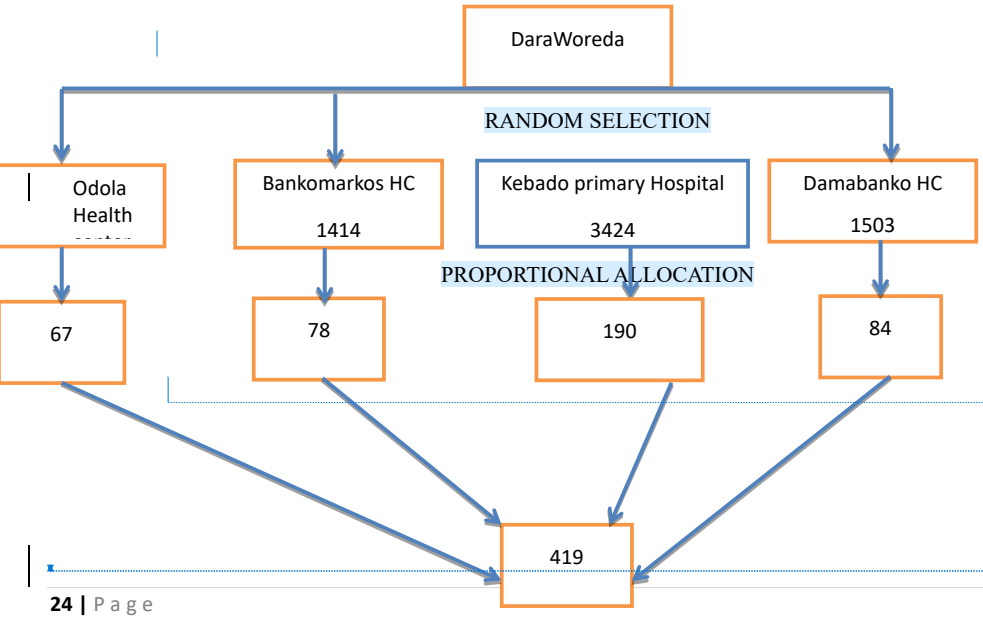

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Fig 2 Sampling procedure to assess community based health insurance service provision quality and associated factors

4.7 Study Variables

4.7.1 Dependent variable

- Quality of CBHI service provision

4.7.2 Independent variables

- The socio demographic characteristics of members
- Knowledge of provider about the scheme
- Community based health insurance experience of provider
- CBHI process and management related factors
- Health service provision related factors

4.8 Operational definitions

Service quality of CBHI: -The service quality to the CBHI scheme was assessed based on 14 quality questions developed from previous literatures. The study participants who scored above the mean score of question was labeled as get qualified service and the score less than mean score was classified as did not get quality(3)

4.9 Data collection procedures

Data was collected with a structured questionnaire, which was administered with the help of 6 diploma health workers. The questionnaire was include information on Socio demographic and economic factors, health facility factors, and individual factors. Structured questionnaire was prepared in English and translated to Amharic and then translated back to English for checking consistency. The health extension workers collected the data by conducting a face-to-face interview with members of CBHI who are on exit from their respective health institutions after they have utilized the service provided. They used a structured questionnaire.

4.10 Data quality management

The questionnaire was checked for consistency by translating the English version to Amharic language. Study variables for this study were from review of previous studies. The questionnaire was administered to members of CBHI who are utilizing the service and still are members. Face to

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face, interview was conducted. The questionnaire was pretested to make sure it results what is needed. Data collection process was supervised as to whether it's being done correctly by trained supervisors.

4.11 Data entry and analysis procedures

Data was coded and entered into Epi data version 3.1 and then exported in to SPSS version 20 for analysis. Analysis of each variable is as follows: - The socio demographic characteristics of respondents were described in terms of frequency, mean, median and IQR. The age, sex, marital status, family size, income and educational status was used to characterize members of CBHI who participate on this study.

Bivariate analysis was used to see if there is relationship between service quality and different socio-demographic aspects of participants and other related factors such as knowledge, experience of CBHI members, and CBHI process and management related factors. The quality of participants was described by percentage and frequency. The factors associated was assessed by using binary logistic regression analysis.

4.12 Ethical consideration

Ethical approval was obtained from Pharma College. And further ethical clearance was obtained from relevant bodies in their hierarchy, starting from health bureau to woreda health office. Participants were provided with the necessary information about the intent of the study and written consent was taken before they are a part of the study.

4.13 Dissemination of results

First the result the study was presented in pharama college hawwasa campus in department of public health. A finding of this study was an input for further implementation of CBHI in sidama region. The finding was disseminated accordingly to the relevant bodies. This wasincluding Ministry of health, health bureau CBHI directorate and Ethiopian health insurance agency.

5. RESULT

5.1 Socio-demographic characteristics of study participants

A total of 404 study participants were enrolled in this study with a response rate of (96.42%). The majority of the study participants 274 (67.8%) were women. The median (±IQR) age of the study participants is 43(±6.75) years (ranging from 18 to 85 years of age). Concerning the marital status, the majority of the study participants 226 (55.9) were married. Similarly, most of the study participants 245 (60.6) have average monthly income of above 1000 ETB. Only 89 (22.4%) of the study participants have an educational status of unable to read and write (Table 2).

Table 2: -Characteristics of the study participants at Dara woreda public health facilities, Sidama region,Southern Ethiopia.

Variables	Category	Frequency	Percentage
Age	≤30 years	58	14.4%
	30-39 years	71	17.6%
	40-49	106	26.2%
	>50 years	169	41.8%
Sex	Male	130	32.2%
	Female	274	67.8%
Marital status	Single	88	21.8%
	Married	226	55.9%
	Divorced	42	10.4%
	Widowed	48	11.9%
Educational	Illiterate	89	22.4%

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status	Primary	173	42.8%
	Secondary and above	142	35.1%
Average Monthly Income	≤1000 ETB	245	60.6%
	> 1000 ETB	159	39.4%

5.2 Knowledge community based health insurance of the study participants

Nine items were used to assess the knowledge of the study participants towards the benefits of CBHI package. Almost all 399 (98.8%) of the study participants were aware that CBHI is a goodway of relieving CBHI members to off health expenditures. Likewise, the majority of the study participants have knowledge about the benefits of CBHI package. In this study having good Accordingly, 222 (55%) of the study participants have adequate knowledge about CBHI packages. (Table 3).

Table 3 Knowledge about the principle of CBHI scheme at Daraworeda public health facilities, Sidama region, Southern Ethiopia.

Variables	Category	Frequency	Percentage
CBHI is good to off the expenses	Yes	399	98.8
	No	5	1.2
CBHI covers only public Institution	Yes	371	91.8
	No	33	8.2
CBHI covers expenses within country	Yes	384	95
	No	20	5
CBHI doesn't cover transportation	Yes	370	91.5

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	No	34	8.5
CBHI covers only inpatient care	Yes	389	96.5
	No	15	3.7
CBHI covers only outpatient care	Yes	394	95
	No	20	5
CBHI doesn't covers cosmetic value	Yes	333	83.4
	No	67	16.6
CBHI covers surgical service	Yes	120	29.7
	No	284	70.3
CBHI covers dialysis until 3 month	Yes	274	67.8
	No	130	32.2
Overall level of knowledge on CBHI benefit package	Yes	222	55
	No	**182**	**45**

5.3 Community based health insurance experience of provider

All the study participants who take part in this study had experience of visiting the health institutions after enrolled in CBHI scheme. The mean time of enrollment of the CBHI scheme is 24 months (ranging from 4 months to 72 months). According to the study participants, thehighest number of households 143 (35.4%) have decided to enrolled in CBHI scheme with the support of HEWs. The majority of the study participants 353 (87.4%) had visited the health center. Apart from these more than half of the study participants 220 (55.5%) have an experience of visiting the health institutions more than 5 times at the time of data collection. In relation to this most of the study participants 326 (80.7%) were happy with the permitted public health institutions. Moreover 259 (64.1%) and 281 (69.6%) of the study participants believed that, they got the required laboratory service and the correct prescribed drug during visiting the health institutions (Table 3)

Table 3 Community based health insurance experience of provider at Daraworeda public health facilities, Sidama region, Southern Ethiopia.

Variables	Category	Frequency	Percentage
Who decide to enroll as a member	Myself	117	29
	Health care providers	77	19.1
	Kebele administrators	67	16.6
	HEWs	143	35.4
Which HC did you visit most	Health center	353	87.4
	Hospital	51	12.6
Frequency of visiting the health institution	≤5 times	194	45.5
	> 5 times	220	55.5

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Are you happy with the permitted health institutions	Yes	326	80.7
	No	78	19.3
Did sick family members receive drug during the recent visit	Yes	314	77.7
	No	90	22.3
Do you think sick family members received the correct drug	Yes	281	69.6
	No	123	30.4
Did sick family members receive laboratory service	Yes	295	77
	No	109	23
Do you think you received the required laboratory service	Yes	259	64.1
	No	145	35.9
Have you ever participated on CBHI related meetings?	Yes	101	25
	No	303	75

5.4 Health service-related factors

About 75% of the study participants agree that they were satisfied with the laboratory service provided in the permitted health facility. About 20% of the respondent does not agree with the idea that health care provider respect them and act friendly during provision of health service. About 20% of the respondent does not agree with the idea that there is adequate and qualified health care workers in the health facility where they were permitted to go.

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Table 4Health service-related factors Community based health insurance at Daraworeda public health facilities, Sidama region, Southern Ethiopia.

Variables	Category	Frequency	Percentage
members were satisfied with laboratory service	Agree	304	75.2
	Disagree	100	24.8
members got immediate care from health facility	Agree	384	95.0
	Disagree	20	5.0
Got respect from health service providers	Agree	323	80.0
	Disagree	81	20.0
Health care providers were friendly	Agree	324	80.2
	Disagree	80	19.8
health facilities have adequate medical equipment	Agree	384	95.0
	Disagree	20	5.0
Health facilities have adequate qualified health practioners	Agree	323	80.0
	Disagree	81	20.0

5.4 Level of service provision qualitywith CBHIscheme

The points obtained from the whole 14 questions were computed to get the total score of each respondent. A respondent had a minimum of 14 and a maximum of 70 points. The mean score of households were 34. In this study the mean score was used to classify households as qualified and not qualified service. Then the provided services were categorized as qualified ifthey score above the mean score otherwise not qualified. Accordingly, the share of study participants who get qualified service with the community based health insurance was found to be 46.3%.

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Table 5: Level of service provision quality with CBHI schemeat Daraworeda public health facilities, Sidama region, Southern Ethiopia.

Variables	Category	Frequency	Percentage
Opening hours of CBHI office at woreda is suitable to get service	Strongly disagree	202	50.0
	Disagree	81	20.0
	Neutral	40	9.9
	Agree	41	10.1
	Strongly agree	40	9.9
There is timely dispensing of insurance cards	Strongly disagree	202	50.0
	Disagree	81	20.0
	Neutral	16	4.0
	Agree	25	6.2
	Strongly agree	80	19.8
The gap between dispensing of insurance cards and making use of cards to get health service is appropriate	Strongly disagree	202	50.0
	Disagree	77	19.1
	Agree	45	11.1
	Strongly agree	80	19.8
Fee payment time for membership is suitable	Strongly disagree	202	50.0
	Disagree	37	9.2
	Neutral	21	5.2
	Agree	64	15.8
	Strongly agree	80	19.8
The CBHI management is trust worthy	Strongly disagree	202	50.0
	Disagree	27	6.7
	Neutral	31	7.7
	Agree	64	15.8
	Strongly agree	80	19.8
Enough information is provided about CBHI	Strongly disagree	234	57.9
	Disagree	13	3.2
	Neutral	25	6.2
	Agree	64	15.8

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	Strongly agree	68	16.8
The service package provided is enough	Strongly disagree	186	46.0
	Disagree	34	8.4
	Neutral	40	9.9
	Agree	64	15.8
	Strongly agree	80	19.8
The fee to become members is affordable	Strongly disagree	176	43.6
	Disagree	44	10.9
	Neutral	40	9.9
	Agree	64	15.8
	Strongly agree	80	19.8
Happy with the facilities in deal with the scheme and giving service	Strongly disagree	198	49.0
	Disagree	34	8.4
	Neutral	40	9.9
	Agree	58	14.4
	Strongly agree	74	18.3
It is ok to pay premium every year despite not using the service in the previous year.	Strongly disagree	200	49.5
	Disagree	34	8.4
	Neutral	40	9.9
	Agree	58	14.4
	Strongly agree	72	17.8
The place where fee is collected is convenient and suitable for the service	Strongly disagree	240	59.4
	Disagree	45	11.1
	Neutral	40	9.9
	Agree	44	10.9
	Strongly agree	35	8.7
Paying additional payment for older children and relatives living with family is ok	Strongly disagree	188	46.5
	Disagree	38	9.4
	Neutral	40	9.9
	Agree	62	15.3
	Strongly agree	76	18.8
Availability of means whereby the community can voice the claims on bad	Strongly disagree	199	49.3
	Disagree	24	5.9
	Neutral	38	9.4
	Agree	75	18.6

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services	Strongly agree	68	16.8
Enrolment in the scheme eases referral to superior health facility	Strongly disagree	173	42.8
	Disagree	37	9.2
	Neutral	42	10.4
	Agree	72	17.8
	Strongly agree	80	19.8

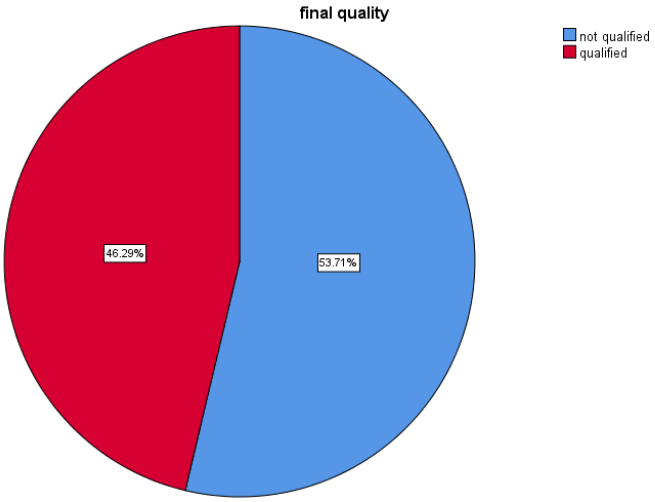

Figure 3: Level of service provision quality with CBHIschemeat Daraworeda public health facilities, Sidamaregion,Southern Ethiopia.

5.5 Factors associated with quality of CBHI service provision

Variables that have a significant association at a p-value <0.25 atthe simple bivariable binary logistic regression analysis were further examined in the multivariable binary logistic regression analysis to control the confounding factors and to see their real association with the outcome variable.

Theresult of the multivariate analysis showed that study participants whose age lies in between

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40 to 49 were 45% less likely to satisfy with CBHI scheme service provision quality compared to study participants above 50 years old (AOR= 0.55, 95% CI: 0.31, 0.96). Similarly, study participants who were happy with CBHI regulations were almost 2 times more likely to satisfy with CBHI service quality compared to their counterparts (AOR= 1.96, 95% CI: 1.12, 3.46).

Households who think they got the right prescribed drug during the recent visit were 1.77 times more likely to satisfy with CBHI scheme service quality compared to their counterparts (AOR= 1.77, 95% CI: 1.08, 2.93)

In addition to these in this study participants who got immediate care during health facility visit were almost 5 times more likely to satisfy with CBHI program service quality (AOR = 4.95, 95% CI: 2.72, 8.98). Households who believed that the permitted public health facilities have adequate medical equipment's were 1.65 times more likely to get qualified service with CBHI program compared to their counterparts (AOR= 1.65, 95% CI: 1.02, 2.69). Likewise, households who believed that the permitted public health facilities have adequate qualified health personnel were 1.89 times more likely to get qualified service by the program compared to their counterparts (AOR =1.89, 95% CI:1.12, 3.20) (table, 4)

Table 6 Bivariate and Multivariate logistic regression analysis results on factors associated with overall service quality levbel 2023

Variables	Obtained quality CBHI service		COR (95% CI)	AOR (95% CI)
	Yes	No		
Age of the study participants				
< 30 years	35	23	1.69 (0.92, 3.11)	1.77 (0.91, 3.45)
30 - 39 years	35	36	1.08 (0.62, 1.88)	1.12 (0.63, 2.10)
40 – 49 years	37	69	0.60 (0.36, 0.99)	**0.55 (0.31, 0.96)**
≥ 50 years	80	89	1	1
There are valid CBHI regulations				
Yes	161	165	1.95 (1.16, 3.28)	**1.96 (1.12, 3.46)**

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No	26	52	1	1
Do you think received the correct Prescribed drug?				
Yes	112	169	2.36 (1.53, 3.64)	**1.77 (1.08, 2.93)**
No	75	48	1	
Got immediate care during visit				
Agree	118	196	1	1
Disagree	69	21	5.46 (3.18, 9.36)	**4.95 (2.72, 8.98)**
HF permitted have Adequate ME				
Agree	72	118	1	
Disagree	115	99	1.90(1.28, 2.83)	**1.65 (1.02, 2.69)**
HF permitted have adequate qualified personnel				
Agree	123	143	1	1
Disagree	64	74	1.01(0.66, 1.52)	**1.89 (1.12, 3.20)**

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6. DISCUSSION

This study aimed to assess the CBHI service provision quality and associated factors among members of CBHI scheme. In this study, the level of the level qualified service with the CBHI scheme was found to be 46.3%. The finding of this study was almost similar with the previous studies conducted in Sheko 54.7 % of the members of CBHI scheme were quality with the scheme (2), another study conducted in the Anilemo district Hadiya Zone Southern Ethiopia also reported that the magnitude of qualified service with CBHI scheme was 54.1% (20), However, another study done in Damotwoyde district of Wolyta zone in SNNR reported that the service quality towards CBHI scheme was found to be 91.38 %(11). The possible reason for this discrepancy might be due to the difference in the socio-demographic characteristics of the respondents, the tools used to measure the quality, and the time difference of the study.

This study used 14 standardized questions using a five-point Likert-scale to assess the overall service quality. The internal consistency of the 14 items tested using Cronbach's Alpha was found to be 0.831.

Whereas the study conducted in Sheko and Damotwoyde district of Wolyta zone in SNNR used only 6 questions scale to assess(2, 11) This is one of the possible reasons for this discrepancy because asking more questions may probe more problems on CBHI enrollment.

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In this study members whose age lies between 40 to 49 years were less likely to get qualified with CBHI scheme compared those with age greater than 50 years (AOR= 0.55, 95% CI: 0.31, 0.96). The finding of this study in line with the previous studies conducted in Southern Ethiopia (3), Nigeria (14), and Turkey (21) this might be attributed to the difference in the expectation of the service and the frequency of getting the service. Older people get more frequent illness compared to younger people. When the frequency of visiting the health, facilities increased and got the service without paying out of their pocket the likelihood of satisfying with the service also increased as illustrated in the previous study.(11)

Households who were happy with CBHI regulations were two times more likely to report that the service they get qualified with CBHI enrollment compared to their counterparts (AOR= 1.96, 95% CI: 1.12, 3.46). The finding of this study was similar with the previous studies conducted in Damotwoyde district of Wolyta zone in SNNR the possible reason might be households who have a better understanding of the regulations of CBHI scheme have a higher chance of satisfying with the service. (11)

In accordance with the previous studies (2, 11) in this study those who agreed that sick family members received the correct prescribed drug during their recent visit were more likely to satisfy with CBHI scheme compared to their counterparts (AOR=1.77, 95% CI: 1.08, 2.93). The possible reason as mentioned by Addise et al, 2021 might be due to households who enrolled and did not get the right prescribed drugs in a public health facility were obliged to pay additional costs for private pharmacies, which might be the causes of dissatisfaction with the CBHI scheme.

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Study participants who got immediate care during their visit were five times more likely to satisfy with CBHI scheme compared to their counterparts (AOR= 4.95, 95% CI: 2.72, 8.98). The finding of this study was in agreement with the previous studies conducted in Rwanda (16) reported that households who received immediate and respectful care during the recent visit were more likely to satisfy with CBHI scheme. It is well known that households who got immediate care during visiting the health facilities will have a better level of satisfaction compared with households who encounter delay during theirvisits.

Households who agreed that the permitted health facilities have adequate medical equipment were more likely to satisfy with CBHI scheme compared to households who didn't agree (AOR= 1.65, 95% CI: 1.02, 2.69). The finding of this study is scientifically plausible because households who assumed to get proper treatment with adequate medical equipment's have a better chance of satisfaction with the program compared to those who were not agreed with the adequacy of medical equipment

Apart from these study participants who believed that the permitted health facilities have adequate qualified personnel were more likely to satisfy with CBHI scheme compared to their counterparts (AOR=1.891, 95% CI: 12, 3.20). Study participants who believed with the qualification and competency of health professionals found in the permitted public health facilities were more likely to satisfy with the service they got from those health facilities

Moreover, the qualitative part of this study pointed out that shortage of drugs in the permitted health facilities, absence of kenema pharmacy in their nearby place, disrespect and poor attitude of health professionals, lack of laboratory and other diagnostic service in the permitted public health facilities, health professionals lacked awareness about CBHI scheme, and rigid premium payment modality are major challenges of CBHI implementation.

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7. Conclusions andRecommendations

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7.1 Conclusions

Health service equity and quality are important indicators in achieving universal health coverage goals. To achieve these goals, establishing a sustainable community-based health care financing system is indispensable. Understanding the level of service quality towards community-based health insurance was one of the major factors to ensure the sustainability of CBHI program. This

study aimed to determine the level service quality and the associated factors among CBHI members.

The findings of this study revealed that less than half of the study participants were getting qualified service with the CBHI scheme in thedaraworeda. Study participants who agreed with the presence of valid CBHI regulations, who think they got the right prescribed drug during the recent visit and study participants who got immediate care during health facility visit were more likely to report qualified service than their counter parts. In addition, satisfaction of households was significantly higher in those members of CBHI who agreed that the permitted public health facilities have adequate medical equipment's, and households who believe that the permitted public health facilities have adequate qualified healthpersonnel

7.2 Recommendations

The government of Ethiopia has implemented CBHI to insure universal health coverage. Hence, to improve service provision quality understanding the satisfaction level of CBHI members, the following measurements need to be considered to enhance satisfaction of target population.

- Sidama regional state health bureau should conduct further investigations on the availability of medications, medical equipment required both at health centers and athospitals.
- This study found that CBHI members who were aware about the regulations were more satisfied. Therefore, the bureau together with sub city and woredashouldassess the awareness of CBHImembers.
- Immediate and respectful care was also another important factor for quality of service. Therefore, the bureau together with sub cities should do assessment on the way CBHI clients are treated both at hospitals and at healthcenter.
- Qualification and competency of professionals was also found to highly affect quality of service. The bureau should do further assessments on the qualification of health professionals at hospitals and health centers.

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9. Annex

Participant Information Sheet and Voluntary Consent (English Version)

My name is _____. I am working as data collector for the study being conducted. I kindly request you to lend me your attention to explain to you about the study and why you are selected as the study participant.

The study title:service provision quality of community based health insurance and associated factors

Purpose of the study: the findings of this study can be of a paramount importance for sidamaregionhealth bureau in improvement of service provided by community-based health insurance.

Procedure and duration: questions will be provided to you by health extension worker. This questionnaire may take up to 20 minutes

Risks and benefits: You are not at any form of risk by participating in this study

Confidentiality: The data you will provide us will be confidential. There will be no information that will identify you. The findings of the study will be generalized for the study population and will not reflect anything particular of individual person. The questionnaire will be coded to exclude names. No reference will be made in oral or written reports that could link participants to the research.

Rights: Participation in this study is voluntary. You have the right to declare to participate or not in this study. If you decide to participate, you have the right to withdraw from the study at any time and this will not label you for any loss of benefit, which you otherwise are entitled. You do not have to answer any question that you do not want to answer.

Contact address: If there, are any questions or enquires any time about the study or the procedures,

Please contact me:

Mobile number ……0916529458

Email Address: ……..gesesegemechu619@gmail.com

Declaration of informed voluntary consent:

I have read/was read to me the participant information sheet. I have clearly understood the purpose of the research, the procedures, the risks and benefits, issues to confidentiality, the rights of participating and contact address for any queries. I have been given the opportunity to ask questions for things that may have been unclear. I was informed that I have the right to stop the study at any time or not to answer any question that I do not want. Therefore, I declare my voluntary consent to allow this study to be conducted with my initials (signature) as indicated below.

I highly assure you that it will only be used for the study and no other purpose.

Signature of the participant: _____

Signature of data collector: _____ Date: _____

Section: 1 socio-demographic characteristic

101 What is your age? ---------years (current age in years.)

102 What is your sex?

1. Male
2. Female

103 What is your current marital status?

1. Single
2. Married
3. Separated / divorced

4. Widowed

104 What is your current educational status?

1. Diploma 1

5. Degree and above

105 How much is your gross salary? ----------Ethiopian birr

Section 2 Knowledge on CBHI package

201 CBHI is a good way to relieve clients off health expenditures?

1. Yes

2. No

202 CBHI covers only costs from public institutions.

1. Yes

2. No

203 CBHI covers only care with in the country.

1. Yes

2. No

204 CBHI does not cover transportation fee

1. Yes

2. No

205 CBHI covers inpatient care

1. Yes

2. No

206 CBHI covers outpatient cost

1. Yes

2. No

207 CBHI does not cover medical care related to cosmetic values

1. Yes

2. No

208 CBHI covers coasts related to surgical service

1. Yes

2. No

209 CBHI covers cost related to dialysis until three months

1. Yes

2. No

Section 3 Experience with CBHI members

301 years of employment in other facility

1. none

2. 6 month -2 years

3. 2-5 years

4. > 5 years

302 years of employment in this facility

303 Which health institution did you visit?

1. Health centers

2. Hospitals

3. Both health centersandhospital

304 How many times did you visit? _____

305 According to CBHI regulations users are required to visit public health centers within the district. Are you happy with the permitted health institutions?

1. Yes
2. No

306 During the recent visit to the health institutions, did sick family members receive drug?

1. Yes
2. No

307 During the recent visit to the health institutions, do you think sick family members received the correct prescribed drug?

1. Yes
2. No

308 During the recent visit to the health institutions, did sick family members receive laboratory service?

1. Yes
2. No

309 During the recent visit to the health institutions, do you think that sick family members received the required laboratory service?

1. Yes
2. No

310 Have you ever participated on CBHI related meetings?

1. Yes
2. No

Section 4 CBHI process and management related factors

401 Can an individual, excluding family members be a part of CBHI scheme?

1. Yes

2. No

402 Is membership fee paid every time you want renewingyour membership?

1. Yes

2. No

403 Do members need to pay premium if they did not use health care in the previous year?

1. Yes

2. No

404 Can members get eye glass service as part of the benefit package?

1. Yes

2. No

405 Can members get service from hospitals without first visiting health centers?

1. Yes

2. No

406 Is the schedule to pay the premium is continent for you

1. Yes

2. No

407 The time to make use of CBHI program after payment of registration fee is ok for you

1. yes

2. No

408 The collection process of insurance cards is appropriate

1. Yes

2. No

409 The opening hours of CBHI office is suitable for the beneficiaries

1. Yes
2. No

Section 5 Health service provision related questions

501 Household members were satisfied with laboratory service

1. Agree
2. Disagree

502 House hold members got immediate care when visiting the health facility

1. Agree
2. Disagree

503 Household members got respect from health service providers

1. Agree
2. Disagree

504 Health care providers were friendly

1. Disagree
2. Agree

505 Do you think that the health facilities permitted have adequate medical equipment

1. Agree
2. Disagree

506 Do you think that the health facilities permitted have adequate qualified health practioners

1. Agree
2. Disagree

Section 6 service provision quality provision of CBHI

601 Opening hours of CBHI office at woreda is suitable to get service

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

602 There is timely dispensing of insurance cards

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

603 The gap between dispensing of insurance cards and making use of cards to get health service is appropriate

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

604 Fee payment time for membership is suitable

1. Strongly disagree
2. Disagree
3. Neutral

4. Agree

5. Strongly agree

605 The CBHI management is trust worthy

1. Strongly disagree

2. Disagree

3. Neutral

4. Agree

5. Strongly agree

606 Enough information is provided about CBHI

1. Strongly disagree

2. Disagree

3. Neutral

4. Agree

5. Strongly agree

607 The service package provided is enough

1. Strongly disagree

2. Disagree

3. Neutral

4. Agree

5. Strongly agree

608 The fee to become members is affordable

1. Strongly disagree

2. Disagree

3. Neutral

4. Agree

5. Strongly agree

609 Happy with the facilities in deal with the scheme and giving service

1. Strongly disagree

2. Disagree

3. Neutral

4. Agree

5. Strongly agree

610 It is ok to pay premium every year despite not using the service in the previous year.

1. Strongly disagree

2. Disagree

3. Neutral

4. Agree

5. Strongly agree

611 The place where fee is collected is convenient and suitable for the service

1. Strongly disagree

2. Disagree

3. Neutral

4. Agree

5. Strongly agree

612 Paying additional payment for older children and relatives living with family is ok

1. Strongly disagree

2. Disagree

3. Neutral

4. Agree

5. Strongly agree

613 Availability of means whereby the community can voice the claims on bad services

1. Strongly disagree

2. Disagree

3. Neutral

4. Agree

5. Strongly agree

614 Enrolment in the scheme eases referral to superior health facility

1. Strongly disagree

2. Disagree

3. Neutral

4. Agree

5. Strongly agree