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IMPACT OF COMMUNITY BASED HEALTH INSURANCE ON HEALTH SERVICE UTILIZATION IN GEDEBANO GUTAZER WOLENE WOREDA, ETHIOPIA

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Impact of Community Based Health Insurance in Health Service Utilization in Gedebano Gutazer Wolene Woreda, Ethiopia

A Thesis Summited to School of Graduate Studies, in Partial Fulfillment of the Requirements for the Degree of Master of Economics in Development Economics

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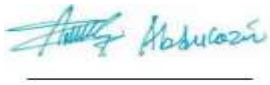
Dr. Abdulaziz Abdulsemed		09-04-2024
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List of acronyms & abreviation

CBHI	Community Based Health Insurance
CHE	catastrophic health expenditure
CDC	center of diseases control
CREHS	community regulated expansion of health system
FGD	focus group discussion
FMOH	Federal ministry of health
GGW	Gedebano Gutazer Wolene Woreda
HH	household
HSTP	Health sector Transformation Package
IFGD	indirect focus group discussion
LMIC	low-income and middle-income countries
OLS	ordinary least square
OOP	Out of Pocket
TB	Tuber closes
UHC	Universal Health Coverage
WHO	world health organization

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ABSTRACT

This paper aimed to study the impact of community based health insurance in health care service utilization by reducing financial burden on members in Gedebano Gutazer Wolene Woreda , Gurage zone, Ethiopia. The study used cross-sectional household survey data both from community based health insurance members and non-members. The study used multi-stage sampling teckique. A logistic regression analysis was conducted to determine the presence of statistically significant associations between the enrollment in CBHI scheme and independent variables, association between CBHI and health care utilization and with health care expenditure, at a p-value<0.05 . The fitness of the model using Hosmer and Lemeshow's goodness-of-fit test was checked. After the logistic regression, family size, chronic disease, and awareness about CBHI are positively affecting the enrollment in CBHI but income is negatively affecting enrollment of household in CBHI. CBHI program increases the utilization of the household in health care service and reduces the out-of-pocket health care expenditure of members, other than non-members. Thus CBHI membership increases health service utilization and financial protection. CBHI proves to be an important strategy for promoting universal health coverage by protecting out of pocket health expenditure. Implementing CBHI in all woredas and increasing membership among households in woredas by increasing knowledge of households about CBHI, increasing service quality and health facility access for rural communities, that are alread implementing, CBHI will further expand its benefit.

Chapter One

Introduction

1.1 Background of the study

In the world, especially low income countries are unable to meet their citizen health care needs. Large number of people are suffering and dying due to a lack of access to the most basic medical care. This is due to the poor and unexpected health shock's; inability to pay for health care services (Atnafu et al., 2018).

Globally, 808 million people face catastrophic health expenditure (CHE), and 122 million people were pushed into poverty each year. It aggravates healthcare inequalities, incurs burden opportunity costs, and pushes households to sit in a deep poverty trap (Shikuro et al., 2020).

In the lower economic group of the society, out-of-pocket medical expenditure results in massive financial barriers and impoverished life in the households. The out-of-pocket health expenditures on low income countries constitute a large share (63.3%) of total expenditure(Khan et al., 2020).Over 90% of healthcare financial difficulties and their consequences occurred in Sub-Saharan African countries, where resources are limited (Kassa, 2023).

Due to lack of health service care access Universal health coverage (UHC) is informed based on the 1946 WHO Constitution, which declares health, fundamental human right and commits to ensuring the highest attainable level of health for all. It represents that everyone receives good quality health services, when and where needed, without incurring financial hardship(world health organization, 2022).

Universal health coverage is becoming priority according to world health organization. Community-based health insurance is widely recognized as the most effective way to achieve universal health coverage with adequate financial protection and against healthcare costs, to promote equal access to high-quality of healthcare, increase financial security, and enhance

social cohesion and solidarity (Geferso and Sharo, 2022). community-based health insurance (CBHI) has been advanced as an alternative means of financial protection and a way to increase health care access for the poor (Dror et al., 2016).

According to World Health Organization, Community Based Health Insurance is a type of health insurance program that provides financial protection against the cost of illness and improving access to health care services for communities engaged in the informal sector (Tahir et al., 2022). Community based health insurance depends on the political willingness, social acceptability, and financial capability, and carefully designed to address inequities. And health insurance reform advertised as "pro-poor" may fail to actually reach poor populations as other groups influence design details and implementation (InsuranceRegulatory & AuthorityDevelopment, n.d.).

Community-based health insurance (CBHI) is not-for-profit private health insurance that is based on an ethic of mutual aid among people in the informal sector and rural areas. CBHI pools members' premium payments into a collective fund that is managed by the members(United States Agency for International Development, 2010).CBHI is a not-for-profit type of health insurance that has been used by poor people to protect themselves against the high costs of seeking medical care and treatment for illness. In principle, CBHI schemes are designed for people who live and work in rural areas, or in the informal sector (Habiyonizeye, 2013).

Community based health insurance schemes are classically risk-pooling approach that tries to spread health costs across households with different health profiles to ensure better access and enables cross subsidies from rich to poor populations. 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 (Mirach et al., 2019a).

To accelerate the progress towards universal health coverage, the government of Ethiopia was piloted community based health insurance in 13 woredas (districts) between 2011 and 2013 (Mulat et al., 2022).Based on Ethiopian Health Insurance Agency the design of the Ethiopian CBHI pilot was learned from the experiences of other countries, especially those

that are believed to have been successful. The best practices around avoiding small-scale, voluntary membership and ensuring the membership of the very poor were considered and incorporated in the design the schemes design. The design of the CBHI pilot was informed by reviewing best practices around the world and by study tours to Ghana, Mexico, Rwanda, and Senegal (Bekele, 2015).

Community-based health insurance schemes are becoming increasingly recognized as a potential strategy to achieve universal health coverage in developing countries. Despite great efforts to improve accessibility to modern health-care services in the past two decades, in Ethiopia, utilization of health-care services have remained very low (Ashagrie et al., 2020).

CBHI dropout rate in the scheme was high in lack of service quality and shortage of medical equipment's. Length of enrollment, health facility visit, hospital accessibility, knowledge of CBHI, and official position holders used for decision-making are significantly associated with the CBHI dropout rate (Ashagrie et al., 2020).

Federal ministry of health (FMOH) provided the necessary guidance on defining the CBHI major parameters based on the findings of the regional feasibility studies and the respective regional context. In terms of premiums, there is a variation in premium rates across regions. The annual average premium per household during implementation year was Birr 126 in SNNP and Birr 180 in Oromia region (Feleke et al., 2015).

The few existing studies are focused on factors influencing drop-out of households from community based health insurance membership in rural districts of Gurage Zone, Southern Ethiopia. From Gurage Zone in Gedebano Gutazer Wolene woreda there is no existing studies done on CBHI. Therefore, this research is aimed to assess the impact of community based health insurance on health care utilization and health care financial burden of households in Gedebano Gutazer Wolene woreda.

1.2 Statement of the Problem

World Health Organization report revealed that countries are still facing different health problems. LICs and LMICs continued to bear the greater part of the burden of communicable diseases, including TB, HIV, malaria and neglected tropical diseases (world health organization(WHO), 2021). A 35% fewer women died globally from causes related to or

aggravated by pregnancy and childbirth, an estimated 94% of them died in LICs and LMICs. Specially large share of the under-five mortality burden in 2020 occurred in just five countries: Nigeria, India, Pakistan, the Democratic Republic of the Congo and Ethiopia(world health organization(WHO), 2022).

The impact of different health insurance schemes in many countries on utilization generally shows a positive effect. This is aligned with the supply-demand theory in which health insurance decreases the price of health care services resulting in increased demand. The impact of health insurance on health status suggests a promising positive effect (Eckart et al., 2019).The general evaluative assessment on the impact of CBHI in the country found out that 45 to 64 percent increase in the frequency of visits to public providers (Jembere, 2018).

Households are willing to pay a higher price than the policy price. Therefore, setting a new premium that reflects households' willingness to pay is highly valuable to policymakers. Social capital and awareness about CBHI scheme play an important role in influencing willingness to pay. It is also necessary to create awareness about the CBHI's benefits (Negera & Abdisa, 2022).

But other study shows that Community-based health insurance (CBHI) scheme is a powerful tool to achieve health service coverage by providing financial protection against healthcare costs. Ethiopia introduced CBHI, although its utilization is suspected to be poor. However, the majority of the participants used the CBHI service; still a large number of users did not receive the services properly. Because lack of services like availability of laboratory services and delivery of essential drugs were low (Girmay & Reta, 2022). Households participating in CBHI scheme and the average frequency of members visit health facility of them would have been less by 0.89, their expected average monthly expenditure would have been 7.9 birr more and their awareness on family planning would have been less by 13.1 percent, if they did not enroll to the scheme (Alemu, 2018).

The magnitude of CBHI utilization was low when compared to other previous studies and the National HSTPII target plan to achieve 80% community-based health insurance utilization(Ethiopian Ministry of Health, 2021).The pooled coverage of CBHI enrolment is low in Ethiopia compared the national target of 80% set for 2020 (Tahir et al., 2022). The

results showed that age, sex, household family size, occupational status of farmer, annual income of households, trustworthiness, affordability of the registration and premium, frequency of visit to the health facility, waiting time to get healthcare service, satisfaction with the healthcare services and the attitude of health professionals, and trustworthiness were factors significantly associated with community-based health insurance utilization (Geferso & Sharo, 2022).

On the other hand the health service delivery system provided by CBHI scheme is not satisfactory in terms of quality, referral system, human resource and building facility. The scheme provides less quality medication for members of the scheme and most of the time the members are forced to buy from private pharmacies (Tesfagiorgis, n.d.). This is a challenge; because members face unexpected cost and they may not have money in their hands in time. Members are not preserving for accidental health service costs (Tesfagiorgis, n.d.).

The government and the private health services utilization rates were 35.5% and 18.5% respectively. Presence of a disabling health problem and an illness episode were associated with increased utilization of health services. Besides, sex, marital status, household income and socioeconomic status were found to be associated with use of the health care. Distance to the nearest health center or hospital, perceived transport cost and perceived treatment cost were shown to be predictors of utilization of health service (Mulat et al., 2022).

For the facts doing by the community based health insurance, scheme had positive impacts on health service issues by reducing catastrophic costs and community is showing high interests in Ethiopia (Bayked et al., 2023).Many studies showed that; there were individuals still who have been suffering from chronic and other diseases due to lack of finance. And now due to the insurance they get free health care services and now they are healthy members and can take any tasks easily than ever. Investigation and documentation of the impact of CBHI on health service utilization and financial risk protection through rigorous study would facilitate informed decisions on healthcare financing mechanisms and advocate for CBHI program expansion.

Despite the CBHI scheme providing significant improvements in the health of the poor and vulnerable group; there are a lot of challenges regarding the utilization of CBHI. But

according to (Menelik et al., 2022), (Bekele, 2015), (Tesfagiorgis, n.d.) and (Mussa et al., 2023) findings that community-based health insurance increase health service utilization and protect health care OOP. But there is no study conducted in Gedebano Gutazer Wolene Woreda to address the impact of CBHI on health care utilization. Therefore, ascertaining and closing this gap requires research. Additionally, scientific evidence is necessary since nothing is known about the current status of CBHI in service utilization and financial burden reduction in Gedebano Gutazer Wolene Woreda. Hence, this study aimed to assess the impact of community based health insurance on health care service utilization by reducing financial burden of members. This study is aimed at analyzing the impact of CBHI on health service utilization and financial burden protection of households in Gurage Zone Gedebano Gutazer Wolene Woreda.

1.3 Research Questions

This study was guided by the following basic research questions

- What are the factors which determine households' involvement in CBHI scheme?
- What are the determinants that can affect the households from utilizing health care services?
- Do households who are members for community based health insurance scheme have better health service utilization experience than households who are nonmember of the scheme?
- Does CBHI scheme have an effect on reduction of financial burdens of illness fees of members?

1.4 Objectives of the Study

The main objective of the study is to analyze the impact of community based health insurance in modern health care service utilization by reducing financial burden on members.

1.4.1 Specific Objectives

- To examine the factors that affect the households to participate in CBHI scheme
- To investigate the rate of health care service utilization among members and nonmembers of CBHI
- To analyze the effect of CBHI on the financial burdens of illness fees of members.

1.5. Hypothesis of the study

On the basis of the above objectives and review literatures such as (Eckart et al., 2019) and (Menelik et al., 2022); the researcher sought to get answers for the research questions Community based health insurance has a positive impact on modern health service utilization and in promoting health care services. In addition, CBHI also reduces the financial burden of individuals out of pocket payments through sharing the financial burden of health care.

Hypothesis can be couched in several ways of statements to make an estimation of the effect of each explanatory variable on the outcome variable. The study tried to address the following directional hypotheses in which the relationship between variables and the direction of effect would be predicted. The hypotheses were tested at 5% level of significance used when working on significant correlation, difference and effect.

1.6 Significance of the study

Out of all the districts (woreda) in the Gurage zone, Gedebano Gutazer Wolene Woreda (GGW) district is one of pilot district for community based health insurance. Although this woreda implement the program since first-2020, there was no study done on this topic. Hence, this research is expected to put a ground for the study area to improve CBHI. This study was also creating awareness for CBHI workers which hinder CBHI as footsteps for health service utilization. This also gives CBHI workers additional value in their effort to incorporate membership needs of clients when developing strategic frame work.

The findings of this research help CBHI agency, health practitioner and other similar institutes to better diagnose the space for their operation. Finally, this research serves as a window to identify the impact of CBHI in health care service utilizations. Also significant in reducing the gap of existing studies on CBHI schemes face the important limitation that most of them are not based on household data and neglecting the effects on the members.

1.7 Scope of the study

The study has geographical, methodological, and conceptual scopes. Geographically, Since CBHI is much broader issue it is a challenging task to see all kebeles and activities of the program even though it is implemented as a pilot in 36kebeles at woreda level. This study was geographically limited to Gurage zone Gedebano Gutazer Wolene woreda. This research

focuses to measure the impact of community based health insurance in terms of health service utilization and financial risk protection.

Concerning methodological scope, the study used both quantitative and qualitative research methodology. The rationale behind using both approaches was the nature of the research questions and the most appropriate method to address the research questions.

1.8 Limitations of the Study

This study encountered with some limitations which are presented as follows. First of all the study should be mainly focused on the impact of Community based health insurance on health utilization in Gedebano Gutazer Wolene Woreda. It would be better if incorporate other factors and determinants of CBHI. The study also delimited to the impact of CBHI on health service utilization in the case of one Woreda. Any generalization that will be made based on the findings of this study may therefore have limitation in applying in other settings and on other area of Gurage zone. Shortage of access to the respondents, the amount of time the respondents can spare and lack of full information from respondents was also be limited. These limitations can highly influence not to successfully done the study.

Accessing secondary data from health office, insurance office and health centers and hospitals are difficult because they didn`t have organized data and recording system, to show the health centers revenue and financial stability, was not accessed and analyzed. In general, even though, the researcher has faced the above limitations, these limitations did not have significant impediment on the outcome of the study.

1.9. Organization of the Study

The study should be organized into five chapters. Chapter one presents the introduction aspect of the research which includes: background of the study, statement of the problem, research questions, objectives, hypothesis, significance, scope of the study, and organization of the paper. Chapter two contains review of literature of most significant theoretical and empirical studies. Methodology of the study is presented in chapter three.

Chapter Two

Literature Review

The researchers have reviewed articles and theories on health care coverage and health utilization system, related to health care financing and community based health insurance scheme. This also reviews on the determinants of CBHI and the impact of CBHI in order to improvement of essential health care services by improving health care financing problems.

This review contains three parts. First is the theoretical literature review, which focuses on reviewing of concepts and theories, related to the research objective using the reviews of the articles and books. The second part is empirical literature review, which discusses the practical experiences and the theories and what they look like on the ground based on empirical data. Third part is the conceptual framework of CBHI.

2.1 Theoretical literature review

2.1.1 Definition and Concept of CBHI

Community-based health insurance (CBHI) is not-profit private health insurance supported by an ethic of mutual aid among people in the informal sector and rural areas. CBHI pools members' premium payments into a collective fund that is managed by the members. Several governments have embraced CBHI with national policies and administrative support. Evidence indicates that CBHI schemes can effectively reach marginalized populations and increase access to health care for low income rural and informal sector workers((USAID, 2010).

Financial risk protection is security from incurring catastrophic costs in case an insured event occurs. This is benefit of having insurance(World bank, 2010).

Health insurance is a formal arrangement in which insured persons are protected from the costs of medical services that are covered by the health insurance plan (the benefits). Health insurance works best when risk pools are large and when the health risks associated with the covered population are diversified, in essence, when the healthy can subsidize the sick(World bank, 2010).

Health insurance schemes can be national, community or private. They can be mandatory or voluntary. Mandatory schemes are usually national, in which there is a legal obligation for people to pay in to them and are based on the principle of social solidarity. Contributions of health insurance are community rated based on an average expected cost of health service. Community base health insurance schemes are usually run by community based or nongovernmental organizations (NGOs), and may also be referred to as mutual health insurance, micro-insurance or community health funds. Community based health insurance schemes often have high administrative cost and revenue collection costs (UNHCR, 2011).

2.1.2 Functions of CBHI on the health system

CBHI contain the main functions of health related services. It is used to achieve goals of health system. WHO has considered the final goals of health status and health equality, responsiveness of health systems to people's non-medical expectations and fairness in financial contribution. The four main functions of the health system are considered: the provision of health services; the resource generation for health (spending on and development of human resources for health, buildings and equipment), health financing and government stewardship. Concentrating on the health financing function, its objective is to ensure that sufficient financial resources are made available, so that people are guaranteed access to effective personal and public health care (Carrin,2003).

2.1.3 Financial Risk Protection

The analysis of PEI responses clearly shows that very few CBHI members incurred OOP expenses during their visit. The average per person payment for members was half of the average paid by non-members. The findings of the household survey also showed that both the incidence and amount of OOP payment were slightly higher for non-members for all three types of services mentioned above. The evaluation estimated the extent to which households face the risk of being impoverished by OOP health expenditure using the non-food consumption expenditure. The evidence in Ethiopia therefore shows OOP payments in general have an impoverishing impact on households, but the impact on CBHI members is much less than on non-members. The analysis thus provides evidence that scaling up CBHI schemes will have a beneficial pay-off by reducing the incident and severity of poverty for CBHI members (Bekele, 2015).

2.1.4 Health service utilization

The level of health services utilization rate was found to be unsatisfactory. Distance to the nearest health center or hospital, perceived transport cost and perceived treatment cost were shown to be predictors of utilization of health services. This clearly indicates improving physical accessibility of health services will possibly result in a better utilization of health care (Girma et al., 2011).

2.1.5 Design and Current Status of CBHI in Ethiopia

The design of implementing CBHI scheme is different from country to country; there is no "one size fits all" strategy for implementing risk-pooling mechanism. Some countries have used top-down public financing and social health insurance (SHI) without CBHI, while others have used CBHI as the main model of reaching the informal sector. As a result of these differences in design, country experiences show huge variation in the coverage, depth, and height of coverage achieved. Successful CBHI models show that there are important conditions for CBHI to grow and develop, including: (i) existence of a minimal level of (perceived) quality of care and gradual improvement of quality at the supply side; (ii) instituting adequate organizational practice and design including responsiveness to people's felt needs by the scheme management; (iii) government commitment and political will with clear action plans, national scope of implementation, existence of regulatory frameworks, and last but not least the unequivocal commitment to subsidize and finance the premium for the poorest in society; and (iv) the need for CBHI schemes to join forces to expand risk pooling and ensure financial sustainability (Bekele, 2015)..

Implementation began with training for different stakeholders, introducing CBHI design concepts and strengthening implementation and monitoring capacity. The CBHI National Coordination Unit prepared specific materials on financial and administrative management, and monitoring and evaluation, as well as a communications strategy. A training-of-trainers approach was used, with roll-out trainings for the Woreda Health Insurance Steering Committee and Kebele Health Insurance Initiative Committee members in all of the pilot areas. Enrollment in a CBHI scheme is decided collectively at the kebele/tabia level. Associated kebeles/tabias form a larger woreda-wide scheme. Scheme management is integrated and works within the woreda administration office. A general subsidy from the

federal government is provided for all scheme members and a targeted subsidy from the regional and woreda governments is provided for the very poor who cannot afford to pay the contribution (Feleke et al., 2015).

2.1.6 CBHI coverage in Ethiopia

CBHI scheme first implemented in Ethiopia was in 13 woreda from four regions in 2003 (Tigray, Amhara, Oromoya and SNNP), while it continued until 2006. The pilot opportunities and challenges have a spear head effect expansion initiative made in collaboration with federal and regional governments. Community Based health insurance is a yearly contract agreement made between member and the insurance scheme on annual advance payment made by the members. All regions have directives guiding the implementation process including the defined period of registration (a maximum of three months) time. The existing CBHI members are expected to renew before the expiry of their contract (before end of defined registration period) and the new members has also register within that period(Ethiopia Health Insurance Agenncy, 2020).

2.1.7. CBHI Members Renewal and Coverage Rate

CBHI member's coverage in Ethiopia is still in increasing rate but the result shows that there is dropout from the members. Though the renewal shows incremental rate, in actual number, there are significant number of dropouts at each year. Therefore, dropout is still a challenge to sustain CBHI program, and it is mainly due to voluntary health insurance system, in which wealthy and healthy people freely opt to join/not to join and or to exit from CBHI membership which erodes the core principle of solidarity (Ethiopia Health Insurance Agenncy, 2020).

2.1.8. Coverage of Indigent CBHI Members

Households who are unable to pay and were entitled for fee waiver in the woreda, are expected to be registered in CBHI scheme as indigents and the regional government must secured their annual contribution to the scheme. Every woreda has to nominate households who are unable to pay based on the health care financing fee waiver selection criteria, but there are challenges in selection process and appropriate size of poor households because of budget requirement from the regional government to be secured for the selected indigents. However, the coverage rate of indigents from CBHI eligible households at each year is far

below than the poverty line 23.5% of the country, which requires the commitment of regional government to improve the minimum proportion (10%) of indigent from eligible (Ethiopia Health Insurance Agenncy, 2020).

Knowledge about CBHI: 95 percent of both members and non-members in pilot woredas are aware of the CBHI schemes. The main sources of information are a neighbor, CBHI official, or a house-to-house sensitization program; represent the 100% of information sources in Amhara, 96% in Oromia, 86% in SNNP, and 81 percent in Tigray. More than 96 percent of member households and 87 percent of non-member households know that it is not only those who are sick who should enroll in CBHI. This clearly shows the value of the intensive sensitization work done by government and especially by the project (Bekele, 2015).

2.1.9. CBHI Money Collection

CBHI scheme money collection from members and revenue has system in the agency. Revenue is collected from their source: - Annual contribution from member, general and targeted subsidy and other innovative income like bazaar, donation etc. Targeted subsidy is an amount of money secured for households who are unable to pay (70% of the annual contribution amount from regional government and 30% from woreda) it is only SNNPR where the woreda secured all targeted subsidy. The federal government subsidizes 10% of the total contribution to strengthen the financial capacity of the CBHI scheme(Ethiopia Health Insurance Agenncy, 2020).

CBHI program is generating a huge amount of money and becoming a potential source of the country health care financing system. However, as the CBHI pooling is still at woreda level, which is very fragmented, considerable number of CBHI woredas have been becoming insolvent at different years. As per number of CBHI woredas and enrolment increased at each fiscal year, CBHI paying contribution and indigents target subsidy collection data have also increased side by side (Ethiopia Health Insurance Agenncy, 2020).

2.1.10 Willingness to pay and join for CBHI (reasons for enrollment)

A high proportion of households were willing to join and pay for the CBHI scheme. The average amount of money they were willing to pay for the scheme was very slightly lower than what is planned by the government. The government of Ethiopia should strengthen

efforts to scale up this scheme in the rural areas of the country specifically to districts not yet enrolled, reduce direct out-of-pocket payment at service delivery points. This also contribute to guaranteeing of rural areas access to quality health services without facing financial hardship, to achieve universal health coverage by the end of 2035 (Muluneh et al., 2020).

Reasons for enrollment: 37 percent of CBHI members joined primarily to reduce out-of-pocket (OOP) expenditure when seeking health care, 35 percent joined to more frequently seek care in order to improve their health status, and 18 percent joined because their premium is less than their OOP payments; only 4 percent said they joined because government paid their registration fees and premiums. Although the design of CBHI in Ethiopia states that the decision on whether to join the scheme is taken at the kebele level, there was no pressure by either the community or the kebele/tabia administration during the enrollment process. According to the household survey results, 84 percent of CBHI members feel that premiums are either easily or somewhat affordable and 83 percent feel that the registration fee is easily or somewhat affordable. All of the FGDs with CBHI members found that the payment is affordable if the services in the benefit package are indeed available (Bekele, 2015).

2.1.11. Health Service Utilization by CBHI Members

The community based health insurance insured households outpatient and inpatient service utilization (visit) increased by 2.6 times, reduced per-capita health expenditure by 17–14% points, increases the per-capita consumption of non-food items by 12–14% points, and increases the per-capita consumption of food items by 12–13% points in a given matching algorism compared to the counterparts. CBHI has enhanced service utilization, reduced the per-capita health expenditure, and increased consumption per capita, it improved household welfare (Menelik et al., 2022).

Most health centers in the pilot woredas are contracted by the CBHI scheme to provide services to scheme members. Even some health centers that had gaps in their readiness to provide quality care were contracted based on the demand from the community. In some regions physical access overrides woreda boundaries (Amhara and SNNP) and/or readiness of health facilities. All pilot woredas have also signed service contracts with their referral hospitals. Amhara, Oromia, and Tigray (not SNNP) also entered contracts to ensure the possibility of referrals within the region (Bekele, 2015).

2.2 Empirical literature review

2.2.1 The impact of CBHI

Findings that community-based health insurance increased outpatient services utilization imply that it could also contribute towards universal health coverage and health equity in rural and informal sectors. CBHI was positively associated with using more outpatient healthcare services including visiting health facilities for curative care in the past one month, seeking care from a health professional, visiting a health facility to seek any medical assistance for illness and check-ups in the past 12 months, and the number of health facility visits per household. However, the study finds no significant impacts of membership in CBHI on maternal and child healthcare services. The study provides insights on the role of CBHI among safety net program beneficiaries to achieve UHC and health equity and increase the per capital annual health facility visits. The evidence can contribute to policy making aimed to integrate the two largest social protection programs in the country and mitigate the adverse impacts of multidimensional poverty (Mussa et al., 2023).

Increased health insurance coverage generally appears to increase access to health care facilities, improve financial protection and improve health status, although findings are not totally consistent. Understanding the drivers of differences in the outcomes of insurance reforms is critical to inform future implementations of publicly funded health insurance to achieve the broader goal of universal health coverage (Eckart et al., 2019).

CBHI has enhanced service utilization by reducing per-capita health expenditure and increasing consumption per-capita, in general, it improved household welfare. The results of this study suggested that the government (ministry of health) and concerned bodies (such as NGOs) should extend the coverage and accessibility of CBHI schemes, create aware to the society about CBHI, and subsidize premium costs of the poor (Menelik et al., 2022).

There is an evidence of a positive effect of community-based health insurance in Ethiopia. CBHI membership increased the utilization of health services and reduced the incidence of catastrophic health expenditure. CBHI should be strengthened as an important strategy for promoting universal health coverage from the perspectives of increasing health service utilization, promoting equitable health services, and ensuring financial protection among

households in the informal sector. CBHI should be scaled up to all woredas and membership increased among already implementing woredas to cover all households in the informal sector (Yibeltal et al., 2022).

Having health insurance is important because coverage helps people get timely medical care and improves their lives and health. Some may believe that people always have access to medical care because they can always go to an emergency room (Bovbjerg & Hadley, 2007). Globally, the relationship between voluntary private health insurance and the out-of-pocket payment share of current spending on health is very weak. In spite of significant gaps in coverage in many countries, as demonstrated by high levels of out-of-pocket payments, spending on voluntary private health insurance is low. This indicates that while gaps in publicly financed coverage are a prerequisite for voluntary private health insurance, they are not enough for a private health insurance market to develop and grow (Thomson et al., 2020).

Utilization of health services among insured households in CBHI was higher. Educational status, family size, occupation, marital status, travel time to the nearest health institution, perceived quality of care, first choice of place for treatment during illness and expected healthcare cost of a recent treatment should be emphasized to enhance community health insurance enrolment, which leads to universal health coverage. Community-based health insurance is an effective tool to increase utilization of health-care services and provide the scheme to member households (Ashagrie et al., 2020).

The magnitude of CBHI utilization in the study area was low when compared to other previous studies and the National HSTPII target plan to achieve 80% community-based health insurance utilization(Ethiopian Ministry of Health, 2021). The results of the study showed that age, sex, household family size, occupational status of farmer, annual income of households, trust worthiness, affordability of the registration and premium, frequency of visit to the health facility, waiting time to get healthcare service, satisfaction with the healthcare services and the attitude of health professionals, and trustworthiness were factors significantly associated with community-based health insurance utilization. Therefore, he stated, the District Health Office and concerned officials of the program should disseminate information about CBHI and improve the awareness of the community. In addition, they should take measures on improving the trust worthiness of the CBHI management system.

Health facilities should improve the quality of health services, households should encourage one another to join the scheme, and researchers should focus on exploring other factors associated with CBHI utilization (Geferso & Sharo, 2022).

On other hand (Mirach et al., 2019a), generalize the overall CBHI client satisfaction provided at Boru Meda hospital was low compared to the national CBHI evaluation. Full availability of prescribing drugs, clients renewed their CBHI membership, and preference of clients to use the hospital for future health care need positively associated with CBHI client satisfaction while the perception of waiting time before physician consultation negatively affected client's satisfaction. Therefore, the hospital management members and service providers need to give attention to reduce waiting time preceding consultation, improve drug availability, and sustain the hospital preference by the hospital management members and service providers need to give attention to reduce waiting time preceding consultation, improve drug availability, and sustain the hospital preference by the client. Ministry of Health was also better to design and strengthen strategies sufficient quantity of essential drugs available in the public hospital, and improving public awareness regarding the concept of insurance. CBHI Agency should also follow and monitor the renewal period of CBHI members as per standard create a strategy to reimbursement for clients who did not get service in a contracted health institution.

To achieve universal health care coverage through community based health insurance, it is advisable that special attention should be given to income level, education, community participation, marriage, family size, Benet package, awareness level and health service quality, premium amount and bureaucratic or governance issue (Bayked et al., 2019).

Low level of awareness, perception of high amount of premium, poor perception of quality of services and lack of trust are the barriers to join community-based health insurance. Conclusion: There has been low level of awareness and misconception about community-based health insurance. The major reason to decline to join CBHI was low capacity to pay the premium (G. D. Demissie, 2021).

2.2.2 Health insurance coverage in Ethiopia

Less than one-third of Ethiopians were covered by health insurance which is far lower than the national targets of covering 80% of the eligible groups by 2020. Administration regions, place of residence, and wealth index were significantly associated with health insurance coverage. Regional and rural–urban disparities in health insurance coverage call for contextualized implementation strategies. For pastoralists dominated regions such as Afar, Somali, Gambella, and Benishangul Gumuz the government should arrange premium subsidization and employ a wide range of promotion activities. Even though the currently implemented CBHI targets the low income rural majorities, those with higher wealth indices were more likely to be covered by health insurance and this implies the need to more subsidies for poor households. Moreover, male and older age headed household were more likely to be covered by health insurance. The insurance scheme should reconsider its implementation strategies to increase health insurance uptake of the younger and female headed households. Another interesting finding is that those with large family size and under-five children were with higher odds of being covered by health insurance. This should be capitalized as it increases the utilization of primary health care by larger family and under-five children and community mobilizations targeting household of small family size should also be emphasized (Merga et al., 2022).

Educational status, awareness about CBHI, perception towards CBHI scheme and illness experience of family, influence CBHI utilization. Furthermore, limited availability of drugs, poor quality of services and the quality of the services for CBHI members are not as good as for non-member are the important reasons for CBHI member to do not renew their membership in the following year. In order to improve the CBHI utilization, there should be a strong monitoring evaluation system to ensure the quality of services and availability of drugs for CBHI members, local level information dissemination regarding the benefit of CBHI scheme, the amount of premium paid and the period of payment for renewal should be strengthened. This study can be used as baseline information for further studies on this topic to explore reasons for low utilization of CBHI scheme by assessing challenges and opportunities (Getahun et al., 2022).

Gradually increasing risk pooling would improve the financial sustainability of CBHI. Improving health service quality and the availability of medicines should be the priority to increase and sustain population coverage. Engaging different stakeholders, including healthcare providers, lower level policy makers, and the private sector, would mobilize more resources for the development of CBHI. Training for operational staff and a strong health information system would improve the implementation of CBHI and provide evidence to inform better decision-making (Mulat et al., 2022).

The magnitude of CBHI utilization in the study area was low when compared to other previous studies and the National HSTPII target plan to achieve 80% community-based health insurance utilization. The results of the study showed that age, sex, household family size, occupational status of farmer, annual income of households, trustworthiness, affordability of the registration and premium, frequency of visit to the health facility, waiting time to get healthcare service, satisfaction with the healthcare services and the attitude of health professionals, and trustworthiness were factors significantly associated with community-based health insurance utilization. The District Health Office and concerned officials of the program should disseminate information about CBHI and improve the awareness of the community. In addition, they should take measures on improving the trustworthiness of the CBHI management system (Geferso & Sharo, 2022).

2.2.3 Willingness to pay and join for CBHI

The majority of the rural household heads in the study area were willing to pay for community- based health insurance scheme. Primary education, merchant, housewife, poor wealth status, good knowledge about CBHI, having illness in the last year and distance from health facility were factors associated with willingness to pay for community-based health insurance. In order to make the CBHI scheme more attractive to all citizens with different socioeconomic status, at least in the short term, the premium for membership should be customized by individual socioeconomic factors. Strengthening awareness creation at community level about the benefit package and principle of the scheme would increase their demand for the CBHI scheme (Kado et al., 2020).

Around 83% of respondents were willing to pay for the CBHI and meet the government expectation for 2020. The study also revealed that educational status, family size, monthly

income, and distance from the health facilities were significant factors associated with WTP for the CBHI scheme. So, the government should consider the economic status of the communities while revising the CBHI scheme premium not to miss those who cannot afford the contribution (Weya et al., 2022).

2.2.3 CBHI client satisfaction

The satisfaction level of the CBHI users is low. Young age, lack of drugs and supplies, poor information provision, long waiting time at consultation, were found to be the major predictors of dissatisfaction. Therefore, the district health offices should address and work on this predictor to regulate clients' satisfaction for CBHI (Wanamo et al., 2021).

Patient satisfaction increased by 11 percentage points. Despite the increase in patient volume, there is no discernible increase in waiting time to see medical professionals. These results and the relatively high levels of CBHI enrollment suggest that the Ethiopian CBHI has been able to successfully negotiate the main stumbling block that is, the poor quality of care which has plagued similar CBHI schemes in Sub-Saharan Africa (Shigute et al., 2020).

2.2.4 Barriers and facilitators of CBHI

There is a low level of awareness about the benefits and principles of CBHI. The major reason for declining CBHI membership is due to a lack of capacity to pay the premium. Therefore, awareness creation programs in the scheme, avoiding flat rate payments (stratified premium based on the economic status of households), ensuring transparency, and monitoring the quality of services are essential empowering tools for increasing enrolment.

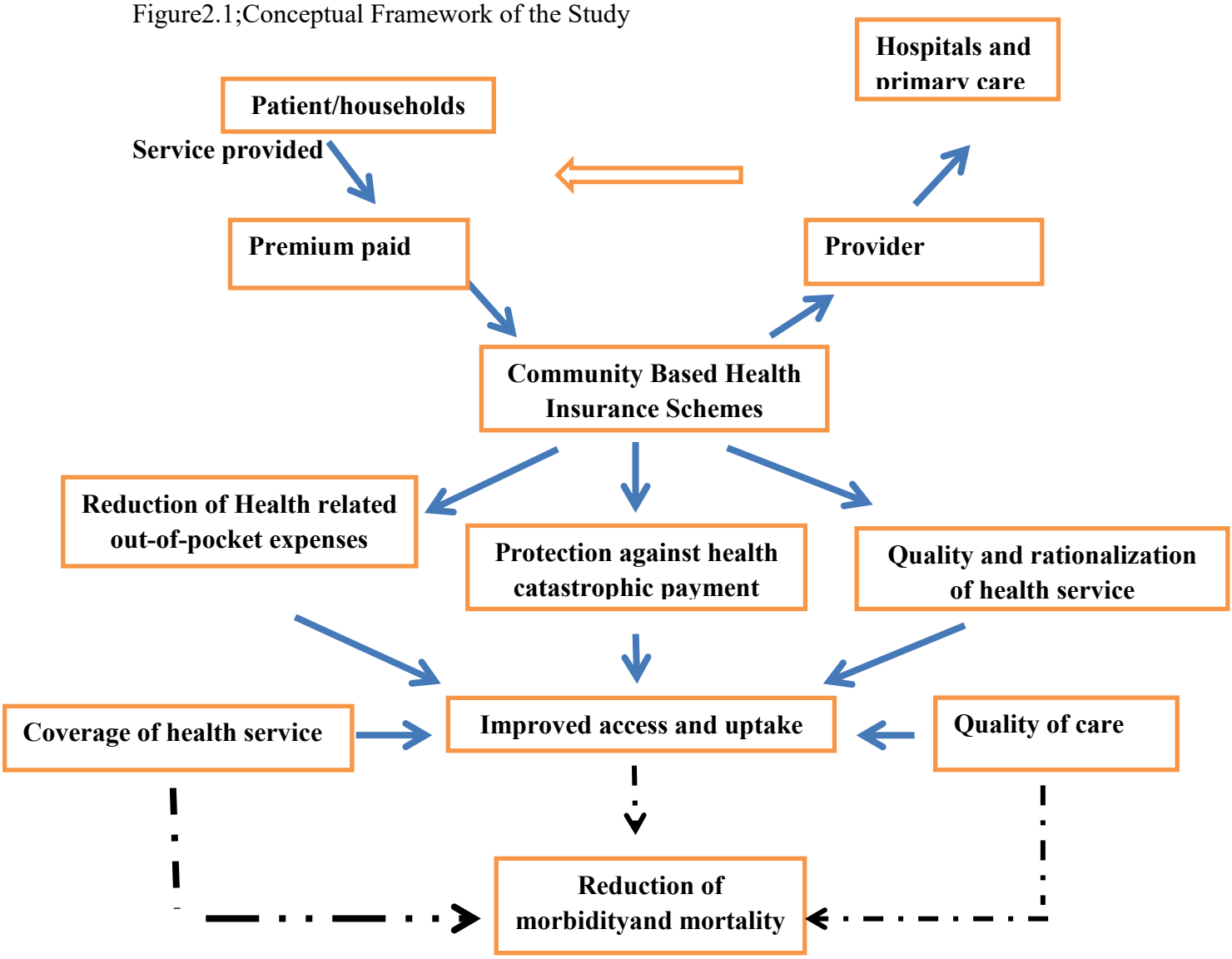
Low level of awareness, perception of high amount of premium, poor perception of quality services and lack of trust are the barriers to join community-based health insurance. There has been low level of awareness and misconception about CBHI. The major reason to decline to join CBHI was low capacity to pay the premium (G. D. Demissie & Atnafu, 2021).

2.2.5 Determinants of CBHI

community based health insurance scheme was determined by unavailability of prescribed drug, Lack of trustworthy on CBHI scheme managers, inconvenience of time of premium collection, unaffordable of premium to contribute in CBHI(Chachalko, 2022).

On the implementation of Community Based Health Insurance; health status, family size, awareness, income level, chronic illness cases are found to be significantly affecting enrollment(Mengist, 2022).Societies' enrollment decision to community-based health insurance program was determined by demographic, social, economic and political factors. Households with large family sizes and farmers in the informal sector should be given maximal attention for intensifying enrollment decision in the insurance program(Taddesse et al., 2020).

Figure2.1;Conceptual Framework of the Study



Source;CBHI framework; adapted from Bennet S-16(Hounton et al., 2012).

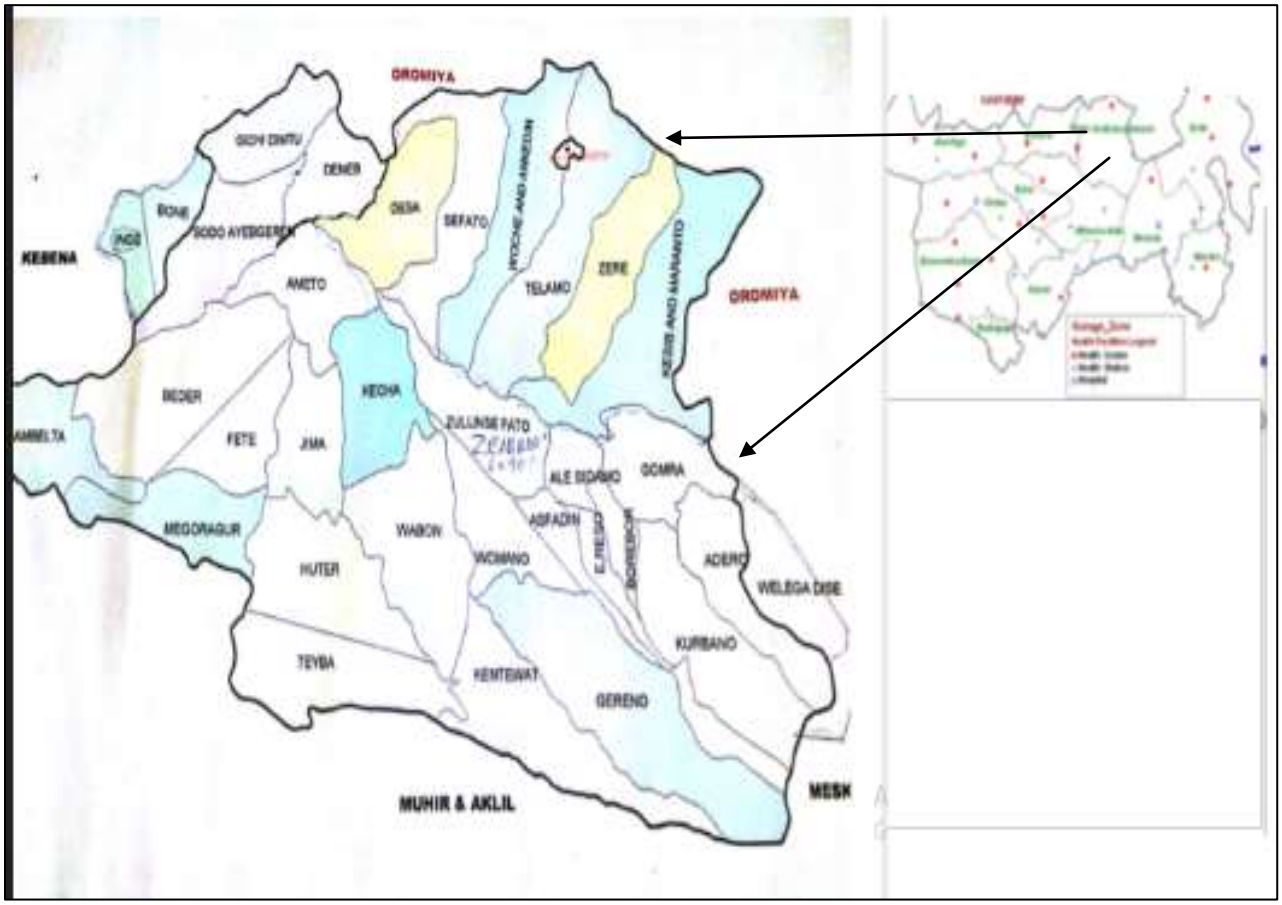
Chapter Three

Methodology of the Study

3.1 Description of the study area

Gedebano Gutazer Wolene woreda is found about 64 km far from Wolkite town,Gurage zone. The woreda is sub divided to 36 kebelles. Based on 2022G.C projection, the total population is expected to be 134,702 of which 49 percent is males. There are one primary hospital, five health centers and 27 health posts constructed by government budgets and the community. Based on the statistics the index shows one health post for 4906 population and the one health center for 26,493 populations and one hospital for 134,702 populations.

Figure 3.1; map of Gedebano Getazer Wolene Woreda



source;(Lavers, 2019)

3.2 Research Design

In this study descriptive and explanatory research design was employed. And the study employed mixed approach; quantitative and qualitative, through collecting and analyzing both quantitative and qualitative data on the basis of a concurrent embodied strategy of data collection and interpretation procedures. For quantitative data collection, the researcher has used primary (cross-sectional household survey) data, and for qualitative data collection both Focus Group discussion and interviewing of key informants are implemented. The cross-sectional household survey helps to acquire households' health utilization status (how many times they visited health facilities to get health services within the last three months prior to this study) and their monthly health care expenditure. Focus Group Discussions and key informants' interviews help to get the required qualitative data which enriches the information gained from the survey because these discussions are vital in getting of detail information on the area.

3.3 Target Population

According to Gedebano Gutazer Wolene Woreda Health office projection (2022 G.C), from the total of 134,702 population, 27,490 are households (both members and non-members). The target population for this study was total of 27,490 households in Gedebano Gutazer Wolene Woreda.

3.4 Sampling Techniques and Sample Size Determination

3.4.1 Sampling Techniques

The study used different sampling techniques such as simple random, proportionate systematic, and purposive. Using purposive sampling technique five catchments/clusters was selected based on health facility. The second sampling technique is random sampling. Using simple random sampling (mainly by the lottery method) five kebeles are selected, one from each catchments/clusters.

The third sampling technique proportionate stratified sampling. This is done in order to set the numbers of households from selected kebele, that should be included in the study is determined proportionally in accordance with the total number of households in the kebele. Next, the households that were covered by the survey were selected using systematic random

sampling from a complete list of the residents of a Kebele. The CBHI scheme had the full list of households enrolled to the scheme by Kebele.

As the study addresses both insured and non-insured huseholds of the kebeles, the non-insured members that were selected for the servey are those households that are closest to the insured households included in the sample in terms of distance of their residential house.

3.4.2 Sample Size determination

This study applied a simplified formula provided by (Yamane,1967) to determine the required sample size.

To identify the sample size for the study, sample size calculation formula is used at 95% confidence level, degree of variability = 5% (0.05 level of significance) and level of precision=9%, which is as follows;

$n=N/(1+N\ (e)^2)$.

Where n= number of samples, N= population size(27490), e=the allowed precession (5%)

The resulting sample size is;

$n=N/(1+N\ (e)^2)= 27490/(1+27490*\ 0.05^2)= 394$

Therefore, the sample size of the study is 394. According to performance of district CBHI scheme 51% of households are member and remaining 49% are non-member. Based on this performance we have use 193 or 49 percent of this sample are control group of households and the remaining around 51 percent or 201 samples are treatment groups(Gedebano Gutazer Wolene Woreda health office, 2022).

Table3.1; Sample size from each randomly selected 5 kebelles are proportionally determined.

No	Kebele	Total household	Participant	Non-participant	Sample size		
					From insured	From non-insured	Total
1	Desa	720	359	361	36	34	70
2	Gomera	521	217	304	26	25	51
3	Gichedimtu	679	473	206	34	32	66
4	Teyiba	616	365	251	31	29	60
5	Kentewat	1517	621	896	75	72	147
Total		4053	2035	2018	201	193	394

Source: (Gedebano Gutazer Wolene Woreda health office, 2022)

3.5 Methods of Data Collection and Instruments

3.5.1 Sources of Data

Both primary and secondary sources of data were used. For the realization of this study, the researcher employed primary source of data that was collected through questionnaire and interview from sampled respondents of CBHI member and non-member households, using focus group discussions and key information interviews. Besides secondary data sources was from annual reports of Gedebano Gutazer Wolene Woreda Health office, health centers and CBHI office.

3.5.2 Data Collection techniques

The primary data has been collected from a sample of rural people in the district directly through semi-structural interviewer supported, pretested questionnaire which is translated into local language using experts to ensure data clarity and variable inclusion. The questionnaire comprises close ended and open ended questions to fully catch variables of interest. The questionnaire has some variation between the members and non-members. This is basically to get the issues that affect the members to persist or drop-out from the scheme, keeping variables affecting enrollment the same with non-members. This is to say variables

of interest for factor analysis are to be parts of the members. The well trained supervisors effectively supervised the process during data collection. These enumerators have been selected on the basis of their experience on data collection and on their close relation with the people and administration of the study area. Beyond this, the qualitative data from kebele and woreda officials about the challenges and opportunities faced during the implementation of the scheme has been obtained through key informant interview.

3.6 Methods of data analysis

The research used both descriptive and econometric method of data analysis. The collected data was analyzed by using descriptive statistics such as frequency, mean, standard deviation, maximum and minimum, and percentage.

The quantitative data collected from each selected households was analyzed using STATA software. Logistic regression models were used to analyze determinant of community based health insurance membership and impact of CBHI on health service utilization. Three models are used in this study to estimate; first, The binary logistic regression were used to estimate households' CBHI enrollment probability, and the extent to which this decision is influenced by specific socio-demographic and economic characteristics; second, the binary logistic regression also used to estimate the probability of CBHI on increasing health care services utilization for the households; and third, multiple linear regression model were used to estimate the probability of CBHI on protection of OOP health expenditure on households.

3.6.1. Econometrics Model Analysis

3.6.1.1 Determinants of CBHI

The research used the basic model of regression that was used to estimate the impact of CBHI in the prepayment scheme in Rwanda (Schneider and Diop 2001) (Bekele, 2015).The logistic regression model has been estimated to analysis binary choice dependent variable. It is represented in the model by yes/no responses to estimate the probability of CBHI enrollment for households to determine the factors that affect enrollment.

$Pi= F(Yi, Zi, Hi,C)$

This log-odds ratio is a linear function of the explanatory variables and we call it logit model. In this case our data is based on household observations and employ the method of maximum likelihood function to estimate the model. To (Gujarati, 2004), in ML estimation procedure, our objective is to maximize the log linear function (LLF) that is to obtain the values of the unknown. The logit distribution function for the participation in CBHI participation is specified as:

$Pi= E(y=1/xi) = 1/(1+e^{-(B1+B2Xi)})$----------1

$Pi= 1/(1+e^{-zi})$----------2

Where zi= B1+B2Xi

Pi- is the probability of being members in CBHI

1-Pi -is the probability of being non-members in CBHI

Therefore, we can write

$Pi(1-Pi)=(1+e^{zi})/(1+e^{-zi})= e^{zi}$----------3

Now simply Pi/(1-Pi) is the odds ratio

If we take the natural log of the above equation, we obtain

Li=ln(Pi/(1-Pi))=zi = B1+B2Xi----------4

L is the log of the odds ratio, is not only linear in X, but also linear in the parameters.

L is called the logit, and hence the name logit model (Gujarati, 2004).

The logit distribution function for the participation in CBHI is specified as: Thus, binary logistic regression model that is going to be employed in the study while the dependent variable is Y and independent one X is:

$Log(y)= ln(1/(1-P_i))= z_i= B_0+B_1X_{i1}+B_2X_{i2}+-------+B_nX_n+u_i$

$L_i= B_0+B_1X_1+B_2X_2+-------+ B_nX_n+u_i$

The model estimate households' CBHI enrollment probability, and the extent to which this decision is influenced by specific socio-demographic and economic characteristics. The hypothesis to be test is that the CBHI member and non-member households do not differ in their socio-economic characteristics. In a logit regression, the dependent variable "demand for insurance" Di, will equal 1 if individuals buy insurance, or zero otherwise. Formally, the logit model can be written as a linear function of the explanatory variables:

$L_i = b_1 + b_2 X_{2i} + ...+ b_n X_{ni}$----------5

P_i (D for CBHI membership) = $1/(1+1/e^{Li})$ ----------6

The second equation shows that the conditional probability to register into CBHI, Pi is a non-linear function of the explanatory variables Xi, which represents a series of attributes that are assumed to have caused a household to buy health insurance membership. Learning from the experiences of other study, the explanatory variables used in determining the estimates in the model were health status (as proxies by illness), household size, age and sex of the family head, education of the family head, distance from health institution, information and monthly income of household. We estimated the unknown coefficients bi which are the weights to each of the households' socio demographic and economic characteristics in the probability that Di = 1 for given Xi.

3.6.1.2 Access to Health service utilization

Outpatients' health care service utilization was measured for those both insured and onn-insured individuals who reported sickness during the three months preceding the interview in the household survey, and has responded to visit health facility to curative care questionnaire. The probability of CBHI in increasing health care utilization was examined at different levels: outpatient and inpatient. For the outpatient health care utilization, we examined the effect of CBHI membership on the probability of a person visiting health facilities when he or she feels ill and on the intensity/frequency of health care utilization (number of visits to a health facility). To examine the probability of CBHI members using health care facilities when they feel ill relative to non-members, we estimated equation using logit regression. Logistic regression model with binary outcomes was used to model the main dependent variable i.e. utilization(Code et al., 2018).

Prob (visit =1) =CBHIi γ +Xi δ + ε I ----------7

Yi =CBHIi γ +Xi δ + ε i ----------8

Where we use Xi to denote the full set of explanatory variables(Gujarati, 2004).Yi indicates the probability of using health care for individual (1 if individual visiting health facilities when they feel ill and 0 otherwise), $CBHI_i$ is a dummy variable indicating whether individual i is enrolled in the scheme, X consists of controlling variables such as household size, age, sex of the family head, education of the family head, distance from health institution, information and income of household.

3.6.1.3 Financial burden of households on out-of-pocket health expenditures

Ordinary least squares regression was used to estimate the impact of health insurance on health care expenditure(Escobar et al., n.d., 2010). The dependent variable health care expenditure is continuous and regression is a statistical methodology that investigates the direction of the strength of the relationship between two variables, i.e. dependent variable and the independent variables. The econometric model equation of classical linear regression model is described below.

The model: $Y = \beta_0 + \beta_1 CBHIi + \beta_2 x_2 + \beta_3 x_3 + \cdots + \beta_8 x_8 + \varepsilon i$ ----------9
is called a Multiple Linear Regression Model

Where the parameters, i = 0, 1, 2...7, 8, are called the regression coefficients and represents the expected change in the dependent variable. y indicates the incidence of health care expenditure, $CBHI_i$ is a dummy variable indicating whether individual i is enrolled in the scheme, X consists of controlling variables such as household size, age and sex of the family head, education of the family head, distance from health institution, information and income of household.

Assumptions for Multiple Linear Regression Model:

1) The model is linear in parameters:- The model is linear in the parameters regardless of whether the explanatory and the dependent variables are linear or not.

2) Ui is a random real variable (+, - or 0):- this means that the value which "u" may assume in any one period depends on chance; it may be positive, negative or zero. Every value has a certain probability of being assumed by u in any particular instance

3) The mean value of the random variable(U) in any particular period is zero $E\ Ui = 0$

4) The variance of the random variable(U) is constant in each period (The assumption of homoscedasticity) :- $Var\ (Ui) = E(\ Ui - E(\ Ui)) = E\ (U2) = \sigma 2$

5) The random variable (U) has a normal distribution $\sim \boldsymbol{N(0,\sigma 2)}$

6) The random terms of different observations are independent (The assumption of no autocorrelation) $(\ , \boldsymbol{uj}) = \boldsymbol{0}$

7) The random variable (U) is independent of the explanatory variables. $\boldsymbol{Cov}\ (\boldsymbol{Xi,Ui}) = \boldsymbol{0}$

8) The explanatory variables are measured without error:- U absorbs the influence of omitted variables and possibly errors of measurement in the y's. i.e., we will assume that the regressors are error free, while y values may or may not include errors of measurement

3.7 Variables

3.7.1 Outcome variables:

The main outcome (dependent) variables in this study are CBHI membership, utilization of health care services and out-of-pocket household expenditure for health. The dependent variable (CBHI membership) for logit analysis is binary choice dependent variable. This binary measurement includes the status of membership or not of enrollment of the respondents which attains values 0 for one who is not a member of the scheme or 1 if one is member of a scheme. Information on CBHI membership obtained from the HH survey with reference to their current status, but the information for the variable out-of-pocket household expenditure and health service utilization were obtained from the HH survey with reference to their response on their visits of past three months for health service.

3.7.2 Main independent variable:

The main independent variable under this study are demographic and socio-economic characteristics of individual head and the household (such as sex, age, education, income of HH, size, information of household, distance from health institution and illness status of household). The study aims to assess factors of CBHI enrollment, the contribution of community health insurance scheme in improving household health expenditure & utilization of healthcare service as a related variable.

Sex of household head:- It explains whether the household leader is male or female and directly affects the CBHI membership and utilization level of the household.

Age of household head:- It is a continuous variable defined as the household heads age at the time of the study measured in years. Age of the household is related with its activity in the community whether he/she accepts new things easily or reactant.

Size of household:- It is a continuous variable representing the total number of family members of the household and directly affects the household heads decision to participate in community based health insurance. This also explains whether the household have more members or not and directly affects enrollment, the health service utilization level of the household and its impact health expenditure. A household having more children consumes more and its budget for month is not equal to a house hold with parents only. The same is true for health service. More household size has more opportunity of having more level of utilization(Weya et al., 2022).

Educational status of the household leader:- This explains whether the household leader has literate or not. This refers to of formal schooling a farm household head completed. Formal education enhances farmers' ability to perceive, interpret, and respond to new events in the context of risk. Education is, thus, hypothesized to increase the probability of farmer's participation in CBHI Program and hence increases household health care utilization and management of its expenditure (Geferso & Sharo, 2022).

Income of the household:- It contains all incomes entered in to the account of the household from crops and livestock. This directly affects the CBHI participation of households and the power of the household to have better health service utilization also directly impact on out-

of-pocket health expenditure. Insurance is existed with the prevalence and existence of risks on the believe of that the current income is not quit enough income. As income increases the need for insurance decreases and income is inversely related with insurance.

Distance of household from health facility**:-** Distance of the kebelle of households from the health institution also affects individuals to participate in CBHI and whether to get health service easily or not. As the health facility fares from the kebelle, individuals look for additional costs for transportation. And this also affects the health service utilization and expenditure, mostly for rural households (Mengist, 2022).

Illness Cases of households:-It is one of the proxies of health status and explains the illness or chronic case faced by households in the last year. It affects households in CBHI participation.

CBHI participation**:-** It shows whether the household is a member or not. Since CBHI membership decreases out of pocket costs for illness being a member has a great power to affect the health care use of the household. CBHI is a dummy variable which contains 1if households are participants and 0 otherwise (Menelik et al., 2022).

3.8. Diagnostic Test

Validity test is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure correctly. A measuring instrument is reliable if it provides consistent results, which in turn does contribute to validity of the instrument. Pre-testing is going to be done first. Finally, the necessary diagnostic test for binary logit has been done. Tests such as multicollinearity, heteroscedasticity and goodness of fit have been considered.

3.9. Ethical consideration

Respondents will provide their response voluntarily and we work to maintain the privacy of their response is maintained. The truth of data collection, analysis and reporting of results is also maintained. All research participants that have been included in the study have been appropriately informed about the purpose of the research methods to be used and the demands of the study.

Chapter Four

Results and Discussions

This chapter has two major contents. Those are data analysis using descriptive and inferential statistics. While the descriptive analysis includes description of the status of respondents from different aspects like demographic, environmental and other issues using descriptive statistics and the inferential statistics include the Econometric part of analyzing relationships and regressions using 95% accuracy of respondents.

4.1. Descriptive Analysis

4.1.1. Demographic characteristics of the respondents

Basic characteristics of sampled households' are presented in table 4.1. The majority of the study participants (322 (81.7%)) were male and 22(18.3%) are women. The majority (90.9%) of the study participants were married. As the study is rural based, the proportion of the respondents with lower academic involvement is higher which is represented by 72.6% of illiterate people followed by 27.4% people who can read and write. In regard to religion, almost all of the respondents (98.7) are members of the Muslim.

Table 4.1: Characteristics of Sampled Households

Variables	Response	Freq.	Percent	Cum.
Sex	Female	72	18.27	18.27
	Male	322	81.73	100.00
Marital status	Married	358	90.86	90.86
	Not married	13	3.30	94.16
	Devoursed	4	1.02	95.18
	Widowed	19	4.82	100.00
Educational status	Cannot read and wright	286	72.59	72.59
	Can write and read	108	27.41	100.00
CBHI	Non member	193	48.98	48.98

participation	CBHI member	201	51.02	100.00
CBHI information	Not heard about	21	5.33	5.33
	heard about CBHI	373	94.67	100.00

Source: Survey data STATA output, 2024

Table 4.1.1: Characteristics of Sampled Households for continuous variables

Variable	Obs	Mean	Std. Dev	Min	Max
age	394	45.22843	10.56995	24	75
hhsize	394	4.769036	1.632979	2	11
Annualincome	394	94370.81	49516.28	7500	225000
distanceofHF	394	44.22642	24.0512	15	120

Source: Survey data STATA output, 2024

4.1.2. Socio-demographic determinants for CBHI enrolment decision

The proportion of female and male headed households enrolled to the CBHI schemes were 52.8% enrollment rate for female headed household and 50.6% for male headed households.

The proportion of households to join CBHI schemes increases with age of the household head. Households headed by young household heads are not enrolling to the CBHI scheme in the same proportion as households with older household heads. As can be seen from the table(4.2), while only a 29% of the households headed by people in the age group of 18-30 and close to 47% of the households headed by people in the age group of 30-45 have joined the CBHI scheme, the proportion is higher in the other age group categories.

Out of the total households covered in the study, the majority households representing 90.7% of the population were married. In terms of membership to the CBHI scheme a greater proportion of the members are married than non-members i.e. 51.1% of the married households were insured while the 48.9% are non-insured.

Literacy of the household head is another variable considered in this study. The proportion of households who are literate and joined the CBHI scheme is 51.9%. The proportion of households who are illiterate and who joined the CBHI scheme is 50.7%, a very small difference with the literate households.

It can also be observed that the proportion of households with a family member having a chronic health condition is higher than households with no family member having a chronic health condition i.e. 88.6% of household with a chronic health condition in their family member have joined the scheme while the proportion is 47.5% in households with no chronic condition in their family members.

Finally, in terms of household income, the proportion of households who joined the CBHI scheme is higher in the less income i.e. 66.7% household with less than 25,000 birr annual income were member of CBHI.

Table (4.2): Socio-demographic factors for CBHI enrolment decision

Variable	Response		HH participate in CBHI		
			No	Yes	Total
Sex	Female	Frequency(count)	34	38	72
		Percent	47.22	52.78	100.00
	Male	Frequency(count)	159	163	322
		Percent	49.38	50.62	100.00
Educe	Not read and write	Frequency(count)	141	145	286
		Percent	49.30	50.70	100.00
	Can write and read	Frequency(count)	52	56	108
		Percent	48.15	51.85	100.00
Information	Not heard about CBHI	Frequency(count)	18	3	21
		Percent	85.71	14.28	100.00
	heard about CBHI	Frequency(count)	175	198	373
		Percent	46.91	53.08	100.00
Illness	No chronic disease in HH member	Frequency(count)	189	170	359
		Percent	52.65	47.35	100.00
	chronic disease in HH member	Frequency(count)	4	31	35
		Percent	11.43	88.57	100.00

Source: Survey data STATA output, 2024

4.1.3. Health Service Utilization by CBHI Members and Nonmembers

Despite the increase in service utilization, the data from the household survey show that difference in service utilization between members and non-members. Out of the 205 individuals who respond there is illness in the reference period (the three months preceding the survey), 101 were from CBHI member households and 104 were from non-member households (Table 4.3). Of those who reported illness, 149 individuals (72.7 percent) reported visiting health facilities. When we disaggregate this to members and non-members, 85.1 percent of members had visited health facilities while 60.6 percent of non-members visited health facilities.

Table 4.3. Seeking health care and Number of visits

Variable	Response of sampled household		HH participate in CBHI		**Total**
			No	Yes	
Ill members in Household	No	Frequency	89	100	189
		%	49.75	47.97	47.97
	Yes	Frequency	104	101	205
		%	53.89	50.25	52.03
	Total	Frequency	193	201	394
		%	100.00	100.00	100.00
Ill member visit health facility	Not visit	Frequency	41	15	56
		%	39.42	14.85	27.31
	Visit	Frequency	63	86	149
		%	60.57	85.14	72.69
	Total	Frequency	104	101	205
		%	100.00	100.00	100.00
Facility type	Health post	Frequency	0	3	3
		%	0.00	3.53	1.99
	Health center	Frequency	63	58	121
		%	95.45	68.24	80.13
	Hospital	Frequency	3	24	27
		%	4.55	28.24	17.88

	Total	Frequency	66	85	151
		%	100.00	100.00	100.00
Why not ill members visit HF	Lack of money	Frequency	14	0	14
		%	46.67	0.00	27.45
	Trust of Health workers	Frequency	16	21	37
		%	53.33	100.00	72.55
	Total	Frequency	30	21	51
		%	100.00	100.00	100.00
Frequency of visiting HF	0	Frequency	3	0	3
		%	4.17	0.00	2.00
	1	Frequency	60	18	78
		%	83.33	23.08	52.00
	2	Frequency	4	46	50
		%	5.56	58.97	33.33
	3	Frequency	5	14	19
		%	6.94	17.95	12.67
	Total	Frequency	72	78	150
		%	100.00	100.00	100.00

Source: Survey data STATA output, 2024

4.1.4 Improving Financial Access/Financial Risk Protection

Of the total CBHI members surveyed in this study, 85.14 percent have used their membership to access health care. When asked what benefits they gained as a result of membership, 40 percent stated that CBHI reduced their OOP payments; another 36 percent stated that it will reduce the risk of future spending on health, and another 24 percent responded that it increased their access to care

Similarly, we estimated and compared the incidence of OOP payments and average OOP payments between members and non-members using descriptive statistics (see Table 4.4). The incidence of OOP payment was more for non-members for all service categories. The difference here is that in all categories, the average OOP payment was lower for members than for non-members. Members pay on the average about half of non-member OOP

payments when accessing care. The average per person payment of members (Birr 127) is half that of non-members (Birr 418)

Table 4.4:- health care expenditure of CBHI members

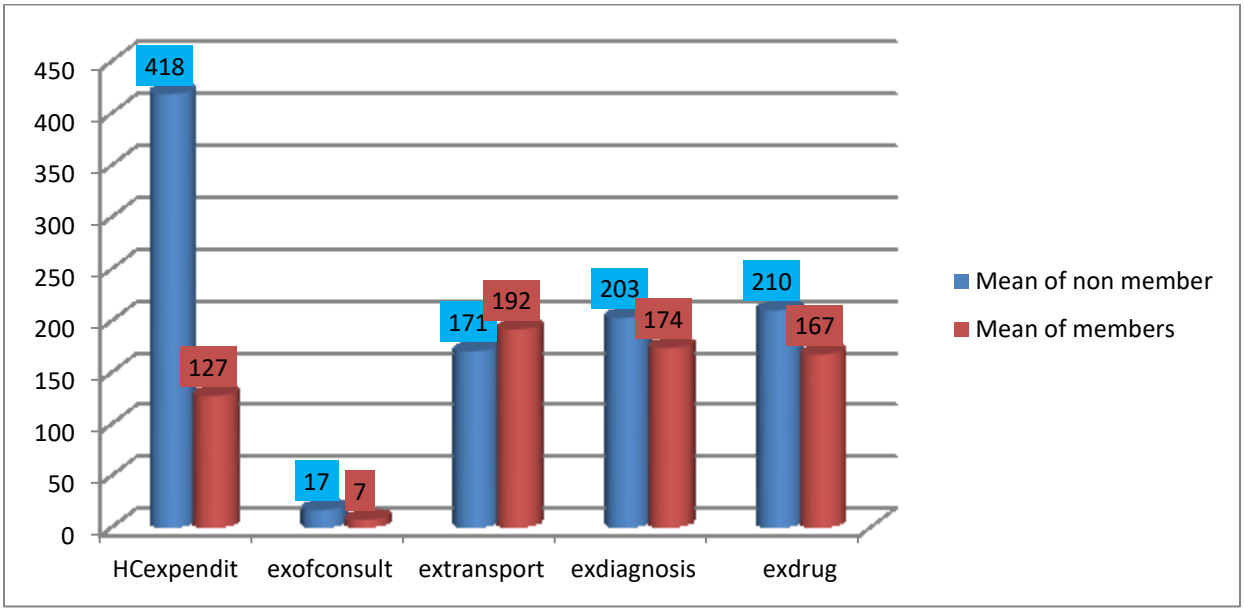
Variable	Obs	Mean (in birr)	Std. Dev.	Min	Max
HS expenditure	76	127.1711	219.0119	0	940
Exp,for consultancy	38	7.105263	9.489082	0	20
For transport	18	191.6667	95.87062	100	500
For diagnosis	14	173.5714	62.86214	80	250
For drug	21	167.381	68.67713	75	300

Table 4.5:- health care expenditure of CBHI non-members

Variable	Obs	Mean(in birr)	Std. Dev.	Min	Max
HS expenditure	69	418.4348	358.3053	0	2150
Exp,for consultancy	61	16.72131	15.70258	0	100
For transport	39	170.5128	109.2546	0	500
For diagnosis	48	202.9167	151.485	0	900
For drug	56	210.2679	135.8991	65	650

Source: Survey data STATA output, 2024

Figure 4.3:- Health care expenditure between CBHI members and non-members



Source: Survey data STATA output, 2024

The mean expenditure of members shows high difference with non-members, 127 birr and 418 birr respectively. But their expenditure for transportation has no big difference.

4.2. Econometric analysis

4.2.1 Factors affect households in participating in the CBHI program

As the theoretical literatures along with some of the empirical evidences have forwarded, when regress the total equation it indicates correlation of many other economic, social or household level factors. Before analyzing the econometrics model, the study test multicollinearity problem, and googness-of-fit. Under this study multicollinearity problem was test based on the standard error for the coefficients of independent variables and Hosmer-Lemeshow test to check fittnes of model. Following the diagnostic test results, it is observed that there is no multicollinearity problem. From the result of logistic regression in appendix A, table-1, the standard error for the coefficients of all independent variables are not large (not-inflated). The Hosmer-Lemeshow test with less value of chi2 (8) and high value of Prob > chi2 (which is greater tha p-vlue 0.05) from the appendix A, table-2 also shows that the model fits the data well. Hence, there is fine goodness of fit in the logistic regression model.

Thus, the following table shows the Econometric output of binary logistic regression which has been applied basically to identify the significant and insignificant variables which affect households' decision to join the scheme.

Table 4.6:-Binary logistic regression result of Factors that affect households in participating in the CBHI program enrollment

* Number of obs =394 *LR chi2(7) = 91.13 *Prob > chi2 = 0.0000

*Log likelihood = -227.45165 * Pseudo R2 = 0.1669

CBHI participation	Coefficient	Std. Err.	P>|z|	[95% Conf. Interval]	Odds Ratio
HH size	.391037	.0806746	0.000	.2329177 .5491563	1.478513
CBHIinformation	2.60742	.7313279	0.000	1.174043 4.040796	13.56401
Annual income	-8.70e-06	2.44e-06	0.000	-.0000135 -3.92e-06	.9999913
Chronic disease	2.162836	.5804571	0.000	1.025161 3.300511	8.695763

Source: Survey data STATA output, 2024

Household family size, CBHI information, nnual income of household and illness of household are significant at 5% level of significance.

House hold income**: -** The odds of enrolment in CBHI membership were 0.00087% less among households who had higher income compared to households who had less income. People get more power to define and use different alternatives if his income is high. Insured people indicate they are not quite sure about the future and want to protect themselves from unexpected occurrence of health shock at any time. If people have enough money or income, they are not interested to become a member in the insurance from the fact that they have the power and resistance for any occurrence of health shock in the future.

Household size**: -** The odds of enrolment in CBHI membership were 1.5 times higher among households who had high family size compared to those who had less family size. The above table indicates households family size is positively related with CBHI program participation. Information about CBHI:- The odds of enrolment in CBHI membership were 13.56 times higher among households who had informed about CBHI compared to non-informed household. There were participatory meetings and trainings. These participatory programs help people to have information about the program. But the question is whether they have true information about the objective and procedure of the program or not.

Illness (chronic disease) status of household**:-**The odds of enrolment in CBHI membership were 8.7 times higher among households who had illness in household compared to those who had no illess in family members.

4.2.2. The impact of CBHI on health care utilization

Before analyzing the econometrics model, the study test multicollinearity problem, and googness-of-fit. Under this study multicollinearity problem was test based on the standard error for the coefficients of independent variables and Hosmer-Lemeshow test to check fittnes of model. Following the diagnostic test results, it is observed that there is no multicollinearity problem. From the result in appendix-A table-3, the standard errors for the coefficients of all independent variables are not large (not-inflated). The Hosmer-Lemeshow test with less value of chi2 (8) and high value of Prob > chi2 (which is greater tha p-vlue 0.05) from the appendix-A table-4, also shows that the model fits the data well. Hence, there is fine goodness of fit in the logistic regression model.

The following table shows the Econometric output of binary logistic regression which has been applied basically to identify the significant and insignificant variables which affect households' health care utilization.

Table 4.7:- regression result for impact of CBHI on health care utilization

Dependent variable:- HC utilization from both members and non members during illness (1 if HH visit health facility during illness, 0 otherwise)

*Number of obs =204 *LR chi2(8) = 56.85 *Prob > chi2 = 0.0000

Log likelihood = -90.48048 *Pseudo R2 = 0.2391

HC utilization	Coefficient	Std. Err.	P>|z|	[95% Conf. Interval]	Odds Ratio
CBHI partic	1.659993	.4737775	0.000	.7314058 2.58858	5.40976
Distance	-.0403344	.0079648	0.000	-.0559452 -.0247236	.9612957

Source: Survey data STATA output, 2024

Health care utilization of households can be measured in terms of health facility visit for curative care during illness of members. The dummy variable CBHI affects level of health care utilization of households. CBHI membership has significantly increased the intensity of health care utilization. As the result of regression from the 95% confidence interval, 5%

percent level of significance, CBHI and distance of household from health facility are strongly significant.

The odds of health care service utilization were 5.4 times higher among households who had CBHI members compared to those who had non-members.

The odds of health care service utilization were 3.87% less among households who had more minute walking distance farther away from the health facility compared to those who had nearest.

4.2.3. The impact of CBHI on health care expenditure of households

4.2.3.1. Diagnostic Test Results of the Regression Model

In order a multiple linear regression model shows the relationship between the dependent variable and multiple (two or more) independent variables and the validity of the inferences drawn from this model analysis depends on its assumptions being satisfied. In this regard, in order the analysis to be valid and the regression model explore the relations and examine effects of the independent variables on the dependent variable, it should satisfy all the multiple linear regression model assumptions. Therefore, the assumptions were checked before running the regression analysis using STATA. In this section, the evaluation of the assumptions of multiple linear regression model and model fitness test analyses are presented and discussed using the outputs of the STATA.

Normality Test; the first important diagnostic test carried out in this model was the normality assumption. Normality test is used to decide whether the residuals are normally distributed or not. If the histogram is bell shaped, then the residuals are normal distributed. The null hypothesis of the model specification is that the residuals are normally distributed. The normality tests for this study as shown in appendix-A figure 1, majority of the score ranges in between the center and known as a normal distribution and is characterized by the bell-shaped curve. This shape implies that the majority of scores lie around the center of the distribution (so the largest bars on the histogram are all around the central value). Therefore, in the sample data, the errors (the standard residuals) are normally distributed. The result of the analysis shows the standard residuals (errors) in the health care expenditure of household with the independent variables, are normally distributed.

Linearity Test; there is a linear relationship between the dependent variable and the independent variables. In other words, the value of Y is proportional to the independent variable X. Since the goodness of the model depends on how well it predicts Y, the linearity of the response(Y) and Predictors(X), the standardized normal probability (P-P) plot graph could be implemented. As it can be seen in graph given below, the figure plots goes a little bit far from the straight line, appendix-A Figure 2, the plots form pattern. Therefore, the linearity assumption was met.

Non - Multicollinearity Test; the independent variables are not very strongly correlated. That is, the predictor variables should not have a strong relationship with each other. Multicolinearity occurs when several independent variables correlated at high levels with one another, or when one independent variable is nearly linear combinations of the other independent variables.

The independent variables in the model should not be highly correlated. To test this assumption the researcher used the more precise approach, assessing the tolerance and its reciprocal values VIF in the output results of the regression analysis for model fitness. The tolerance value is the indication of the percent of variance in the predictor that can't be accounted for by the other predictors, very small value indicated that a predictor is redundant. As it shows in appendix-A table 5, there was no multicolinearity among the independent variables education, CBHI participation, CBHI information, Annual income, hh size, age, distance of health facility and sex in the model for the health service expenditure. Therefore, the non-multicolinearity assumption was met.

4.2.3.2. Model fitness test and Significance of the independent variables as a whole

Since the objective of this model was investigating the impact of independent variables on health care expenditure, the capacity of the whole independent variables in explaining health care expenditure is presented using this model. Model fitness test is a statistical test to check whether the regression model is fit for the data or not. To test the model fitness, the overall steps for testing multiple linear regression model, F-ratio-test analysis of variance [ANOVA] for the overall model fitness test and t-test for the significance of an individual coefficients in the regression model with 5 % level of significance were used. Multiple linear regression model was used in order to identify which regression coefficient (or independent variable)

has significant impact for the model (for the dependent variable). Model does a good job of describing the relationship between the dependent variable and the independent variables, if large proportion for sample coefficient of determination R^2 be ensured. The table 4.8 provides the prob>f is 0.000 which indicate the probability that the model become statistically insignificance is 0% or the model become statistically significance is 100%. On the other hand R-square of the regression result in table 4.8, is 0.3151. Which indicates 31.51% of the variation in the dependent variable (health care expenditure) is explain by the independent variable.

Table 4.8:- Regression results of CBHI impact on health care expenditure of HHs

```
. reg HCexpenditure CBHIpartic sex  age educ hhsize CBHIinfo Annualincome distanceofHF
```

Source	SS	df	MS		
Model	4834657.07	8	604332.134	Number of obs	= 145
				F(8, 136)	= 7.82
Residual	10509186.7	136	77273.4318	Prob > F	= 0.0000
				R-squared	= 0.3151
				Adj R-squared	= 0.2748
Total	15343843.8	144	106554.471	Root MSE	= 277.98

HCexpendit~e	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
CBHIpartic	-291.6746	54.17996	-5.38	0.000	-398.8187	-184.5304
sex	22.88941	59.63221	0.38	0.702	-95.03691	140.8157
age	1.978447	2.229211	0.89	0.376	-2.429955	6.386848
educ	-68.48527	63.39252	-1.08	0.282	-193.8478	56.87729
hhsize	26.60577	16.52238	1.61	0.110	-6.068236	59.27977
CBHIinfo	-398.7449	110.7585	-3.60	0.000	-617.7765	-179.7132
Annualincome	.00042	.0005529	0.76	0.449	-.0006733	.0015133
distanceofHF	.3641726	1.207914	0.30	0.764	-2.02455	2.752895
_cons	527.4577	175.5788	3.00	0.003	180.2398	874.6755

Source: Survey data STATA output, 2024

The estimated model from above result is:

$$= 527.45 - 291.67\text{CBHIpartic} + 22.89\text{sex} + 1.97\text{age} - 68.5\text{educ} + 26.60\text{hhsize} - 398.74\text{CBHIinfo} + 0.00042\text{income} + 0.36\text{distance}$$

As the result of above estimated equation the mean score of CBHI participation increases by one unit, health care expenditure decrease by coefficient of 291.67, is holding the other independent variables constant. As indicated in Table 4.8, the results of the regression analysis on CBHI difference with its corresponding sig. p - value ($p = 0.000 < .05$) indicates statistically significant.

CBHI information indicate significant at 5% level of significance with p-value of 0.000. With each additional information of household about CBHI the health care expenditure decrease by coefficient of 398.74, holding other independent variables constant

4.3. Discussion

The study assessed determinants of CBHI enrollment rate, impact of CBHI on service utilization and financial risk protection of household.

Enrollment in CBHI was positively associated with household size, information and presence of chronic illness and negatively associated with household income. Larger family size was also associated with enrollment in this study. This finding was consistent with the previous study by supported by (Mengist, 2022) in Amhara region and also consistent with the study conducted in West Gojjam zone by Mirach et al. (2019). A positive association between larger family size and CBHI enrollment could be a result of the financial burden that large households face when attempting to pay for health care out of pocket (Girmay & Reta, 2022).

The study also found that households that did not experience chronic illness were less likely to join an insurance scheme than those that did. This is consistent with the study from (Mirach et al., 2019b), conversely, found a positive association between the presence of chronic illness in a household and CBHI enrollment. It seems reasonable to assume that households without chronic illness have less need to access health care services, and thus, are less likely to enroll in an insurance plan. However, our study also found that households that had a family member with a chronic illness whose health status was perceived to be poor were also less likely to enroll than those who perceived the health status of their ill family member to be good.

A household with awareness about CBHI is more probability to be insured in CBHI than non-awareness. In line with this, households had an awareness about insurance principles and the functioning of the CBHI, they were more eager to be insured in CBHI package (Menelik et al., 2022).

The study also found that household income is negatively associated with CBHI enrolment. As HH income increase enrollment rate of households are decrease.

The CBHI scheme has had a positive impact on utilization of health-care services. According to descriptive result of this study, 72.69% of individuals with illness from CBHI member households had utilized outpatient health services compared to 60.57% individuals from non-member households. From result of marginal effect, As household being a member in the

CBHI program increases the probability of health care service utilization of the household. This result is like the result studied in rural area of developing countries the example of Senegal (Johanes, 2001).

In this study, one of the parameters linked to health care utilizations has been discovered to be CBHI membership and distance of household from health facility. This finding was contrary to a study conducted by Geferso & Sharo(2022).

Distance from health facilities was a factor that was associated with health care utilization. This study showed that those households far away from health facilities were low to utilize health services at health facilities compared to households near from health facilities.

The result of this study reveals that the mean score of CBHI participation increases by one unit, health care expenditure decrease by 291.67. CBHI participation is inversely related with health care expenditure. This result is consistence with the study conducted by Escobar et al.(n.d., 2010) in Low income and Middle income countries. With each additional information of household about CBHI the health care expenditure decreases by 398.74 units, holding other independent variables constant. This result also consistent with the studies conducted by Demissie & Negeri(2020), (Bekele, 2015), (Menelik et al., 2022) reveal that CBHI has enhanced service utilization, and reduced the household out of pocket health expenditure.

Chapter Five

Conclusions and Recommendations

This chapter is the final section that presents summary of major findings, conclusions, and recommendations of the study. It reports summary of the main findings of the study based on the results and discussions section. Based on the findings of the study the conclusions were made and recommendations are forwarded to concerned bodies, to CBHI office of Gedebano Gutazer Wolene woreda and suggestion for other researchers. Finally, as the result of scope and limitations of the study, the researcher provides suggestion for future/further study.

5.1. Conclusion

In general, the key objective of the paper was to identify the impact of CBHI participation on health care utilization and on out-of-pocket health expenditure of household in Gedebano Gutazer Wolene Woreda district. The issue of implementation comprises three distinct things. The first is examining the factors that affect the households to participate in CBHI scheme. The next issue is investigating the health care service utilization among members and nonmembers of CBHI. The last is analyzing the impact of CBHI on the financial burdens of illness fees of members. These three points were respectively the specific objectives of this paper. From the result using logistic regression for the factors of CBHI enrollment and impact of CBHI on health service utilization, and estimation of classical linear regression model using OLS method for impact of CBHI in health care expenditure show that, Society's enrollment decision in community-based health insurance program was determined by demographic, social, economic and political factors. Moreover, variables like income of the household, information about CBHI of household, size of household members and presence of chronic disease from households are statistically significant at 5% level of significance. The probability of CBHI enrollment is positively affected by size of household, information about CBHI and chronic disease from household. On the other hand, it has negative relationship with income of household and distance of household from health facility. To be more specific, a person having very good level of awareness is higher probability of being member of the scheme as compared to having poor awareness.

In addition, the members of community based health insurance have more frequency of visit to health facilities. Utilization is increased as household enrolling in CBHI. The evidence shows that even in terms of frequency, CBHI members are highly utilize their health care and are more likely to attend health care providers even for simple sickness. The researcher also fined that, as the households enrolling in CBHI decrease out of pocket health expenditure. Similarly as a households are more informed about CBHI the health care expenditure decrease by CBHIinfo coefficient.

5.2. Recommendation

Based on the empirical results obtained from the study, the following possible recommendations are forwarded in order to improve enrolment rate of CBHI, improve health care utilizations of the community and reduce their health care costs.

Ensure Enrollment of Eligible Households in the Woreda: The principle of insurance operation rest on the law of large numbers. The principle of risk pooling requires large membership size to guarantee adequate financial resources for the purchase of health services. Currently the CBHI scheme has an enrollment ratio of only 51%. Hence if appropriate community mobilization works are undertaken by the scheme and the local authorities there is the potential to increase the enrollment rate and increase the pool size which is essential to have a sustainable scheme.

Improve Healthcare Service: The impact of CBHI on health care utilization shows that CBHI member households are better off in utilizing health care services than non-member households. However, if problems in the drug supply and availability of key professionals is resolved in the health centers the households might prefer to follow the referral line to by passing the system which exposes them to risk of additional health service expenditure. A related issue here is to make the public facilities self-contained where they would be able to provide all the required services within the premises of the health facility. This would reduce the discomfort the CBHI beneficiaries would face and influence the members to make the required visits whenever they feel sick. Therefore, this study recommends the respective bodies to focus on awareness creation for the community on health care utilization. Hence, they can develop health seeking behavior and can use CBHI as an opportunity to get health care services with low cost. Service quality related issues in each health post/center like

hospitality, medicine provision, fast and prioritized service, are serious issues. Additionally members are complaining on the qualities of health centers and health professionals; which ministry of health is recommended to scale up the competencies and qualities of health centers.

More Community Sensitization & Awareness Creation Work**:** Without necessary skills and knowledge of insurance concepts among both recipients of health care services and those managing these insurance schemes, success is unlikely. People have general concepts about community based health insurance, but most they are unclear about detail concept and procedure of Community based health insurance. They do not have clear information about the environment they live in and what type of opportunities and challenges are there. People not strongly relate risks and Community based health insurance program. People also relate Community based health insurance with woreda and kebelle administration issues. This is one truck people hinder not interestingly participate in the program without considering the fact behind Community based health insurance program. So that strong advertisement should be undertaken through mass medias where rural people have an access.

5.3. Areas for future research

Within the allotted time, budget, methodology adopted, objectives specified, it is impossible to cover each issue of community based health insurance scheme. Specifically, this study recommends interested bodies to Conduct further researches on community based health insurance and proper use of medicines. When there is clearly specified evidence on the impact of the program in improving healthcare service utilization and enhancing financial protection, but also be done on the why CBHI members are pay out-of-pocket money for medicine.

6. REFERENCE

United States Agency for International Development. (2010). *HEALTH INSURANCE HANDBOOK*. *June*.

Alemu, L. (2018). *Yom Institute of Economic Development Joint Masters Program with Debre Markos University The impact of community based health insurance scheme on health care utilization in North Achefer Woreda , West Gojjam Zone , Amhara Region , Ethiopia*.

Ashagrie, B., Biks, G. A., & Belew, A. K. (2020). Community-based health insurance membership dropout rate and associated factors in dera district, northwest ethiopia. *Risk Management and Healthcare Policy*, *13*, 2835–2844. https://doi.org/10.2147/RMHP.S277804

Atnafu, D. D., Tilahun, H., & Alemu, Y. M. (2018). *Community-based health insurance and healthcare service utilisation , North- West , Ethiopia : a comparative , cross- sectional study*. 1–6. https://doi.org/10.1136/bmjopen-2017-019613

Bayked, E. M., Kahissay, M. H., & Workneh, B. D. (2019). *Factors affecting community based health insurance utilization in Ethiopia: A systematic review*. 1–34.

Bayked, E. M., Toleha, H. N., Zewdu, S., Workneh, B. D., & Kahissay, M. H. (2023). The impact of community-based health insurance on universal health coverage in Ethiopia : a systematic review and meta-analysis. *Global Health Action*, *16*(1). https://doi.org/10.1080/16549716.2023.2189764

Bekele, M. (2015). EVALUATION OF COMMUNITY- BASED HEALTH INSURANCE PILOT SCHEMES IN ETHIOPIA : *Roport*, *May*.

Bovbjerg, R. R., & Hadley, J. (2007). *Why Health Insurance Is Important*. *1*, 3–5.

Carrin, G. (2003). Community based Health Insurance Schemes in Developing Countries : facts , problems and perspectives. *Discussion Paper*.

Chachalko, D. (2022). *Determinants for Non-Enrolment in Community Based Health Insurance Scheme In South Ari District , South Omo Zone , Southern Ethiopia 2022 Abstract*. 1–17. https://doi.org/10.36648/2254-9137.22.9.165

Code, P., Code, M. E. C. C., No, E., & Centre, R. (2018). *The Contribution of Community Based Health Insurance (CBHI) in Improving Access and Utilization of Healthcare Services : The Case of Adea District , East Shoa Zone , Oromia Region , Ethiopia*.

Demissie, B., & Negeri, K. G. (2020). Effect of community-based health insurance on utilization of outpatient health care services in southern ethiopia: A comparative cross-sectional study. *Risk Management and Healthcare Policy*, *13*, 141–153. https://doi.org/10.2147/RMHP.S215836

Demissie, G. D. (2021). *Barriers and Facilitators of Community-Based Health Insurance Membership in Rural Amhara Region , Northwest Ethiopia : A Qualitative Study*. 343–

348.

Demissie, G. D., & Atnafu, A. (2021). Barriers and Facilitators of Community-Based Health Insurance Membership in Rural Amhara Region , Northwest Ethiopia : A Qualitative Study. *Original Research*, 343–348.

Dror, D. M., Hossain, S. A. S., Majumdar, A., & Pérez, T. L. (2016). *What Factors Affect Voluntary Uptake of Community-Based Health Insurance What Factors Affect Voluntary Uptake of Community-Based Health Insurance Schemes in Low- and Middle-Income Countries ? A Systematic Review and Meta-Analysis*. *September*. https://doi.org/10.1371/journal.pone.0160479

Eckart, M., Erlangga, D., Suhrcke, M., Ali, S., & Bloor, K. (2019). Article : The impact of public health insurance on health care utilisation , financial protection and health status in low- and middle-income countries : A systematic review. *Research Article*.

Escobar, M., Griffin, C. C., & Shaw, R. P. (n.d.). *The Impact of Health Insurance in Low- and Middle-Income Countries*.

Ethiopia Health Insurance Agenncy. (2020). *Ethiopia Health Insurance Agency CBHI Members ' Registration and Contribution 2011-2020 GC*.

EthiopianMinistryofHealth. (2021). *Health Sector Transformation PlaneII HSTP II 2020/21-2024/25 (2013 EFY - 2017 EFY)*.

Feleke, S., Mitiku, W., Zelelew, H., & Ashagari, T. D. (2015). *Ethiopia's Community-based Health Insurance: A Step on the Road to Universal Health Coverage*.

Gedebano Gutazer Wolene Woreda health office. (2022). *በደቡብ ክልል ጤና ቢሮ ጉራጌ ዞን ገ/ጉ/ወ/ወ/ጤ/ጥ/ፅ/ቤት በ2015 በጀት ዓመት ሀክምና አገልግሎት ዘርፍ የማዐጤመ ፕሮግራም ዕቅድ እና የ2014 አፈጻጸም መስከረም 20014 ዓ.ም ሆሳእና*.

Geferso, A. T., & Sharo, S. B. (2022). *Community-Based Health Insurance Utilization and Its Associated Factors among Rural Households in Akaki District , Oromia , Ethiopia , 2021*. *2022*, 12.

Getahun, T., Teklesilassie, L., Habtemichael, M., Abebe, Y., & Getahun, H. (2022). " Magnitude of community - based health insurance utilization and associated factors in Bassona Worena District , North Shoa Zone , Ethiopia : a community - based cross - sectional study ." *BMC Health Services Research*, 1–8. https://doi.org/10.1186/s12913-022-08794-6

Girma, F., Jira, C., & Girma, B. (2011). *ORIGINAL ARTICLE HEALTH SERVICES UTILIZATION AND ASSOCIATED FACTORS IN JIMMA ZONE , SOUTH WEST ETHIOPIA*. *21*(4), 85–94.

Girmay, A. M., & Reta, M. T. (2022). Community-based health insurance service utilization and associated factors in Addis Ababa , Ethiopia. *Article*, *April*, 1–9. https://doi.org/10.1002/puh2.18

Gujarati, D. N. (2004). *BASIC*.

Habiyonizeye, Y. (2013). *Implementing Community-Based Health Insurance schemes Lessons from the case of Rwanda*.

Hounton, S., Byass, P., & Kouyate, B. (2012). *Assessing effectiveness of a community based health insurance in rural Burkina Faso*.

InsuranceRegulatory, & AuthorityDevelopment. (n.d.). *Handbook on Health Insurance*.

Jembere, M. yismaw. (2018). *Community Based Health Insurance Scheme as a New Healthcare Financing Approach in Rural Ethiopia : Role on Access , Use and Quality of Healthcare Services , the Case of Tehuledere District , South Wollo Zone ,*. *7*(2). https://doi.org/10.4172/2327-4972.1000227

Johanes, Ji. (2001). *The impact of health insurance on the access to health care and financial protection in rural areas of developing countries : The example of Senegal*. *December*, 1–25.

Kado, A., Taye, B., Abdi, H., Dessie, Y., & Geda, B. (2020). Willingness to Pay for Community-Based Health Insurance Scheme and Associated Factors Among Rural Communities in Gemmachis District , Eastern Ethiopia. *Original Research*, 609–618.

Kassa, A. M. (2023). *In Ethiopia ' s Kutaber district , does community-based health insurance protect households from catastrophic health-care costs ? A community- based comparative cross-sectional study*. 1–16. https://doi.org/10.1371/journal.pone.0281476

Khan, J. A. M., Ahmed, S., Sultana, M., Sarker, A. R., Chakrovorty, S., Rahman, M. H., Islam, Z., Rehnberg, C., & Niessen, L. W. (2020). The effect of a community-based health insurance on the out-of-pocket payments for utilizing medically trained providers in Bangladesh. *Jo*, 287–298. https://doi.org/10.1093/inthealth/ihz083

Lavers, T. (2019). Social Science & Medicine Towards Universal Health Coverage in Ethiopia ' s ' developmental state ' ? The political drivers of health insurance. *Social Science & Medicine*, *228*(February), 60–67. https://doi.org/10.1016/j.socscimed.2019.03.007

Menelik, D. asfaw, Mohamed, S. shifaw, Assefa, A. B., & Birara, setognal A. (2022). *The Impact of Community-Based Health Insurance on Household ' s Welfare in Chilga District , Amhara Regional State , Ethiopia*. *10*(June), 1–12. https://doi.org/10.3389/fpubh.2022.868274

Mengist, S. A. (2022). *Determinants of Community Based Health Insurance Program Implementation in Ebinat District , Amhara Regional State , Ethiopia*.

Merga, B. T., Balis, B., Bekele, H., & Fekadu, G. (2022). Health insurance coverage in Ethiopia : financial protection in the Era of sustainable development goals (SDGs). *Health Economics Review*, 1–7. https://doi.org/10.1186/s13561-022-00389-5

Mirach, T. H., Demissie, G. D., & Biks, G. A. (2019a). *Determinants of community-based*

health insurance implementation in west Gojjam zone , Northwest Ethiopia : a community based cross sectional study design. 1–8.

Mirach, T. H., Demissie, G. D., & Biks, G. A. (2019b). *Determinants of community-based health insurance implementation in west Gojjam zone , Northwest Ethiopia : a community based cross sectional study design*. 1–9.

Mulat, A. K., Mao, W., Bharali, I., Balkew, R. B., & Yamey, G. (2022). Scaling up community - based health insurance in Ethiopia : a qualitative study of the benefits and challenges. *BMC Health Services Research*, 1–12. https://doi.org/10.1186/s12913-022-07889-4

Muluneh, G., Shimelis, O., Dejene, M., Waju, B., & Kudus, Y. (2020). Willingness to Join and Pay for Community-Based Health Insurance Among Rural Households of Selected Districts of Jimma Zone , Southwest Willingness to Join and Pay for Community-Based Health Insurance Among Rural Households of Selected Districts of Jimma. *Journal*. https://doi.org/10.2147/CEOR.S227934

Mussa, E. C., Palermo, T., Angeles, G., Kibur, M., Otchere, F., & Isnp, A. (2023). Impact of community - based health insurance on health services utilisation among vulnerable households in Amhara region , Ethiopia. *Research*, 1–15. https://doi.org/10.1186/s12913-023-09024-3

Negera, M., & Abdisa, D. (2022). Willingness to pay for community based health insurance scheme and factors associated with it among households in rural community of South West Shoa Zone , Ethiopia. *BMC Health Service Research*, 1–9. https://doi.org/10.1186/s12913-022-08086-z

Shigute, Z., Mebratie, A. D., Sparrow, R., & Alemu, G. (2020). The E ff ect of Ethiopia ' s Community-Based Health Insurance Scheme on Revenues and Quality of Care. *Article*.

Shikuro, D., Mezgebu, Y., Abane, K., & Ayal, D. (2020). *Catastrophic Out-of-Pocket Health Expenditure Among Rural Households in the Semi-Pastoral Community , Western Ethiopia : A Community-Based Cross-Sectional Study*. 761–769.

Taddesse, G., Atnafu, D. D., Ketemaw, A., & Alemu, Y. (2020). *Determinants of enrollment decision in the community-based health insurance , North West Ethiopia : a case-control study*. *1*, 1–9.

Tahir, A., Abdilahi, A. O., & Farah, A. E. (2022). Pooled coverage of community based health insurance scheme enrolment in Ethiopia , systematic review and meta - analysis , 2016 – 2020. *Health Economics Review*, 1–10. https://doi.org/10.1186/s13561-022-00386-8

Tesfagiorgis, E. (n.d.). *The Impact of Community-based Health Insurance on Health Service Utilization in Aneded Woreda, Ermiyas Tesfagiorgis, Debre Markos University*. 378–395.

Thomson, S., Sagan, A., & Mossialos, E. (2020). 2020 Comparative Study on private-health-

insurance. In *Private Health Insurance History, Politics and Performance*.

UNHCR. (2011). *A Guidance Note on Health Insurance Schemes for Refugees and other Persons of Concern to UNHCR*.

Wanamo, T. E., Girum, F., Mohammed, ahmed yasin, & Leta, A. (2021). *iMedPub Journals Assessing Factors Associated with Poor Community Based Health Insurance for Client Satisfaction Level with Public Health Care Services in Negele Arsi District Health Centers , West Arsi Zone Ethiopia Abstract*. *Lmic*, 1–9.

Weya, A., Id, K., Haji, A., Hareru, H. E., & Id, A. H. (2022). Is Ethiopian community-based health insurance affordable ? Willingness to pay analysis among households in South Central ,. *Research Article*, 1–15. https://doi.org/10.1371/journal.pone.0276856

World bank. (2010). *Health Insurance Handbook*.

world health organization(WHO). (2021). *World health statistics 2021: monitoring health for the SDGs, sustainable development goals*.

world health organization(WHO). (2022). *World Health Statistics World Health Statistics*.

Yamane (1967:886). (1967). determining the sample size. *Technometrics*, *10*(3), 621–622. https://doi.org/10.1080/00401706.1968.10490610

Yibeltal, K., Ermias, D., Girmay, M., Negalign, B., & Alula, M. (2022). The impact of community-based health insurance on health service utilization and financial risk protection in Ethiopia. *Research*.

APPENDIX

Appendix A, Results of regression and goodness of fit

Table 1, Logistic model for CBHIpartic and its multicollinearity test

```
. logit CBHIpartic sex age educ hhsize CBHIinfo Annualincome chronicdiseas distanceofHF

Iteration 0:   log likelihood = -146.79622
Iteration 1:   log likelihood =  -100.7404
Iteration 2:   log likelihood = -99.699389
Iteration 3:   log likelihood = -99.686179
Iteration 4:   log likelihood = -99.686162
Iteration 5:   log likelihood = -99.686162

Logistic regression                               Number of obs   =        212
                                                  LR chi2(8)      =      94.22
                                                  Prob > chi2     =     0.0000
Log likelihood = -99.686162                       Pseudo R2       =     0.3209
```

CBHIpartic	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
sex	.754846	.4618645	1.63	0.102	-.1503919	1.660084
age	.6555717	.2317458	2.83	0.005	.2013583	1.109785
educ	-.6488806	.5014342	-1.29	0.196	-1.631674	.3339124
hhsize	1.635724	.3496864	4.68	0.000	.9503513	2.321097
CBHIinfo	3.312953	1.066683	3.11	0.002	1.222293	5.403613
Annualincome	-.4731895	.2160678	-2.19	0.029	-.8966745	-.0497045
chronicdiseas	2.817321	.706875	3.99	0.000	1.431871	4.20277
distanceofHF	-.017395	.0092742	-1.88	0.061	-.035572	.0007821
_cons	-5.954993	1.578709	-3.77	0.000	-9.049205	-2.860781

Table 2, goodness of fit Logistic model for CBHIparticipation

```
. lfit, group(10) table
```

Logistic model for CBHIpartic, goodness-of-fit test

(Table collapsed on quantiles of estimated probabilities)

Group	Prob	Obs_1	Exp_1	Obs_0	Exp_0	Total
1	0.0833	1	0.8	21	21.2	22
2	0.1658	1	2.7	20	18.3	21
3	0.2418	2	4.6	20	17.4	22
4	0.3130	8	5.9	12	14.1	20
5	0.4653	10	9.1	13	13.9	23
6	0.6113	13	10.8	7	9.2	20
7	0.6819	16	13.8	5	7.2	21
8	0.7910	15	15.7	6	5.3	21
9	0.9347	15	18.4	6	2.6	21
10	0.9892	21	20.3	0	0.7	21

```
number of observations =       212
      number of groups =        10
Hosmer-Lemeshow chi2(8) =     12.09
           Prob > chi2 =      0.1474
```

Table 3, Logistic model for HC utilization

```
. logit HCutilization CBHIpartic sex age educ hhsize CBHIinfo Annualincome distanceofHF

Iteration 0:   log likelihood = -118.90515
Iteration 1:   log likelihood = -91.568839
Iteration 2:   log likelihood = -89.647778
Iteration 3:   log likelihood = -89.621361
Iteration 4:   log likelihood = -89.621351
Iteration 5:   log likelihood = -89.621351

Logistic regression                               Number of obs   =        204
                                                  LR chi2(8)      =      58.57
                                                  Prob > chi2     =     0.0000
Log likelihood = -89.621351                       Pseudo R2       =     0.2463
```

HCutilization	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
CBHIpartic	1.621201	.488396	3.32	0.001	.6639621	2.578439
sex	-.4945525	.5067426	-0.98	0.329	-1.48775	.4986447
age	.4664564	.2468817	1.89	0.059	-.017423	.9503357
educ	.2929673	.5137655	0.57	0.569	-.7139946	1.299929
hhsize	-.5077203	.3967216	-1.28	0.201	-1.28528	.2698396
CBHIinfo	1.078715	.6567162	1.64	0.100	-.2084253	2.365855
Annualincome	-.1442636	.2283823	-0.63	0.528	-.5918847	.3033575
distanceofHF	-.0391064	.007922	-4.94	0.000	-.0546333	-.0235795
_cons	1.670552	1.262812	1.32	0.186	-.8045141	4.145619

Table 4, goodness of fit for Logistic model of HC utilization

```
. lfit, group(10) table
```

Logistic model for HCutilization, goodness-of-fit test

(Table collapsed on quantiles of estimated probabilities)

Group	Prob	Obs_1	Exp_1	Obs_0	Exp_0	Total
1	0.3128	6	4.7	15	16.3	21
2	0.5368	4	9.4	17	11.6	21
3	0.6534	14	12.2	6	7.8	20
4	0.7374	17	14.1	3	5.9	20
5	0.7950	18	15.3	2	4.7	20
6	0.8751	17	17.6	4	3.4	21
7	0.8991	18	19.6	4	2.4	22
8	0.9438	17	17.5	2	1.5	19
9	0.9642	18	19.1	2	0.9	20
10	0.9841	20	19.5	0	0.5	20

```
     number of observations =       204
           number of groups =        10
    Hosmer-Lemeshow chi2(8) =        14.09
                Prob > chi2 =         0.0795
```

Figure 1: Normality test for residuals

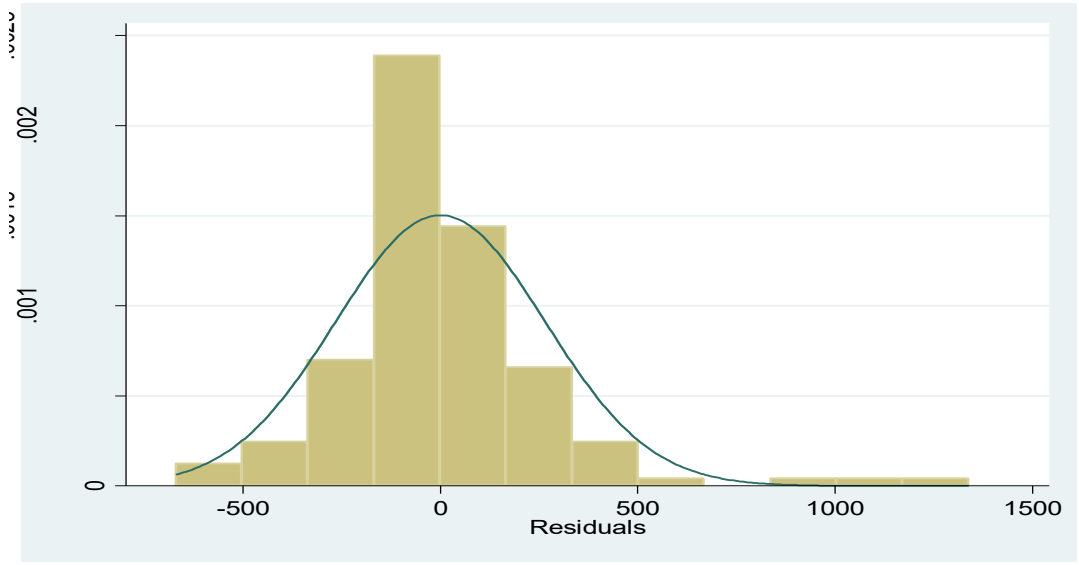


Figure 2: Linearity p – p plot graph for HC expenditure

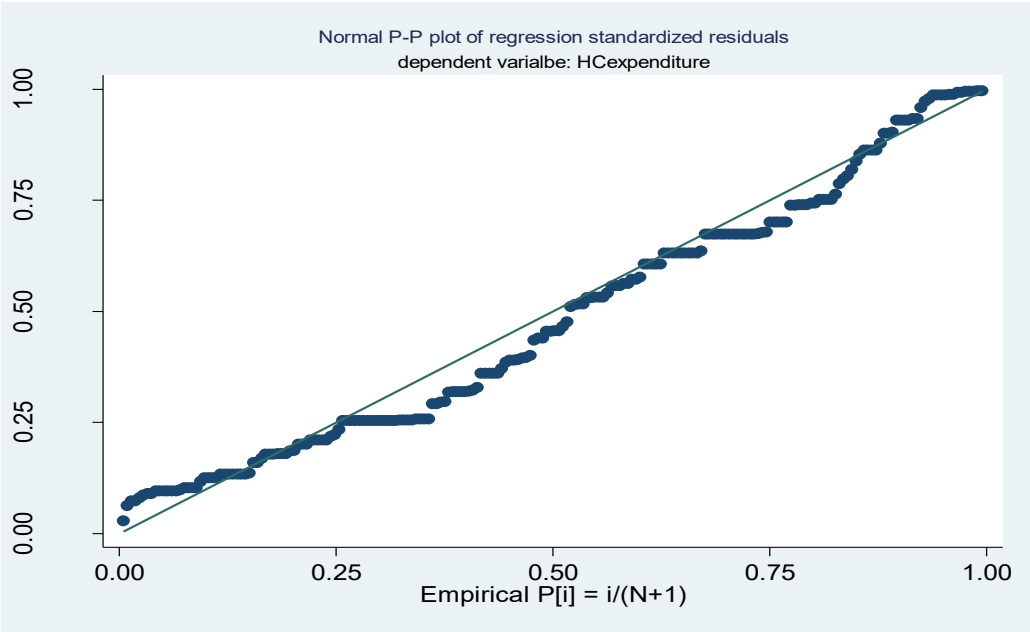


Figure 3: Scatter plot for homogeneity of variance for HCexpenditure

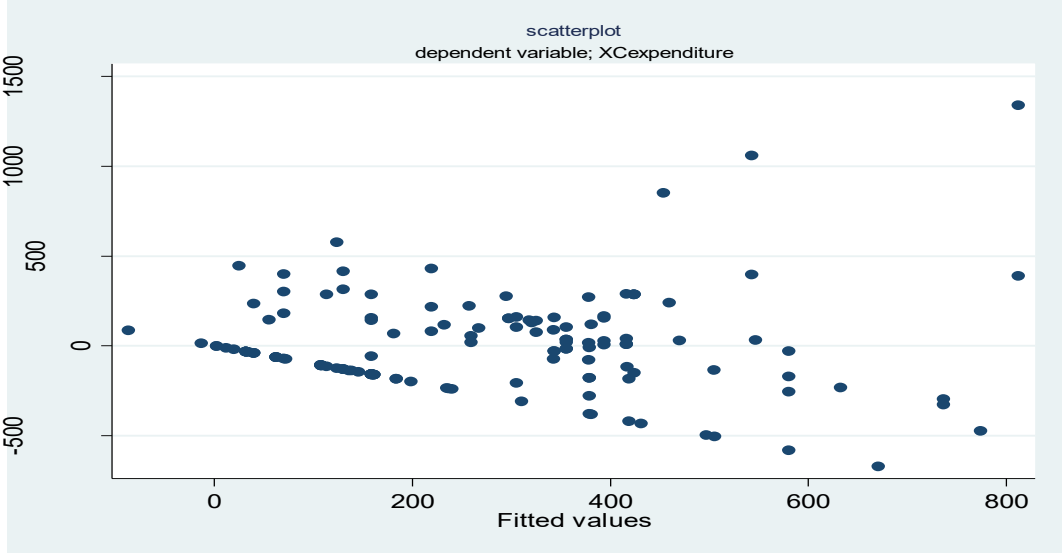


Table 5: Non – Multicolinearity test of the Independent Variables

```
. vif
```

Variable	VIF	1/VIF
educ	1.33	0.752845
CBHIpartic	1.32	0.756072
CBHIinfo	1.32	0.758785
Annualincome	1.31	0.764579
hhsize	1.29	0.777068
age	1.12	0.895724
distanceofHF	1.10	0.908204
sex	1.09	0.915828
Mean VIF	1.23	

Table 6: Model Fitness Test: health service expenditure with the Independent Variables

Source	SS	df	MS
Model	5190685.79	8	648835.724
Residual	10153158	136	74655.5736
Total	15343843.8	144	106554.471

```
Number of obs =     145
F(  8,   136) =    8.69
Prob > F      =  0.0000
R-squared     =  0.3383
Adj R-squared =  0.2994
Root MSE      =  273.23
```

Appendix B:- Quastionnaire

WOLKITE UNIVERSITY

COLLEGE OF BUSSINES AND ECONOMICS

DEPARTMENT OF ECONOMICS

Questionnaire to be filled by households

Dear respondents,

I am a post graduate student of Development Economics, Wolkite University. Currently, I am undertaking a research entitled *"**the impact of community based health insurance on health care utilization and reduction of financial risk in Gedebano Gutazere Wolene Woreda**"*. You are one of the respondents selected to participate in this study. The purpose of this questionnaire is to collect relevant data that will be used for the partial fulfillment of the requirements of the degree of masters of development economics. Therefore, I would kindly request you to assist me providing actual information by filling the questionnaire to the best of your knowledge. Your participation is entirely voluntary and the questionnaire is completely anonymous. Finally, I confirm you that the information that you share me will be kept confidential and only used for the academic purpose. No individual's responses will be identified as such and the identity of persons responding will not be released to anyone.

Thank you in advance for your kind cooperation and dedicating your time!

With regards,

Jemal Kedir

Tel.: +251 947769706

General Directions

Please note the following points before you start filling the questionnaire

- You do not need to write your name on the questionnaire,
- For items/questions with alternatives, encircle the alternative that you choose
- Use the blank space if you need to add idea/s that is not mentioned in the questionnaire

Part I: Socio-Demographic Characteristics of the Household (household characteristics)

Zone _____ Woreda___ catchment___Kebele _____ villages/got _____

2.11Who is interviewed?

1. Head of household 2. Representative of head

2.12 Sex of household head? 1. Male 2. Female

2.13 Age of household head? _____

2.14 Marital Status of the household head?

1. Married 2. Single 3. Divorced 4. Widowed 5. Other (specify) ___

2.15 Head can read and write? 1. yes 2. No

2.16 What is highest grade complete? 1=elementary(grade1-8) 2=secondary(grade9-10) 3= preparatory(grade 11-12) 4= certificate tvet/ttc 5= college diploma 6= university 7=none formal education 8= adult education 9= other_____

2.17 Religion of the household head/spouse

1. Orthodox/Christian 2.Muslim 3.Protestant 4.Catholic 5=none 6=Others _____

2.18 Household size in number _____

1.9.1. Number of females _____

1.9.2. Number of Males _____

1.9.3. Number of under five children in the household _____

1.9.4. Number of household members between the age of 5 and 17 _____

1.9.5. Number of household members between the age of 18 and 64 _____

1.9.6. Number of household members between the age of 65 and above _____

1.9.7. Number of relatives (spouse, son/daughter, adopted children, etc.) _____

1.9.8. Number of non-relative household members (paid domestic worker, etc.) _____

2.19 Does/did the household head involve in political, social or religious positions?

1. Yes 2. No

2.110 Is there any household member (other than household head) actively involving in social, political or religious positions? 1. Yes 2. No

2.111 Is currently member of CBHI program? 1. Yes 2. No

2.112 If ``No`` for ``1.11``, Why has your household decided not to enroll in the CBHI program (multiple responses allowed-list in order of importance)?

1. Illness and injury does not occur frequently in our household

2. The registration fee and premiums are not affordable

3. Want to wait in order to confirm the benefits of the scheme from others

4. We do not know enough about the CBHI scheme

5. There is limited availability of health services

6. The quality of health care services is low

7. The benefit package does not meet our needs

8. Lack of confidence in scheme management

9. Other reasons, please specify _____

2.113 If ``Yes`` for ``1.11``, Why has your household or any of your household members decided to enroll in the CBHI program (multiple answers allowed-list in order of importance)?

1. Illness and/or injury occurs frequently in our household
2. Our household members need health care
3. To finance health care expenses
4. CBHI registration and premium is paid by the government
5. Premium is low compared to the user fee price to obtain medical treatment
6. Pressure from other family members/community
7. Pressure from the kebele/tabia administration
8. others please specify

Part II; Awareness (information) of CBHI for both members and non-members

2.1 Have you ever heard about community based health insurance program (CBHI)? [non-CBHI members only] 1=Yes 2=No

2.2 From whom did you hear about CBHI?

1= neighbors/friends 2= CBHI officials in public meeting 3= CBHI house to house awareness creation campaigns 4= mass media: ETV, radio 5= health professionals in health facilities 6=others, specify_____

2.3 Perceptions about CBHI [put ticks on the space provided]

Questions	**Correct**	**Non correct**	**Do not know**
Only those who fall sick should consider enrollment in CBHI			
Only the very poor who cannot afford to pay for healthcare need to join the schemes			
Under CBHI program, you pay money (premiums) in order for the CBHI to finance your future health			

care needs?			
CBHI program are like savings scheme, you will receive interest and get your money back			
If you do not make claims through CBHI, your premium will be returned			

2.4 When did you enroll into CBHI? _____ [CBHI members only]

2.5 Who paid for the enrollment fee?

1=HH contribution 2= local government (coverage for Indigent HH)

2.6 How long does it take, after payment of registration fee and premium, to start utilizing health services? _____ days

2.7 Where Do you pay the premiums

1=at the CBHI office 2=Kebele/Tabia administration 3=Official comes and collects 4=others, please specify----------

2.8 When your current membership expires would you renew your CBHI membership for the following year? 1=Yes 2=No

2.9 If yes for question 2.8, what is the highest amount you are willing to pay to renew your membership? _____ ETB

2.10 If no for question 2.8, why do you plan not to renew your CBHI membership (multiple responses allowed-list in order of importance)?

1= Illness and injury does not occur frequently in our HH

2= the registration fee and premiums are not affordable

3= there is limited availability and poor quality of health services

4 = The quality of service (waiting time, staff attitude, medicine, diagnostics) for CBHI members is not as good as for out of pocket paying patients (non-CBHI members)

5= other, specify

2.11 Have you made use of your CBHI membership to cover health costs?1=Yes2=No

2.12 Why has your household not benefitted from CBHI?

1 = No one in my HH has visited health facilities

2= We still pay other additional costs for treatment (specify)

3= The quality of service (waiting time, staff attitude, medicine, diagnostics) for CBHI members is not as good as for out of pocket paying patients (non-CBHI members)

4= Delays in issuance and distribution of CBHI ID cards

5=others, specify

Affordability and expectations CBHI

2.13 The timing/time interval of premium payment is convenient for your household?
1=disagree, 2=indifferent, 3=agree

2.14 The CBHI registration fee is?1=easily affordable 2=somewhat affordable 3=unaffordable

2.15 The CBHI regular contribution (premium) is?
1=easily affordable 2=somewhat affordable 3=unaffordable

CBHI experience

(The following questions should be asked only to households who are enrolled in the CBHI program)

2.16 The local CBHI agent tries hard to solve CBHI implementation problems
1= Disagree 2= indifferent 3=Agree

2.17 The community (CBHI members) has the right to guide and supervise the activities of the CBHI management? 1= Disagree 2= indifferent 3=Agree

2.18 Health professionals treat patients of CBHI membership as much as out of pocket paying patients (none members) 1= Disagree 2= indifferent 3=Agree

2.19 The CBHI benefit package meets the requirements of my household. 1= Disagree 2= indifferent 3=Agree

2.20 The local CBHI management is trustworthy. 1=Disagree 2= indifferent 3=Agree

2.21 I am satisfied with the experience at the local CBHI office when I go to register?1= Disagree 2= indifferent 3=Agree

2.22 I am satisfied with the local CBHI office when I go to pay the regular contribution (premium)? 1= Disagree 2= indifferent 3=Agree

2.23 I am satisfied with quality of healthcare services provided by the contracted provider?

1=Excellent 2=Good 3=Fair 4=Poor 5=Very poor 6=I don't know

Part III: Household livestock ownership and Assets

3.1 . Livestock information of the household currently own

Types of livestock	Do you have these animals? 1= yes, 2= no	How money of these animals do this household currently own? (in number)
2.1.1 cattle		
• Plough oxen		
• Fattened ox		
• Cows		
• Bull		
• Calf		
• Heifer		
• Others		
2.1.2 small ruminants		
• Goats		
• Sheep		
• Others		
2.1.3 transport animals		
• Donkey		
• Horse		
• Mule		
2.1.4 others		
• Chicken		
• Beehives		
• Others(specify		

3.2 Is your dwelling owned by your household or rented, or do you reside without payment?

1. Owned by the household

2. Rented

3. Occupied without payment

4. Other (specify) _____

3.3. Do you own the following (you own currently)?

Types of assets	Do you have these assets? 1= yes, 2= no	How money of these assets do this household currently own? (in number)
Modern beds		
Chairs/bench		
Radio/TV		
Computer/laptop		
Mobile/cellphone		
Modern stoves		
Bicycle/motorbike		
Water pump		
Others (specify)		

Part IV: Land use and Production in the last 12 months

4.1 How much cropland does your household own (in hectares)? _____

4.2 How much cropland was irrigated in the last 12 months (in hectares)? _____

4.3 How much cropland (both own and rented) was cultivated by the household over the last 12 months in hectares? _____

4.4 Which crops did you grow/cultivated, produced and sold in the last 12 months?

Types of crops	Production (kg)	Price per kg	Total price

Part V: Health care utilization

Outpatient Treatment (when the patient is gets consultation and/or other services without being admitted to stay at health facility)

5.1 Do you perceive that your household members are healthy? 1.Agree 2.Neutral 3.Disagree

5.2 Did a household member fall ill in the past three months? 1. Yes 2. No

5.3 If the answer for question number ``5.2`` is `Yes`,

1.1.1. what is the number of household members fallen ill in the past three months? _____.

1.1.2. How long he/she stayed ill in the last 3 months? If ill members were more than one,

please mention for each ill member. _____

5.4 What was the major cause of illness? _____

5.5 Did the ill household member/s visit health facilities for the illness felt in the past three months? 1. Yes 2. No

5.6 If the answer for question number `5.5` is `Yes`,

5.6.1. What types of facility they visited?

1. Health post 2.Health center 3.Private clinic 4.Public hospital 5. Private hospital 6. NGO clinic 7.Traditional healer 8.Home service by health extension worker

9. Other (specify) _____

5.6.2. How many days did a household member stay in the health facility? _____

5.7 Why do you choose this facility? 1.Proximity 2.Inexpensiveness 3.Staff are always available 4.Medicines are available 6.Short-waiting time 7.Staff are more compassionate 8.Staff more capable 9.CBHI coverage 10.Referral from first visited facility 11.Other, specify _____

5.8 What type of service did the ill household member/s receive?

1. Inpatient 2. Outpatient 3. Both 4. Other_____

5.9 If the answer for question number ``5.5`` is ``No``, What was the major reason the ill members did not visit health facilities? 1. Distance from health facility 2.Lack of money 3.Lack of trust on treatment 4. Others (specify) _____

5.10 Does any member of the household have chronic disease (symptoms have gone more than 30 days? 1. Yes 2. No

5.11 Total number of visits (in number) of household members to health facilities in the past three months _____

5.12 What transportation did you use to reach the nearest health facility?1.On foot 2.Transportation animals 3.Cycle/Motorbike 4.Vehicles/bus/ 5. Others (specify) _____

5.13 How long (in hours) does it take to reach the nearest health facility? _____

5.14 How long it took to see health professional? _____

5.15 What is your Perception about the overall quality of health care services provided by the facility. 1. Very good 2. Good 3. Average 4. Poor 5. Very poor

5.16 How much money has the household spent for last 12 month (List for Each illness case)

5.16.1. Transportation to health facilities _____ birr

5.16.2. Medical record _____ birr

5.16.3. Laboratory _____ birr

5.16.4. Medicine(drug) _____ birr

5.17 Is your source of financing for health care expenditure from out of pocket payment?

1. Yes 2. No

5.17.1 If your answer for question 5.17 is yes, what was the main source of financing for out of pocket health care expenditure?

1.Own saving 2.Reduce household food consumption (if the household purchases food) 3. Reduce household nonfood consumption 4.Selling of assets 5.Selling of food stocks 6.Borrowing 7. Increase sell of labor 9. Other (specify)_____

5.17.2 If your answer for question 5.17 is no, what was the main source of financing for health care expenditure? 1.Community based health insurance (CBHI) 2. fee waivers from Kebele/Tabia/woreda 3. Provided free for all 4.Remittance (in cash or in kind) 5. Other (specify)_____

5.18 Is all laboratory investigations available in health facilities?

1. Available 2. Rarely available 3. Not available

5.19 How was waiting time OPD? 1= Less than 30 minutes 2=30 to 60 minutes 3= 1to 3 hours 4=3 to 6 hours 5= 6 hours and more 5=More than a day

5.20 Were drugs available in health facilities? 1.Available 2.Rarely available 3.Not available

5.21 How was your satisfaction by the services provided by health facilities?

1. Very satisfied 2. Satisfied 3. Indifferent 4. Dissatisfied 5. Very Dissatisfied

5.22 Do modern health care providers can be trusted more than traditional healers (perception of the respondent) 1. Agree 2. Neutral 3. Disagree

Part V: HEALTH CARE UTILIZATION

maternal and child health services

5.23 Were there pregnant women in this household in the last 12 months? 1=Yes 2=No

5.24 Did you have antenatal care visit to a health facility during her pregnancy? 1=Yes 2=No

5.25 How was number of visits? 1= 1st time 2= 2nd time 3= 3rd time 4= 4th time

5.26 What types of facility you visited for antenatal care?

1=Health post 2=Health center 3=Private clinic 4=Mission /NGO clinic 5=Public hospital 6=Private hospital 7=Mission /NGO hospital 8=traditional healer 9: home service by health extension workers 10=Other (specify)_____

5.27 Did you deliver in a health facility? 1=Yes 2=No

5.28 What types of facility use for deliver? 1=Health center 2=Private clinic 3=Public hospital 4=Private hospital 5=Mission/NGO hospital 6=traditional healer 7: home service by health extension workers 8=Other (specify)_____

5.29 Did you receive immunization service? (to be asked only for household members who are under 5 years of age) 1=Yes 2=No

5.30 If yes, state number of times immunization was received?

1= 1st time 2= 2nd time 3= 3rd time 4= 4th time

Part V; HEALTH CARE UTILIZATION

Inpatient Treatment (when the patient is admitted by health professional to stay at health facility)

5.31 Number of hospitalization in each episode? 1=1st time 2=2nd time 3=3rd time 4=4th time

5.32 What types of health care facility use? 1=Health center 3=Private clinic 4=Public hospital 5=Private hospital 6=Mission/NGO hospital 7=Pharmacy/drug store 8=traditional healer 9=Other (specify)_____

5.33 Distance to the facility (kilometer) _____

5.34 Travel time to the facility (hour)?_____

5.35 Reason for choice of this facility? 1=Proximity 2=Inexpensiveness 3=Staff are always available 4=Medicines are available 5=Short-waiting time 6=Staff are more compassionate 7=Staff are more capable 8=CBHI coverage 9=Referral from first visited facility 10=other, specify_____

5.36 How much money has the household spent on?

Transportation_____Consultation_____Diagnostics_____Medicine_____Bed___

5.37 Main source of financing? 1=Own saving 2=Reduce HH food consumption (if the HH purchases food) 3. Reduce HH nonfood consumption 4=Sell of assets 5=Sell

of food stocks 6=Borrowing 7=Remittance (in cash or in kind) 8= Community based health insurance (CBHI) 9= fee waivers from Kebele/Tabia/wore da 10=Increase sell of labor 11=provided free for all 12= Other (specify)___

5.38 How satisfied is the patient with Diagnostics, Cleanness of facility, Courteousness of staffs, Waiting time, Availability of drugs/supplies, Cleanness of bed and food, Professional care? 1=Very satisfied 2=Satisfied 3=Indifferent 4=Dissatisfied 5=very dissatisfied

5.39 Waiting time 1= Within a day 2=within a week 3= within two weeks 4=Within a month 5=After a month

5.40 Availability of drugs/supplies? 1=Not available 2=Rarely available 2=Usually available 3= always available

ወልቂጤ ዩኒቨርስቲ

<u>ውድ ደንበኞች፡-</u>

እኔ በወልቂጤ ዩኒቨርስቲ በምጣኔ ሀብት የትምህርት ክፍል በልማት ምጣኔ ሀብት የትምህርት አይነት የዘንድሮ ዓመት የማስተርስ ዲግሪ ተመራቂ ተማሪ ስሆን በአሁኑ ወቅት የመመረቂያ የጥናታዊ ጽሁፌን በማዘጋጀት ላይ እገኛለሁ።

የጥናታዊ ጽሁፌ ዓርእስት; ***the impact of community based health insurance on health care utilization and reduction of financial risk in Gedebano Gutazere Wolene Woreda***;የሚል ሲሆን ለጥናቱ ውጤታማነት እርስዎ የጥናቱ ናሙና አካል በመሆንዎ ከዚህ በታች የተዘረዘሩትን መጠይቆች በተገቢው መንገድ እና በአግባቡ እንዲሞሉልኝ በትህትና እየጠየቅኩ በፍቃደኝነት እንድትሳተፉ አሳስባለሁ።

በመጨረሻም ለጥናቱ አላማ የምትሰጡኝ ማንኛውም መረጃም ሆነ ማስረጃ ለሶስተኛ ወገን ተላልፎ የማይሰጥ እና ሚስጥራዊነቱ የተጠበቀ መሆኑን እያረጋገጥኩ መረጃዎቹ ለጥናታዊ ጽሁፉ ማሟያ ብቻ የሚውሉ መሆኑን እገልጻለሁ።

ስለትብብራችሁ ብሎም ስለሰጣችሁኝ ጊዜ እጅግ አመሰግናለሁ!!

<u>አጠቃላይ ትእዛዝ፡-</u>

መጠይቁን ከመሙላትዎ በፊት እባክዎ የሚከተሉትን ሃሳቦች ከግምት ውስጥ ያስገቡ፤

- በመጠይቁ ላይ ስምዎን መጻፍ አይፈቀድም፤
- ለምርጫ ጥያቄዎች እባክዎ መልሱን የሚያመላክቱትን ፊደላት ያክብቡ፤
- በመጠይቁ ውስጥ ያልተካተቱ ሃሳቦች ካሉ ክፍት ቦታውን በመጠቀም ሃሳብዎን ይግለጹ፤

ክፍል አንድ:

የአባወራዎች የማሕበራዊና ስነ-ሕዝብ መረጃ

1.1 ክልል _____ ዞን _____ ወረዳ _____ቀበሌ _____ ጎጥ/ጣቢያ _____

1.2 ቃለመጠይቁ ተደረገለት የቤተሰብ አካል 2. አባወራ 2. እማወራ

1.3 የተጠያቂው ጾታ 2. ወንድ 2. ሴት

1.4 ዕድሜ _____

1.5 የጋብቻ ሁኔታ 1. ያገባ/ች 2. ያላገባ/ች 3. የተፋታ/ች 4. የሞተበት/ባት

1.6 አባወራ/እማወራ ማንበብና መጻፍ ይችላሉ: 1. አዎ 2. አይችሉም

1.7 የተማሩ ከሆነ የትምህርት ደረጃ _____

1.8 የአባወራ/እማወራ ሃይማኖት? 1. ኦርቶዶክስ ተዋህዶ ክርስቲያን 2. እስልምና 3. ፕሮቴስታንት 4. ሌላ (ይጠቀስ)

1.9 የቤተሰብ ብዛት _____

1.9.1. ሴት _____

1.9.2. ወንድ _____

1.9.3. ዕድሜያቸው ከ5 ዓመት በታች የሆኑ የቤተሰብ አባላት ቁጥር _____

1.9.4. ከዕድሜያቸው ከ5 ዓመት እስከ 17 ዓመት የሆኑ የቤተሰብ አባላት ቁጥር __

1.9.5. ዕድሜያቸው ከ18 ዓመት እስከ 64 ዓመት የሆኑ የቤተሰብ አባላት ቁጥር __

1.9.6. ዕድሜያቸው ከ65 ዓመት በላይ የሆኑ የቤተሰብ አባላት ቁጥር __

1.9.7. የስጋ ዝምድና ያላቸው የቤተሰብ አባላት ቁጥር (ባለቤት/ልጅ/ወ.ዘ.ተ.) __

1.9.8. የስጋ ዝምድና የሌላቸው የቤተሰብ አባላት ቁጥር (ሞግዚት፣ ወ.ዘ.ተ.) __

1.10 አባወራ/እማወራ በፖለቲካ ስራዎች በንቃት ይሳተፋሉ? 1. አዎ 2. አይሳተፉም

1.11 አባወራ/እማወራ በማሕበራዊ ጉዳዮች ላይ ንቁ ተሳታፊ ናቸው?1. አዎ 2 አይደሉም

1.12 አባወራ/እማወራ በሃይማኖት ተቋማት ንቁ ተሳትፎ ያደርጋሉ? 1.አዎ 2 አያደርጉም

1.13 ከአባወራ/እማወራ ውጭ ካሉ የቤተሰብ አባላት ውስጥ በፖለቲካ ስራዎች ንቁ ተሳትፎ የሚያደርግ አለ? 1. አዎ 2 የለም

1.14 ከአባወራ/እማወራ ውጭ ካሉ የቤተሰብ አባላት ውስጥ በማህበራዊ ስራዎች ላይ ንቁ ተሳትፎ የሚያደርግ አለ? 1. አዎ 2 የለም

1.15 ቤተሰቡ የማሕበረሰብ አቀፍ የጤና መድህን አባል ነውን? 1. አዎ 2. አይደለም

1.16 ለጥያቄ 1.15 መልስዎ አይደለም ከሆነ ምክንያትዎ ምንድን ነው (ከአንድ በላይ መልስ ይቻላል)?

1. በቤተሰቡ አባላት ላይ አደጋ ወይ ለሕመም ተጋላጭነቱ በጣም ዝቅተኛ ስለሆነ
2. የምዝገባና ዓመታዊ ክፍያ መጠን አቅምን ያገናዘበ ባለመሆኑ
3. የሌሎች አባላትን ለውጥ በመጠባበቅ ላይ በመሆኑ
4. ስለማሕበረሰብ አቀፍ የጤና መድህን መቂ ግንዛቤ ስለሌለ
5. የጤና አገለግሎት ተደራሽነት ውስን መሆን
6. የጤና አገልግሎት ጥራቱ ደካማ መሆን
7. በጤና መድህን የታቀፉ አገልግሎቶች ውስን መሆን
8. አገልግሎት አሰጣጡ ምስጢር ጠባቂነት የሚጎድለው መሆኑ
9. ሌላ ካለ ይጠቀስ_____

1.17 ለጥያቄ ቁጥር “1.15” መልስዎ አዎ ከሆነ ለመሳተፍዎ ምክንያትዎ ምንድን ነው (ከአንድ በላይ መልስ ይቻላል(ከአንድ በላይ መልስ ይቻላል)?

1. በቤተሰብዎት ላይ ሕመምና/ወይም አደጋ መብዛት 2. የቤተሰቡ አባላት የጤና አገልግሎት ስለሚፈልጉ 3. ለጤና አገልግሎት የሚወጣውን ወጪ ለመቀነስ 4. የማሕበረሰብ አቀፍ ጤና መድህን ወጪ በመንግስት የሚሸፈን ስለሆነ 5. የማሕበረሰብ አቀፍ

ጤና መድህን የሚከፈለው ክፍያ ከሕክምናው ወጪ ስለሚቀንስ 6. የቤተብ ወይም የማሕበረሰቡ ግፊት 7. የአካባቢው አስተዳደር ግፊት 8. ሌላ (ይጠቀስ) ----------

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1.18 ስለ ማህበረሰብ አቀፍ የጤና መድህን ፕሮግራም (CBHI) ሰምተው ያውቃሉ? [የማህበረሰብ አቀፍ የጤና መድህን አባላት ያልሆኑ ብቻ] 1=አዎ 2=አይደለም።

1.19 ስለ የማሕበረሰብ አቀፍ የጤና መድህን ከማን ሰማህ? 1= ጎረቤቶች/ጓደኞች 2= የማዓጤመ ባለስልጣናት ስብሰባ 3= ማህበረሰብ አቀፍ የጤና መድህን ከቤት ለቤት የግንዛቤ ማስጨበጫ ዘመቻዎች 4= መገናኛ ብዙሃን፡ ኢቲቪ፣ ራዲዮ 5= በጤና ተቋማት ያሉ የጤና ባለሙያዎች 6=ሌሎችም ካሉ ይግለጹ_____

1.20 ስለ ማዓጤመ ያሉ ግንዛቤዎች [በተሰጠው ቦታ ላይ ምልክት ያድርጉ]

ጥያቄዎች	ትክክል	ትክክል አይደለም	አላውቅም
የታመሙ ሰዎች ብቻ በማህበረሰብ አቀፍ የጤና መድህን መመዝገብን ግምት ውስጥ ማስገባት አለባቸው የላሉ			
ለጤና እንክብካቤ መክፈል የማይችሉ በጣም ድሆች ብቻ ናቸው መርሃግብሮቹን መቀላቀል ያለባቸው			
በCBHI ፕሮግራም መሰረት፣ CBHI የወደፊት የጤና እንክብካቤ ፍላጎቶችዎን እንዲሸፍን ገንዘብ (ፕሪሚየም) ይከፍላሉ?			
የCBHI ፕሮግራም ልክ እንደ ቁጠባ እቅድ ነው፣ ወለድ ይቀበላሉ እና ገንዘብዎን መልሰው ያገኛሉ			
በCBHI በኩል የይገባኛል ጥያቄ ካላቀረቡ፣ ፕሪሚየምዎ (ቅድመ ክፍያዎ) ይመለሳል			

1.21 ወደ ማሕበረሰብ አቀፍ የጤና መድህን የተመዘገቡት መች ነው? _____ [የማዓጤመ አባላት ብቻ]

1.22 ለምዝገባ ክፍያ የከፈለው ማነው? 1=የቤተሰብ መዋጮ 2=የአካባቢ አስተዳደር (የድሆች ሽፋን)

1.23 የምዝገባ ክፍያ እና የኢንሹራንስ ክፍያ ከተከፈለ በኋላ የጤና አገልግሎትን መጠቀም ለመጀመር ምን ያህል ጊዜ ይወስዳል? _____ ቀናት

1.24 የአባልነት ክፍያውን የሚከፍሉት የት ነው; 1=በማሕበረሰብ አቀፍ የጤና መድህን ፅ/ቤት 2=ቀበሌ/ታቢያ አስተዳደር 3=እቤት ድረስ መጥቶ 4=ሌሎችን ካሉ ይግለፁ --------

1.25 የአሁኑ አባልነትዎ ሲያልቅ የእርስዎን የማዓጤመ አባልነት ለሚቀጥለው ዓመት ያድሳሉ?

1=አዎ 2=አይ

1.26 መልስዎ አዎ ከሆነ፣ አባልነትዎን ለማደስ (ለመክፈል) የሚፈልጉት ከፍተኛው መጠን ምን ያህል ነው?__ብር

1.27 መልስዎ አይደለም ከሆነ፣ ለምንድነው የማሕበረሰብ አቀፍ የጤና መድህን አባልነትዎን ላለማደስ ምን ምክንያት አለዎት?

1= በሽታ እና ጉዳት በሀገራችን በተደጋጋሚ አይከሰትም።

2= የምዝገባ ክፍያ እና አገልግሎቱ ተመጣጣኝ አይደሉም

3=የጤና አገልግሎት አቅርቦት ውስንነት እና የጥራት ጉድለት አለ።

4 = ለማዓጤመ አባላት የአገልግሎት ጥራት (የመጠባበቅ ጊዜ, የሰራተኞች አመለካከት, መድሃኒት, ምርመራ) ጥሩ አይደለም. 5= ሌላ ካለ ይግለጹ _____

1.28 የጤና ወጪዎችን ለመሸፈን የእርስዎን የማዓጤመ አባልነት ተጠቅመዋል? 1=አዎ 2=አይደለም።

1.29 ለምንድነው ቤተሰብዎ ከማሕበረሰብ አቀፍ የጤና መድህን አገልግሎት ያላገኙት?

1 = በእኔ ቤተሰብ ውስጥ የጤና ተቋማትን የጎበኘ የለም።

2= አሁንም ለህክምና ሌሎች ተጨማሪ ወጪዎችን እንከፍላለን (ይግለጹ)

3=ለማዓጤመ አባላት የሚሰጠው የአገልግሎት ጥራት (የመጠባበቅ ጊዜ፣የሰራተኞች አመለካከት፣መድሃኒት፣የመመርመሪያ) ጥሩ አይደለም

4= የማዓጤመ መታወቂያ ካርዶችን መስጠት እና ማከፋፈል መዘግየት 5=ሌሎች ይግለጹ-----

1.30 ተመጣጣኝ እና የሚጠበቁ የአባልነት ክፍያ የጊዜ/የጊዜ ልዩነት ለቤተሰቦ ምቹ ነው;

1= አልስማማም ፣ 2= አላውቅም ፣ 3= እስማማለሁ።

1.31 የማዓጤመ ምዝገባ ክፍያ እንዴት ያዩታል?1=በተመጣጣኝ ዋጋ 2=በተወሰነ ዋጋ 3=የማይቻል

1.32 የማዓጤመ መደበኛ መዋጮ ክፍያ መጠን፤ 1=በተመጣጣኝ ዋጋ 2=መካከለኛ ዋጋ 3=የማይቻል

CBHI ተሞክሮ (የሚከተሉት ጥያቄዎች የሚጠየቁት በማዓጤመ ፕሮግራም ውስጥ ለተመዘገቡ ቤተሰቦች ብቻ ነው)

1.33 የአከባቢው የማዓጤመ ወኪል የማዓጤመ የአተገባበር ችግሮችን ለመፍታት ከባድ ነው

1 = አልስማማም 2 = ገለልተኛ 3 = እስማማለሁ

1.34 ማህበረሰቡ (የማሕበረሰብ አቀፍ የጤና መድህን አባላት) የማዓጤመ አስተዳደርን ሥራ የመመራት እና የመቆጣጠር መብት አላቸው? 1=አልስማማም 2 = ገለልተኛ 3 = እስማማለው

1.35 የጤና ባለሙያዎች ከኪስ ክፍያ ህመምተኞች በበለጠ ለማዓጤመ አባላት አገልግሎት ይሰጣሉ

1 = እስማማለው 2 = አልስማማም 3 =ገለልተኛ

1.36 የማዓጤመ አገልግሎት መመሪያዎች የቤተሰቤን መስፈርቶች ያሟላል.

1 = እስማማለው 2 = አልስማማም 3 =ገለልተኛ

1.37 የአከባቢው የማዓጤመ አያያዝ እምነት የሚጣልበት ነው.1 = እስማማለው 2 = አልስማማም 3 =ገለልተኛ

1.38 ለመመዝገብ በምሄድበት ጊዜ በቢሮው ተሞክሮ ረክቻለሁ?

1 = እስማማለው 2 = አልስማማም 3 =ገለልተኛ

1.39 መደበኛ ክፍያ ለመክፈል በሄድኩበት ጊዜ በአከባቢው በማዓጤመ ቢሮ ረክቻለሁ?

1 = እስማማለው 2 = አልስማማም 3 =ገለልተኛ

1.40 በአቅራቢያው በኮንትራቱ አገልግሎት በሚሰጡት የጤና ተቋማት እንክብካቤ እና ጥራት ረክቻለሁ?1 =በጣም ጥሩ 2 =ጥሩ 3=መካከለኛ 4 =ደካማ 5 =በጣም ደካማ 6 = አላውቅም

ክፍል ሁለት፡ የቤት እንስሳት ባለቤትነት እና ንበረትሰ

2.1 የቤት እንስሳት ባለቤትነት መረጃ

የቤት እንስሳት አይነት	ብዛተ	የአንዱ ዋጋ	ጠቅላላ ዋጋ

የቀንድ ከብት			
• የእርሻ በሬ			
• የድለባ በሬ			
• ወይፈን			
• ላሞች			
• ጥጃ			
• ሌሎች			
• ፍየል			
• በግ			
የመጓጓዣ እንስሳት			
• ፈረስ			
• አህያ			
• በቅሎ			
ሌሎች			
• ዶሮ			
• ንብ			
• ሌሎች			

2.2 አሁን የሚኖሩበት ቤት ባለቤትነት የማነው? 1. የግል ንብረት ነው 2. የኪራይ ነው

3. የግል ንብረት ባይሆንም ያልክፍያ እየኖሩበት ነው 4. ሌላ (ይጠቀስ)

_____

2.3 የቤተሰቡ ቋሚ ንብረትን በተመለከተ

የንብረት አይነት	ብዛት	የአንዱ ዋጋ	ጠቅላላ ዋጋ
ዘመናዊ አልጋ			
ወንበር/ጠረጴዛ			
ሬድዮ/ቴሌቪዥን			

ኮምፒውተር			
የቤት/ሞባይል ስልክ			
ዘመናዊ ምድጃ			
ሞተር ሳይክል			
የውሀ ፓምፕ			
ሌሎች ካሉ የጠቀሱ			

ክፍል ሦስት: የመሬት ይዞታና ባለፉት 12 ወራት የሰብል ምርት መረጃ

3.1 በቤተሰቡ ስም ምን ያህል የማሳ መሬት (በሄክታር) ይገኛል)? _____

3.2 ባለፉት 12 ወራት ምን ያህል የመሬት ይዞታ በመስኖ ለምቷል? _____

3.3 ባለፉት 12 ወራት ምን ያህሉ መሬት/ማሳ በዘር ተሸፍኗል? _____

3.4 ባለፉት 12 ወራት የምርት ሁኔታና ሽያጭ መረጃ

የአዝእርት አይነት	የተመረተ በኪ.ግ	የተሸጠ በኪ.ግ	የአንዱ ኪ.ግ ዋጋ	ጠቅላላ ዋጋ

ክፍል አምስት: የጤና አገልግሎት አጠቃቀም

5.1 የእርስዎ ቤተሰብ ጤንነት ጥሩ ሁኔታ ነው ብለው ያስባሉ? 2. አዎ 2. ገለልተኛ 3. አልስማማም

5.2 ባለፉት 3 ወራት ከተሰብ አባል ውስጥ የታመመ ሰው ነበር? 2. አዎ 2. የለም

5.3 ለ ``5.2`` መልስዎ "አዎ" ከሆነ፡

1.1.3. ባለፉት 3 ወራት ውስጥ የታመሙት የቤተሰብ አባላት ቁጥር ምን ያህል ነው?_

1.1.4. የታመሙት አባላት ህመሙ ለስንት ጊዜ ቆይቶባቸዋል (ከንድ በላይ ከሆኑ የእያንዳንዳቸው ይዘርዘር) ----------

5.4 የሕመሙ መንስኤ ምን ነበር? _____

5.5 የታመሙት የቤተሰብ አባላት ሕክምና ለማግኘት ወደ ጤና ተቋማት ሄደው ነበር? 2. አዎ 2. የለም

5.6 ለ`5.5` `አዎ`, ከሆነ

5.27.1. የሄዱበት የጤና ተቋም ዓይነት 1. ጤና ኬላ 2. ጤና ጣቢያ 3. የግል ክሊኒክ 4. የመንግስተ ሆስፒታል 5. የግል ሆስፒታል 6. መንግስታዊ ያልሆነ ጤና ተቋም 7. ፋርማሲ/መድሀኒት መደብር 8. ባሕላዊ ሕክምና አዋቂ 9. በጤና ኤክስቴንሽን የቤት ውስጥ አገልግሎት 10. ሌላ ----------

5.27.2. በጤና ተቋሙ የቆየባቸው ቀናት ብዛት ----------

5.7 ጤና ተቋሙን የመረጡበት ምክንያት 2. ቦታው ቅርብ ስለሆነ 2. የዋጋ ቅናሽ ስላለው 3. የጤና ባለሙያዎቹ ሁልጊዜ ስራ ላይ ስለሚሆኑ 4. የመድሀኒት አቅርቦት ስላለው 6. አገልግሎቱን በአጭር ጊዜ ማግኜት ስለሚቻል 7. ስነ ምግባር የተላበሱ የጤና ባለሙያዎች ስላሉት 8. ችሎታቸው የላቀ ባለሙያዎች ስላሉበት 9. የጤና መድህን ሽፋን 10. ሪፈራል ስለተጻፈ 11. ሌላ

5.8 ያገኙት የጤና አገልግሎት ዓይነት 2. ተኝቶ መታከም 2. ተመላላሽ 3. ሁለቱንም

5.9 ለ ``5.5`` ``የለም`` ከሆነ, የታመሙ የቤተሰብ አባላት ወደ ጤና ተቋም ያልሄዱበት ምክንያት ምን ነበር? 1. ከጤና ተቋም ያለው የቦታ ርቀት 2. የገንዘብ እጥረት 3. በሚሰጠው ሕክምና ላይ ዕምነት ማጣት 4. ሌላ _____

5.10 ከቤተሰቡ አባላት ውስጥ ለረዥም ጊዜ የቆየ በሽታ ያለበት አለ (ምልክቱ ከ30 ቀናት በላይ የቆየ?

1. አዎ 2. የለም

5.11 በአጠቃላይ ባለፉት 3 ወራት ውሥጥ የቤተሰቡ አባላት አገልግሎት ፈልገው ለምን ያህል ጊዜ ጤና ተቋማት ጎብኝተዋል_____

5.12 ወደ ጤና ተቋም ለመሄድ የተጠቀሙት የመጓጓዣ ዓይነት 2. በእግር 2. በበቅሎ/ፈረስ/አህያ 3. በሞተር/ሳይክል 4. በአውቶቡስ/መኪና 5. ሌላ--------

5.13 ወደጤና ተቋም ለመድረስ የሚወስደው ሰዓት ----------

5.14 ወደ ጤና ተቋም ከሄዱ በኋላ ሕክምናውን ከሚሰጠው ጤና ባለሙያ ጋር ለመገናኜት የሚወስደው ሰዓት ---------

5.15 በእርስዎ አስተያየት የጤና ተቋማቱ የአገልግሎት አሰጣጥ ጥራት ምን ይመስላል. 2. በጣም ጥሩ 2. ጥሩ 3. መካከለኛ 4. ዝቅተኛ 5. በጣም ዝቅተኛ

5.16 የጤና አገልግሎት ለማግኘት በዚህ 12 ወር የተከፈለ ክፍያ መጠን

5.37.1. ለመጓጓዣ _____ ብር

5.37.2. ካርድ ለማውጣት _____ብር

5.37.3. ለላቦራቶሪ _____ ብር

5.37.4. ለመድሀኒት _____ ብር

5.17 ለጤና አገልግሎት የከፈሉት ገንዘብ ምንጩ ከየት ነው ? 1. ከራስ ቁጠባ 2. ከቤተሰቡ የምግብ አቅርቦት ላይ ተቀንሶ/እህል በመሸጥ 3. የምግብ አቅርቦት ካልሆኑ ወጪዎች ተቀንሶ 4. ቋሚ ዕቃ በመሸጥ 5. ብድር 7. ከውጭ የተላከ ገንዘብ/ዕቃ 8. በጤና መድህን 10. ከሌላ ጊዜ የበለጠ በመስራት የተገኜ ተጨማሪ ገቢ 11. የነጻ ሕክምና ተጠቃሚ በመሆን 12. ሌላ (ይገለጽ)_____

5.18 በሄዱበት ጤና ተቋም ሁሉንም የላቦራቶሪ አገልግሎቶች ሁኔታ

1. ሁሉም አሉ 2. የተወሰኑት ብቻ አሉ 3. ምንም የለም

5.19 በሄዱበት ጤና ተቋም የመድሀኒት አቅርቦት ሁኔታ 1. አለ 2. የተወሰኑት ብቻ አሉ 3. ምንም የለም 5.41. በጤና ተቋማቱ ባገኙት የጤና አገልግሎት እርካታዎ ምን ይመስላል? 2. በጣም ረክቻለሁ 2. ረክቻለሁ 3.ገለልተኛ 4. አልረካሁም 5. በጣም አልረካሁም

5.20 ዘመናዊ የጤና አገልግሎት ሰጪ ተቋማት ከባሕላዊ ሕክምና የተሻለ ዕምነት ይጣልባቸዋል ብለው ያምናሉ? 2. እስማማለሁ 2. ገለልተኛ 3. አልስማማም

ክፍል V፡ የጤና እንክብካቤ አጠቃቀም- የእናቶች እና የህፃናት ጤና አገልግሎቶች

5.21 በዚህ ቤተሰብ ውስጥ ባለፉት 12 ወራት ነፍሰ ጡር ሴቶች ነበሩ? 1=አዎ 2=አይደለም።

5.22 በእርግዝናዋ ወቅት ወደ ጤና ተቋም የቅድመ ወሊድ ክብካቤ ጎበኘች? 1=አዎ 2=አይደለም።

5.23 የጉብኝቶች ብዛት እንዴት ነበር? 1= 1ኛ ጊዜ 2= 2ኛ ጊዜ 3= 3ኛ ጊዜ 4= 4ኛ ጊዜ

5.24 ለቅድመ ወሊድ ምን አይነት ተቋማትን ጎበኘች? 1=የጤና ኬላ 2=የጤና ጣቢያ 3=የግል ክሊኒክ 4=ተልእኮ /መንግስታዊ ያልሆነ ድርጅት 5=የህዝብ ሆስፒታል 6=የግል ሆስፒታል 7=ተልእኮ /መንግስታዊ ያልሆነ ሆስፒታል 9፡የቤት አገልግሎት በ HEWs 10=ሌላ (ይግለጹ)_____

5.25 በጤና ተቋም ነው የወለዱት? 1=አዎ 2=አይደለም።

5.26 ለመውለድ ምን ዓይነት ተቋም ተጠቀሙ? 1=የጤና ጣቢያ 2=የግል ክሊኒክ 3=የህዝብ ሆስፒታል 4=የግል ሆስፒታል 5=ተልእኮ/NGO ሆስፒታል 6=ባህላዊ ፈዋሽ 7፡የቤት አገልግሎት በጤና ኤክስቴንሽን ባለሙያ 8=ሌላ (ይገለጽ)_____

5.27 የክትባት አገልግሎት አግኝተዋል? (ከ5 አመት በታች ለሆኑ የቤተሰብ አባላት ብቻ የሚጠየቅ) 1=አዎ 2=አይደለም።

5.28 አዎ ከሆነ፣ ምን ያህል ጊዜ ክትባቱን ተቀብሏል? 1= 1ኛ ጊዜ 2= 2ኛ ጊዜ 3= 3ኛ ጊዜ 4= 4ኛ ጊዜ

ክፍል V; የጤና እንክብካቤ አጠቃቀም የታካሚ ሕክምና (በሽተኛው በጤና ተቋም እንዲቆይ በጤና ባለሙያ ሲገባ)

5.29 በእያንዳንዱ ክፍል ውስጥ በሆስፒታል የተኙት ብዛት? 1= 1ኛ ጊዜ 2= 2ኛ ጊዜ 3=3ኛ ጊዜ 4=4ኛ ጊዜ

5.30 ምን ዓይነት የጤና እንክብካቤ ተቋማት ይጠቀማሉ? 1=ጤና ኬላ 2=የጤና ጣቢያ 3=የግል ክሊኒክ 4=የህዝብ ሆስፒታል 5=የግል ሆስፒታል 6=ሚሽን/መንግስታዊ ያልሆነ ድርጅት

5.31 የተቋሙ ርቀት (ኪሎሜትር) _____

5.32 ወደ ተቋሙ የጉዞ ጊዜ (ሰዓት)?_____

5.33 የዚህ መገልገያ ተቋም ምርጫ ምክንያት? 1=ቀረቤታ 2=ውድ አለመሆን 3=ሰራተኞች ሁል ጊዜ ይገኛሉ 4=መድሀኒቶች ይገኛሉ 5=የአጭር ጊዜ ቆይታ 6=ሰራተኞች የበለጠ ሩህሩህ ናቸው 7=ሰራተኞች የበለጠ ችሎታ ያላቸው 8=የቀበሌው የCBHI ሽፋን 9=ከመጀመሪያው ተቋም ስለሚሻል 10=ሌላ ይግለፁ።

5.34 ቤተሰቡ ምን ያህል ገንዘብ አውጥቷል? ለመጓጓዣ-- ለምክር --ለምርመራ---ለመድኃኒት--ለአልጋ---

5.35 የህክምናው የፋይናንስ ምንጭ? 1=ከራስ ቁጠባ 2=የቤተሰብ የምግብ ፍጆታን በመቀነስ 3. የቤት ምግብ ያልሆነ ፍጆታን በመቀነስ 4=ሀብት በመሸጥ 5=የምግብ ግብአት በመሸጥ

6=በመበደር 7= በጥሬ ገንዘብ 8=ማህበረሰብ የተመሰረተ የጤና መድን (CBHI) 9= ከቀበሌ/ታቢያ/ወረዳ 10=የጉልበት ሽያጭ 11=ለሁሉም በነጻ የቀረበ 12=ሌላ (ይግለጹ)___

5.36 የበሽተኛው ምርመራ፣ በተቋሙ ንፅህና፣ የሰራተኞች ጨዋነት፣ የህክምና ዎረፋ የመጠበቂያ ጊዜ፣ የመድሃኒት/የዕቃ አቅርቦት፣ የአልጋ እና የምግብ ንፅህና፣ ሙያዊ እንክብካቤ ላይ ምን ያህል ረክተዋል? 1= በጣም ረክቻለሁ 2= ረክቻለው 3=መካከለኛ 4= አልረካሁም 5= በጣም አልረካም።

5.37 ህክምና የመቆያ ጊዜ 1= በአንድ ቀን ውስጥ 2=በሳምንት ውስጥ 3=በሁለት ሳምንት 4=በወር ውስጥ 5=ከወር በኋላ

5.38 የመድሃኒት/የእቃ አቅርቦት ሁኔታ? 1=አይገኝም 2=አልፎ አልፎ 2=ብዙውን ጊዜ የሚገኝ 3=ሁልጊዜ ይገኛል።

Appendix C; Key information interview

1.1. Woreda Health Office Heads

INSTRUCTION TO THE INTERVIEWER

The purpose of this assessment is to gather data to evaluate the impact of CBHI schemes from different perspectives including improving financial access, quality of health services, increasing resource mobilization and community participation.

If there are questions for which someone else is the most appropriate person to provide that Information, it would appreciate that person.

Any information you will provide as part of this interview will be held strictly confidential. Any reference to the information you provide in our analysis will be made without mentioning or implicating your name in any way.

Interviewee (Name and Title):

Region:

Zone:

Woreda:

Date: Tel No.:

<u>Roles and Responsibilities</u>

1. What are the roles and responsibilities of various levels of government authorities with regards to CBHI policy making, design and management?
   a. FMOH
   b. EHIA
   c. Regional government/BOFED/RHB
   d. Regional steering committee
   e. Zonal authorities
   f. Woreda government/WOFED/WorHO

Have all been fully engaged in the process? If not, what can be done to better engage these authorities during the future scale up?

2. How do you assess the policy guidance, financial and technical support received from FMOH and EHIA or from Regional government? How about commitment and support from regional government and Zonal authorities in terms of budget allocation for general and targeted subsidy?
3. Who else is providing the required technical support?

Experience and Impact of the Schemes

4. Given the experiences of the your piloted woredas, what were the strength and weaknesses regarding the
    - Legal frameworks,
    - Directives, by-laws, manuals and guidelines,
    - Sensitizing the community
    - The structures and recruitment of staff
5. The pilot scheme design was implemented and tested for some time now. What are the major successes and challenges in the scheme parameters:
    a. Benefit package?
    b. Level of premiums?
    c. Membership scenario (HH vs. individual basis) Reimbursement amounts?
    d. Referral mechanism?
    e. Payment to the health facilities on timely manner?
    f. Enabling the schemes to cover all health related expenses through its income?
    g. Affordability to member?
    h. Fairness compared to benefit package?
    i. CBHI management schemes?
    j. Institutional arrangement (staff size, dual assignment, etc.,)?
    k. Staff skills and capacity?

What are the major complaints of members in this regard, if any?

6. What are the successes and challenges in mobilizing the community to enrol/renew membership in CBHI? What proportion of the woreda population is currently enrolled? What strategy has worked and what hasn't?
7. Has the targeted (and general) subsidy allowed in pilot woredas to adequately include indigents in the CBHI? Are there indigents who are left out? And how significant are they in number? To what extent do you see CBHI as one of the mechanisms to increase access to health care equitably? Discuss challenges in this regard, if any.
8. Could you tell us about the successes, challenges and the areas that need improvement regarding the defined benefit package and the views of CBHI members on its coverage and adequacy as well as availability of these services in the health facilities?
9. How successful has the CBHI scheme been in negotiating agreeable terms and contract with service providers – in terms of service quality, fee, and reduction in unnecessary services/prescription (moral hazard) etc.? What are the successes and challenges in contract administration?
10. Does the implementation of the CBHI scheme have any impact (positive or negative) on the health facilities in terms of increasing resources, improving quality of care, motivation of the staff?

Health Service Utilization and Quality

11. Have you seen any difference between CBHI implementation and non CBHI Woredas with experience of your woreda in terms of utilization of services? If there is increase in patient flow, how successful have facilities been in coping with this demand surge? How about coping with further demand increase with the scale up? Please provide evidence.
12. How is the referral of the CBHI members being carried out? Any specific challenges given that they are likely to claim preferential treatment? Any specific measures introduced? Lessons learned for scaling up.
13. To what extent are health facilities providing quality health care services for CBHI schemes as well as other clients? How does your organization support facilities to make them respond to increased demand for quality care?

Management

14. The management of the schemes is heavily dependent on the scheme managers. How do you view CBHI management and staffing structure? Any successes and challenges

regarding retention and motivation of CBHI management team? What should scaling up woreda learn in this regard?

15. How and to what extent is the community involved in the management of CBHI scheme viz. CBHI design and administration? Discuss
16. How and to what extent is the community involved in the management of health service delivery in the district? Discuss
17. What is the role of the woreda administration in enrolment drive, allocation of resources and staff recruitment? What worked and what didn't? What are the innovative strategies in successful woredas that should be scaled up?

Financial Status

18. Overall, what is the financial status of the CBHIs?
19. If the surplus of the CBHIs is increasing over time, why is this so? Are the beneficiaries not utilizing services? Is the user fees paid too low? Or are the premiums higher? Can you explain this for us?
20. Have the Woreda health office invested any additional resources on health facilities (human resources, water and electricity, other equipment) to ensure that CBHI members get quality services? If yes, please describe the investments made
21. Can the health bureau/other woredas be able to do such investments in the scaling up woredas?
22. What was the role of the FMOH or regional health bureau in improving quality of care and CBHI scheme in the pilot woredas? Please describe the support you received from FMOH for the CBHI schemes?

Data to be collected from the Woreda Health offices from secondary Sources

1. Outpatient and inpatient visits

No	Item	CBHI members	Non-CBHI members	total
1	Total population of woreda			
2	Total outpatient visits in 2014 EFY			
3	Total inpatient visits in 2014 EFY			

2. **Financial support from the FMOH (in ETB)**

No	In type	For the woreda (Amount in ETB)
1	25% subsidy for the premiums	
2	Investment for health facilities	
3	Subsidy for the tertiary care	
4	Any other, specify	

1.2. Woreda Finance Office

INSTRUCTION TO THE INTERVIEWER

The purpose of this assessment is to gather data to evaluate the impact of pilot CBHI schemes from different perspectives including improving financial access, quality of health services, increasing resource mobilization and community participation.

If there are questions for which someone else is the most appropriate person to provide that Information, I would appreciate.

Any information you will provide as part of this interview will be held strictly confidential. Any reference to the information you provide in our analysis will be made without mentioning or implicating your name in any way.

Interviewee (Name and Title):
Phone no:
Region:
Zone:
Woreda:
Date:

General

1. Are you aware of the CBHI schemes that are piloted in your woreda?
2. Generally, can you talk about your WOFED's role in the implementation of the CBHI in the woreda and your relationship, if at all, with the scheme management?
3. What do you think are the major achievements (impacts) of CBHI scheme in the woreda?

Experience and Impact of the Schemes

4. What is the perceived or actual contribution of the CBHI on the following:
   a. Access to care?
   b. Quality of care?
   c. Equity?
   d. Affordability?

5. Given the experiences of the pilot woredas, what were the strength and weaknesses regarding the
    - Legal frameworks,
    - Directives, by-laws, manuals and guidelines,
    - Sensitizing the community
    - The structures and recruitment of staff
6. Looking at the operationalization of CBHI pilots, how successful have the schemes been in
    - Funding the indigent
    - Other design parameters (setting of premiums, benefit packages, premium payment frequency, enabling the schemes to cover all health related expenses through its income etc.)

      What were the strengths and weaknesses?
7. What are the major challenges and successes in the implementation of CBHI?

1.3. CBHI Management Team

INSTRUCTION TO THE INTERVIEWER

The purpose of this assessment is to gather data to evaluate the impact of pilot CBHI schemes from different perspectives including improving financial access, quality of health services, increasing resource mobilization and community participation.

This assessment will also provide recommendations for the scale-up of the pilot schemes at national level.

If there are questions for which someone else is the most appropriate person to provide that Information, It is appreciate. Any information you will provide as part of this interview will be held strictly confidential. Any reference to the information you provide in our analysis will be made without mentioning or implicating your name in any way.

Interviewee (Name and Title):

Region:

Zone:

Woreda:

Date:

Telephone No.

Tell us a little about your functions in the management of the CBHI scheme?

Enrollment

1. What is the status and progress of the woreda in enrolling its residents into CBHI? What are the successes and challenges?
2. What do you think are the major reasons for some people not to enroll into the scheme or failure to renew membership?
3. Does your scheme have partnership with microfinance institutions in your area? If so, how much of the CBHI contribution was mobilized through microfinance institutions?

Service Utilization and Reimbursement

4. How far CBHI members are using the health service in the contracted facilities? Do you think most of the members are using the services in the recommended (referral system) manner?
5. How often do you reimburse health facilities for services used by CBHI members? What are the mechanisms by which you check whether the invoices sent from the health facilities are right? Do you have adequate capacity to check on health facilities? Are there instances by which health facilities tried to overstate the reimbursement request amount?
6. Do you face a problem of unnecessary care seeking behavior by CBHI members and unnecessary or over prescription of services including drugs, diagnostics etc. by health care providers (client and provider moral hazard)? Discuss how such circumstances, if they exist, affect the financial viability of the scheme?

Service Quality and Patient Satisfaction

7. Are there mechanisms whereby you are able to check on the patient perceived quality of service in contracted health facilities

   i.e. waiting time, availability of staff, availability of services, drugs and supplies etc.?

   Discuss. If so, are these regular checks or in response to complaints from your members?

   Do your findings show any change in service quality? Cite examples
8. Is there any other organization that conducts quality check up on health facilities? Do you get feedback from such an organization?

9. How do you assess members' satisfaction about the services provided by the schemes and also health service providers? Do you have a standard client compliant management mechanism? Describe how, if at all, action is taken based on feedbacks? What are the major complaints forwarded by your members?

Financial Status of the Scheme

10. Who is assisting you in collecting the premiums? Have the kebele/administration and/or saving and credit association collect and bring the contribution on time? What are the main successes and challenges in the collection of premiums?
11. How healthy is the situation of the CBHI scheme in terms of its finances? Please describe the financial status of the scheme to us? Please give us evidence in the table below

Organizational Status

12. How successful has the CBHI scheme been in recruiting and retaining core staff? Discuss successes and challenges in this regard.
13. How frequently does the Board of Management meets? What are the average attendance ratios of Board members?
14. What is the support you are receiving from RHB, WorHO, woreda administration and regional office (training, supervision, administrative support etc.)? Are you satisfied? What needs to improve?
15. What is your overall assessment of the schemes? What do you recommend for the future in terms of organizational structure, staffing, and budgeting, key design issues etc?

Secondary Data to be collected from CBHI Management team:

1. **Status of enrolment**

No	Item	2014 EFY	2015 EFY
1	Total woreda population		
2	New Enrollment		
	Premium payment		
	Government subsidy		
3	Renewal of membership		
	Premium payment		
	Government subsidy		

4	Total members in the woreda		

2. Financial status of the Woreda CBHI Scheme

No	Item	2013 EFY	2014 EFY
1	Total income of the CBHI scheme (ETB)		
2	Total CBHI members		
2.1	Reimbursement for the cost of OPD visits in the health centers (ETB)		
2.2	Reimbursement for the cost of inpatient services in health centers (if any) (ETB)		
2.3	Reimbursement for the cost of hospital OPD services if any (ETB)		
2.4	Reimbursement of the cost of hospital inpatients services in hospitals (ETB		
2.5	Reimbursement for cost of services in private clinics and pharmacies (ETB)		
2.6	Administrative cost (ETB)		
2	Total cost of the scheme (ETB)		
3	Surplus/deficit of the scheme (ETB		

1.4Health Facilities-Hospitals and Health Centers

INSTRUCTION TO THE INTERVIEWER

The purpose of this assessment is to gather data to evaluate the impact of pilot CBHI schemes from different perspectives including improving financial access, quality of health services, increasing resource mobilization and community participation. This assessment will also provide recommendations for the scale-up of the pilot schemes at national level.

If there are questions for which someone else is the most appropriate person to provide that Information.

Any information you will provide as part of this interview will be held strictly confidential. Any reference to the information you provide in our analysis will be made without mentioning or implicating your name in any way.

Interviewee (Name and Title):
Region:
Zone:
Woreda:
City:
Name of health facility:
Ownership:
Date:
Telephone No.

Tell us a little about your health center or hospital (beds, services, area of service, population covered, number of staff, size and makeup of the facility governance body,)?

1. Are you a provider of health services to CBHI scheme members in the woreda?----
   If yes, in your opinion, what is the impact of the CBHI on utilization of services? ----------
   How about impact on quality of services? Give evidence ----------
2. How do you perceive CBHI in terms of creating additional demand for health care – do you perceive it as creating additional workload and pressure to the health facility or as creating an opportunity to strengthen the capacity of your facility?
3. What incentives and disincentives CBHI schemes created on the facility and your staff?
4. After the establishment of CBHIs, are there differences in members and non-members in claiming their rights-i.e. requesting for better service? Please elaborate.
5. The CBHIs have their benefit packages. Are you able to provide all the services listed in the benefit package (for your level) to members of the CBHIs? If not what are the major gaps?
6. What are the major complaints from CBHI members on the quality of your services?
7. What is payment modality you are using to get reimbursements from CBHI members (fee for service or capitation)? If there is a difference between the payment modes of CBHI schemes and Non-members? Which mode of payment is advantageous for the health facility and why?
8. How frequently do you request and collect reimbursement for the expenses you incurred for CBHI members? Do you face any challenge in the process?
9. What is the impact of CBHIs in increasing your retained fees?
10. What kind of support did you receive from RHB and WHO to improve quality of care because you are a CBHI provider?

Secondary Data to be collected at facility level

	CBHI members	Non CBHI members	Total for the facility
Total catchment population			
Outpatient visits for 2014 EFY			
Total referral made to a hospital or received from a health center in 2014 EFY			

Number of inpatients in 2014			
Total retained fee in ETB			

FOCUS GROUP DISCUSSION GUIDE

2.1 CBHI Members

INSTRUCTION TO THE INTERVIEWER

This document is meant to be used as a general guide for the CBHI Evaluation team members to conduct focused group discussions with members of CBHI. Facilitators of the FGD should start by explaining briefly the purpose of the discussion, the evaluation process and thank them for coming to the meeting.

Woreda: _____

FGD No: _____

Composition of f FGD Participants:

1. Number of males:---------

2. Number of Females:_____

3. Number of youth_____

4. Number of adults_____

Date: _____

1. How much do you pay for membership (registration +membership)? Is the amount affordable to you and your community? What about the payment scheduling?
2. What types of households joined CBHI schemes and why?
3. Indigent targeting - Some members of the CBHI get their contributions by the government as they are recognized as indigents.
   a. Were you involved in the identification of indigents?
   b. Do you think the selection process is transparent and fair?
   c. Are there some people who are not included and others inappropriately included in the targeted groups?
   d. What do you suggest to improve the process?
4. Since you become member of the schemes, what are the major benefits you got?
5. What is the community's perception regarding the benefit package of CBHI?
6. What is the community's perception about the quality of care received from CBHI contracted facility in terms of:
   b. Waiting time?
   c. Availability of staff?
   d. Attitude and motivation of staff?
   e. Availability of diagnostic facilities?
   f. Availability of essential medicines?

g. Cleanliness of the facilities?
h. The referral system?

7. Are health service providers serving CBHI members better than non-CBHI members or vice versa, and why?
8. What do you think should be done to enrol the non-members of your community into the CBHI in your community? What should be adjusted to keep current members including you as a member of the scheme?
9. Do you participate in the management of the scheme? If so, what is your role in this regard?

2.2: NON-CBHI Members

INSTRUCTION TO THE INTERVIEWER

This document is meant to be used as a general guide for the CBHI Evaluation team members to conduct focused group discussions with non-members of CBHI. Facilitators of the FGD should start by explaining briefly the purpose of the discussion, the evaluation process and thank them for coming to the meeting.

Woreda: _____

FGD No: _____

Name of FGD Participants:

1. Number of males:---------
2. Number of Females:_____
3. Number of youth_____
4. Number of adults_____

Date: _____

1. Are you aware of the existence of the CBHI Scheme in your woreda?
2. Were you requested to become a member of the CBHI scheme? How were you communicated?
3. Why did you decided not to join the CBHI scheme?
4. Do you know how much is paid by the CBHI members? What do you think about the affordability of the pre-payment scheme (registration fee and membership Fee)?
5. Do you think that members of the CBHI schemes in the community are benefiting? Please describe what you have seen and heard as their benefit? Do the benefits you heard make paying worth in your opinion?
6. Are health service providers serving CBHI members better than non-CBHI members or vice versa, and why?
7. What should be changed in the current CBHI scheme set up (payment levels, payment scheduling, benefit package, service availability etc.) to make you a member of a CBHI scheme?

2.3 Health Workers

INSTRUCTION TO THE INTERVIEWER

This document is meant to be used as a general guide for the CBHI Evaluation team members to conduct focused group discussions with the staff of the CBHI contracted

facility. Facilitators of the FGD should start by explaining briefly the purpose of the discussion, the evaluation process and thank them for coming to the meeting.

Woreda: _____

Facility Name_____

FGD No: _____

Name of FGD Participants:

1. Number of males:---------
2. Number of Females:_____
3. Number of youth_____
4. Number of adults_____

Date: _____

1. What do you think is the impact of CBHI in changing the health seeking behavior of its members? Compared to the non-CBHI members and also comparing the situation before the start of the CBHI pilot, is there a change in seeking care by members? Please discuss the changes (OPD visits, for exempted services like immunization and deliveries etc.)?
2. Was your facility ready to provide quality care to members of CBHI? What were its strengths and weaknesses in service delivery when CBHI started? What kind of support have you received from the federal and regional level to improve health facility? Was it adequate?
3. What is the change that CBHI has brought to your facility in terms of
   a. Increased financial mobilization from its members?
   b. Increased community participation in facility management?
4. What is the impact of CBHI on the health staff in term of:
   a. Increased workload?
   b. Disagreement and conflict with members of CBHI when they claim their rights?
5. Are there any efforts being made to motivate the health staff with any sort of incentives? If yes, please discuss
6. What do you think should be done to motivate and encourage staff as well ensuring the readiness of facilities when scaling up CBHI scheme to other woredas?