

Addis Ababa University
School of Graduate Studies
Department of Sociology

**Role of Community Based Health Insurance on Health Service provision and
Healthcare Seeking Behavior of Households in Rural Ethiopia: the Case of
Tehuledere District, South Wollo Zone**

By

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June, 2017

Addis Ababa, Ethiopia

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Healthcare Seeking Behavior of Households in Rural Ethiopia: the Case of
Tehuledere District, South Wollo Zone**

**A Thesis Submitted to the School of Graduate Studies of Addis Ababa
University in Partial Fulfillment of the Requirements for the Degree of Master
of Arts in Sociology**

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Declaration

I, Molla Yismaw Jembere, hereby declare that the thesis entitled: “*Role of Community Based Health Insurance on Health Service provision and Healthcare Seeking Behavior of Households in Rural Ethiopia: the Case of Tehuledere District, South Wollo Zone*”, submitted by me to award of the Degree of **Master of Arts in Sociology at Addis Ababa University**, is a product of my original work and it hasn't been presented for the award of any other Degree, Diploma, Fellowship of any other university or institution. This work has also accredited the views of the research participants. To the best of my knowledge, I have fully acknowledged the materials and pieces of information used in the study.

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Certification

This is to certify that this thesis entitled: “*Role of Community Based Health Insurance on Health Service provision and Healthcare Seeking Behavior of Households in Rural Ethiopia: the Case of Tehuledere District, South Wollo Zone*”, prepared by Molla Yismaw and submitted in partial fulfillment of the requirements for the award of degree of **Master of Arts in Sociology** complies with the regulation of the University and meets the accepted standards with respect to originality and quality.

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Acronyms and abbreviations

ANOVA	Analysis of Variances
CBHI	Community Based Health Insurance
CSA	[Ethiopian] Central Statistics Agency
E.C	Ethiopian Calendar
EDHS	Ethiopian Demographic and Health Surveys
EFY	Ethiopian Fiscal Year
EHIA	Ethiopia Health Insurance Agency
EIC	Ethiopian Insurance Corporation
ETB	Ethiopian Birr
Ethio-GIS	Ethiopian Geographic System
FGD	Focus Group Discussion
Fig	Figure
FMoH	[Ethiopian] Federal Ministry of Health
GDP	Growth Domestic Product
HBM	Health Belief Model
HSFR	Health Sector Financing Reform
HSHSTP	Health Sector Transformation Plan
IDI	In-depth Interview
KII	Key Informant Interview
LMIC	Low and Middle Income Countries
MOFED	[Ethiopian] Ministry of Finance and Economic Development
NGO	Non Government Organization
OOP	Out- of -Pocket
OOPS	out- of -Pocket Spending
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PFSA	Pharmacy Fund and Supply Agency
SDPRP	Sustainable Development and Poverty Reduction Program
SHI	Social Health Insurances
SNNPR	Southern Nations, Nationalities and Peoples Region
SPSS	Statistical Package for Social Science
SRS	Simple Random Sampling
TV	Television
UHC	Universal Health Coverage
UNDP	United Nation Development Program
US	United States
USAID	United States Agency for International Development
USD	United States Dollar
WHO	World Health Organization

Abstract

The issue of community based health insurance is an emerging and promising concept to access affordable and effective health care in low and middle income countries. Introduction of CBHI scheme aims to mobilize additional resources to the health sector. More importantly, substantially pooling risks between the poor and the better off as well as the sick and healthy that improve equity, quality and access in health service delivery. In addition, as a health insurance scheme removes or considerably reduce cash requirement at the point of getting services, members will be encouraged to seek service when it is needed which ultimately increase the demand for seeking care and utilization of the service. However, CBHI is limited in most developing countries and out of pocket health care expenditure still impoverishes households especially in rural and people in informal sector. So far, little has been done regarding the role of CBHI on health care seeking behavior, access and quality of services in developing countries in general and in Ethiopia in particular. Accordingly, the main objective of this study was to examine services provision of health care providers and health care seeking behavior of households in response to the introduction of CBHI scheme in rural Ethiopia: particularly in Tehuledere District, South Wollo Zone. To conduct this study, mixed research approach employed concurrently to gather data from 344 respondents (70% male and 30% female) for household survey and informants of IDIs, KIIs and FGDs. The quantitative data were analyzed using descriptive statistics such as table, percentage and graph on one hand, and inferential statistics like, T-Test, one way ANOVA and correlation on the other hand were used to verify the group difference and relationship across variables. Qualitative data were analyzed using thematic analysis. The sampling design of this study used both probability (multistage stage proportional sampling) and non-probability (purposive based on conveniences and judgmental sampling until saturation achieved). The study finding disclosed that in some parameters there were gaps in design and implementation of CBHI scheme. In addition, overall quality of service improved though there were limitations in some quality indicator. Health services utilization improved from 0.33 visits of individual per year in 2011 to 1.44 visits in 2016; more than four times from the previous visits. Majority of the respondents (93.3%) do have positive or favorable attitude towards CBHI scheme and its role in promoting health condition of the community. Furthermore, CBHI enable health care providers to prescribe the appropriate diagnostic test and drugs without any uncertainties about the ability of the CBHI member to pay. However, work load increases without increasing incentives; that resulted effect on moral hazards and mistreatment of members. This study has a significant role in filling research gaps, policy implication and sources of information within the limited literature on the issue at hand.

Key Words: CBHI Scheme, Rural, Household, Health care Seeking Behavior, mixed approach

Chapter One: Introduction

1.1. Background of the Study

Healthcare financing and access to affordable and effective healthcare is a major problem in low and middle income countries (LMIC) and out of pocket expenditure for healthcare ¹ become a major cause of impoverishment such as, poverty (Jacobs *et al.* 2008; WHO 2010). Since 1980s, most developing countries introduced user fees in order to improve availability of health care facilities to improve access and quality of services (Carrin *et al.* 2005; Parmar *et al.* 2012). Later in the 1990s, the financial difficulties associated with imposition of user fees brought drop out from seeking health care service which resulted poor health condition in LMIC (Tabor 2005).

According to Wagstaff (2009), out of pocket payments create financial barriers that prevent millions of people from seeking and receiving needed health service worldwide. Moreover, many of those who do seek health care and pay for health care services are faced with financial burden and poverty. People who suffer financial difficulties might forego health care services utilizations. Carrin *et al.* (2008) stated that lack of ability to access health services; exorbitant expenditure and impoverishment are strongly associated with the degree to which countries rely on out-of-pocket payments as a means of financing their health care systems.

Similar to the aforementioned claim, the state of health care financing in Ethiopia over the years has been characterized by low government spending and minimal participation of the private sector. Health care expenditure in Ethiopia represented 6.2% of the total public budget, and 1.8% of GDP in 2000 and only about 50% of the population has access to basic health services; and drug supplies are irregular in most of the available facilities (FMoH 2010; Wamai 2009).

Ethiopian health care system was largely reliant on out of pocket spending (OOPS), exposing many households to financial hardship due to very expensive health expenditures or causing them to give up seeking healthcare especially in rural Ethiopia (Anagaw 2015; FMoH 2010). According to FMoH (2010), poor health care financing in Ethiopia slowdown health

¹ ***Out of pocket expenditure (user fees) for healthcare services*** ¹: defined as direct payments made by individual to health service providers at the time of service use; that will not reimburse and share risk.

improvements on access, quality and utilization of essential health services among the poor and rural communities.

Healthcare financing in Ethiopia depend on government expenditure, donors and high out of pocket user fees. For example in 1999/2000 the government and other public enterprises provide 31% of the financing, donors and NGOs provide 37%, households provide 31% and other private employers and fund about 1% (FMoH 2005; MOFED 2008). A study conducted by FMoH (2010) found out that out of pocket expenditures of households increased from 31% in 1999/2000 to 37% in 2010 due to high reliance on out of pocket expenditure and low government spending on the health sector.

In responses to high out of expenditure, low utilization and quality of services, one way to facilitate access and overcome unaffordable expenditure is through a health insurance mechanism, whereby risks are shared and financial inputs pooled through cross subsidizations within people who sick frequently and unable to afford for health care, and people who are healthy but pay premium for CBHI scheme within households (Ahuja and Jutting 2009). Additionally, to deal with inequality in health care among households, there is widespread consensus that providing universal, sustainable, affordable and quality health services underpins efforts to achieve equitable health outcomes. Consequently, community based health insurance is one approach and alternative to finance healthcare provision in the informal sector to increase utilization of health services; rather than waiting for top-down tax-based financing or social health insurances (SHI) development, bottom-up or CBHI has been introduced to low-income countries over the past two decades for rural community and people who engaged in the informal sector (Carrin, Mathauer and Evans 2008).

In many developing countries efforts are underway to improve quality, access, efficiency and effectiveness of health care through reforming the way of health care financing (Tabor 2005). Correspondingly, the government of Ethiopia introduced two types of health insurance schemes in 2011. The first scheme know as social health insurance which is mandatory health insurance program for formal sector employees including pensioners and financed by earmarked payroll /pension contributions from employees and employers (FMoH 2008). Social health insurance is in the planning phase but not yet implemented. The second is community based health insurance

(CBHI) scheme with the aim of enhancing access to health care and reducing the burden of out of pocket healthcare expenditure for rural households and people engaged in the informal sectors intended to cover 83.6% of the population (FMoH 2010).

Accordingly, the pilot CBHI scheme² was tested in 13 Districts located in four regions (Tigray, Amhara, Oromiya, and SNNPR) of the country in 2011 aimed at improving access to health care services, reducing the burden of out of pocket expenditure, increasing quality of services to balance high demand of health care and low supply of medical services basically for rural households and people in urban informal sector (FMoH 2010; Anagaw 2015).

A study by FMoH (2011) stated that the designing of the Ethiopian CBHI scheme builds on the assumption of certain features(parameters) such as, membership for enrollment is done voluntary on a household basis; to reduce the possibility of adverse selection, financing the very poor (indigents), regular premium, targeted subsidy , benefit package, community involvement in management and administration of CBHI scheme and line of referral are considered main features in the designing of CBHI scheme. In the pilot districts, households who join the community-based health insurance are expected to pay 180 Birr (8.57 US\$) annually as a premium. Community based health insurance covers a wide variety of health insurance arrangements or benefit packages. The benefits packages of CBHI in Ethiopia include all curative and preventive care that are part of the essential health package in Ethiopia (FMoH 2008; FMoH 2010; FMoH 2011). Community based health insurances scheme brought a potential to achieve universal coverage of health services through risk pooling and protect rural household and informal sector population from costly health care expenditure (Jutting 2003). The scheme is new for many developing countries particularly for Ethiopia. So, an investigation about CBHI and its contribution in the health care system is imperative, as it changed households access for healthcare service, improve healthcare seeking behavior and quality of service provisions.

Consequently, this study examine health service provisions of frontline healthcare providers and healthcare seeking behavior of households in rural Ethiopia following the introduction of

² *Pilot Districts to implement CBHI scheme were Tehuledere, Fogera, South Achefer, Gimbichu, Kuyu, Deder, Limu Kosa, Yirgalem, Demboya, Damot Woyde, Kelete Awlaelo, Ahferom and Tahtay Adiyabo at national level(EHIA 2015).*

community based health insurances scheme; in viewing to draw lessons on the plan and implementation and benefit of community based health insurances scheme for rural households particularly on *Tehuledere* District in South *Wollo Zone*.

1.2. Statement of the problem

World Health Organization (WHO) has called for all health systems to move towards universal health coverage (UHC) to enhance access to adequate and affordable health care services for all since 2005 (WHO 2010). Over for a century, many high and middle income countries have achieved universal coverage by introducing different financing mechanisms for health care such as tax-based financing and/or social health insurance schemes. On the other hand, low income and middle income countries have made little progress in this aspect to cover people in the informal sector particularly poor and vulnerable families who often represent the majority of the population (WHO 2010; Wang 2012).

Over two billion people live in developing countries with health systems afflicted by inefficiency, inequitable access, inadequate funding and poor quality of health care services. These people account for 92% of global annual deaths from communicable diseases, 68% of deaths from non-communicable conditions, and 80% of deaths from injuries (Escobar, Griffin and Shaw 2010; WHO 2010).

What is more, in many developing countries, millions of people so far suffer because they cannot access affordable health care services or for the reason that paying for health care results in severe financial hardship or pushes them into deep poverty (Wolfe *et al.* 2014). A study by WHO(2010) stated that globally, about 150 million people face catastrophic health expenditures every year and 100 millions fall into poverty after paying for health care.

In Africa, population still rely mostly on out of pocket payments (accounting for 30%-85% of total health spending in the poorest countries), which are associated with a higher probability of incurring very expensive health expenditure and impoverishment. Health-related expenses remain the most important reason for households being pushed below the poverty line (WHO 2010). As a result of weaknesses in the health financing system, many of the world's 1.3 billion

people having very low incomes still lack access to effective and affordable health care services (WHO 2005).

Even through, health insurances has emerged both as way of augmenting financial recourses available for health care, and means of provision of services especially in developing countries (Hsiao 2001), in Africa, health insurance is relatively limited to few countries. Yet, community-based health insurance is practiced in few countries like Ghana, Rwanda, Senegal, Nigeria, Tanzania, South Africa, and Burkina Faso. Although, community based healthcare financing through schemes can be a very important tool in achieving financial protection, access, quality and utilization of healthcare services in most developing countries such as Ethiopia (WHO 2005; USAID 2011).

Even so, Ethiopia has recorded notable improvement over the past decade in a number of population health outcomes; for instance child mortality per 1,000 live births has fallen from 166 in 2000 to 88 in 2011 and maternal mortality rates have declined from 871 to 676 per 100,000 live births due to changes that have been accompanied by a rapid expansion of health-care infrastructure and facilities at all levels overall utilization rates remain low (FMoH 2010; CSA 2014^a). For example, according to the Ethiopian Demographic and Health Surveys(EDHS), outpatient health care utilization per capita per year has increased only marginally from 0.27 visits in 2000 to 0.3 visits in 2011. The low utilization rates are accompanied by a high reliance on out-of-pocket (OOP) spending (37%) to finance health care results poor health care service provisions in the country (CSA 2014^a).

For the fact that, access to modern health care and various other health indicators, Ethiopia ranks low even as compared to other low- income countries. One of the reasons for low achievements on healthcare services is the user fee charges (FMoH 2011). To resolve challenges related to access, quality and utilization of health services CBHI scheme becomes one approach for developing countries including Ethiopia (UNDP 2011; WHO 2010; Melaku , Shimeles and Berhane 2014).

There are various studies regarding the role of CBHI on access for health care, quality of care and change in healthcare seeking behavior. For example, a literature review study by Escobar *et al.* (2010) examines many studies from developing experiences and found out that seven of the

ten studies evaluate the link between health insurance and access and use; nine find a positive and significant impact of health insurance on access and change in health care seeking behavior. Additionally, a study conducted by Buchmueller and Kronick (2005) stated that majority of the studies (39 of 51) analyze the impact of health insurance on access, use and quality of health care services, and indicating that health insurance increases access, quality and use of health service.

Furthermore, there are also scant researches which underscored the factors that determine the health care seeking behavior of the rural poor dweller such as, a study conducted in rural Tanzania by Msuya, Jutting and Abay (2007) showed that majority (87%) health insurance member households did go to modern health care facilities as compared to only half (50%) of the non-members. Health care seeking decision of insured households had a significant difference in health care visit than non member (Jutting 2000).

In Ethiopian, Anagaw *et al.* (2015) stated that due to the limited capability of publicly financed health care in Ethiopia to provide adequate and affordable access to health care, community based health insurances has been proposed as a feasible alternative. In contrast to user fees, health insurance encompasses risk-sharing and is supposed to reduce unforeseeable or even unaffordable health care costs (in the case of illness) to calculable, regularly paid payment that enhances equity and universal converge of health care services. Another study on willingness to join community-based health insurance scheme by Melaku, Shimeles and Berhane (2014) examined that social, economic, cultural and awareness level were dominant factors that determine enrollment to CBHI scheme that result low health care utilization.

Additionally, a study on the impediments of health seeking behavior and health service utilization from healthcare institutions by Dereje and Getnet (2015) stated that factors such as, cultural practice, religious orientation, social and cultural closer, access, availability, distances from the health facility, household income and level of education were the main reasons that trigger health services utilization from modern healthcare facilities.

Moreover, a study on community based health insurance scheme in rural Ethiopia by Anagaw (2015) outlined a general evaluative assessment of the impact of CBHI in the whole country especially in piloted region point out the determinants of enrollments to the scheme, the impact of the scheme in general health services utilization and financial protection. The finding of this

study showed that low rates of health services utilization in Ethiopia are not linked to lack of awareness of the symptoms of the most common diseases or a low-perceived need for healthcare but are driven by healthcare costs. In addition, the study confirmed that CBHI scheme create access to health care services and 45 to 64 percent increase in the frequency of visits to public providers. However, quality of care and the differential treatment provided to the insured remain major concern.

Similarly, a study conducted by Ethiopian Health Insurance Agency (EHIA) (2015) stated that 72.3 percent of CBHI members visited health facilities and the likelihood of CBHI members visiting a health facility when feeling sick was 26.3 percentage points higher than that of non-members. Socio-economic determinants of community based health insurance by Hellina (2014) was conducted in Kilte Awelaelo District, Tigray Regional State and she argued that cultural, economic and social factors are pillars that determine membership of CBHI scheme and health care seeking behavior.

Furthermore, regarding health care seeking behavior, Fitsum, Challi and Belaineh (2007) conducted a study on health services utilization and associated factors in Jimma zone and found out that the utilization level was not adequate. Their finding revealed that sex, marital status, household income, socioeconomic status, presence of disabling health problem, presence of an illness episode, perceived transport cost, perceived treatment cost and distance to the nearest healthcare facility were found to be the major influential factors shaping healthcare utilization of the study participants.

Despite the existence of studies on CBHI and health care seeking behavior in Ethiopian context, none of them had an emphasis on the planning and implementation of CBHI scheme, quality of service and healthcare seeking behavior due to the introduction of community based health insurance in the rural households. In addition, attitude of insured households and perception of health care providers about CBHI scheme were not investigated so far. What is more, most studies conducted previously focused on the health care seeking behavior of a specific geographic community were not linked with the introduction of CBHI scheme (for example Dereje and Getnet 2015; Fitsum, Challi and Belaineh 2007). Other studies focused on the general

health care seeking behavior of rural Ethiopia irrespective of their socio-economic and cultural context (for example, Anagaw 2015; EHIA 2015).

Moreover, most researches on CBHI scheme and healthcare utilizations used literature review (example, Escobar *et al.* 2010). In addition, most researches employed quantitative method especially, from public health and clinical perspective. It is also important to note the absence of empirical works which shows the appropriateness between the plan and implementation of CBHI scheme, the linkage between CBHI with healthcare utilizations and quality of care, familiarity of the researcher about the study area motivated the investigator to study through systematically articulating the CBHI scheme and health care seeking behavior of the rural household in *Tehuledere* District in South *Wollo Zone* in Amhara regional state which is one of the 13 pilot Districts since 2011, and had not been studied previously.

1.3. Objectives of the Study

1.3.1. General Objective of the Study

The main objective of this study is to examine health service provisions of frontline healthcare providers and healthcare seeking behavior of households in rural Ethiopia; to draw lessons on the plan, implementation and benefit of community based health insurances scheme particularly on *Tehuledere* District in South *Wollo Zone*.

1.3.2. Specific objectives of the study

In line with the general objective, the following specific objectives were formulated. These are:-

- To study the consistency between the plan and implementation of scheme in the study area;
- To investigate quality of health care services in terms of overall quality, drug availability, waiting time, treatment of clients in relation to the introduction of community based health insurance in the study area;
- To examine the role of community based health insurance scheme on healthcare seeking behavior and health service utilizations of households;
- To examine the attitude of insured households and perception of frontline healthcare workers towards community based health insurance scheme in the study area.

1.4. Significance of the Study

Studying the design and implementation of CBHI, quality of service provisions, health care seeking behavior and services utilization, perception of health care providers and attitude of households about CBHI are major factors that determine accessibility, quality of health service provisions and healthcare utilization. This results in good or bad health condition of the individual in particular and the society in general especially in developing countries like, Ethiopia. Accordingly, studying CBHI and health care seeking behavior of households in *Tehuledere* District rural community serves the following purposes.

This study provides basic information about the design and implementations of the newly established healthcare financing in Ethiopia. Additionally, this study has a wide range of implications for enhancing affordable healthcare services, policy formulation, public health development, which eventually contributes improvements of the health status of the community.

Moreover, the outcome of the study adds some insights to the existing gap in literature on community based health insurances and healthcare seeking behavior of rural community in Ethiopia.

Finally, this study will also serve as a way in and be helpful in instigating new researchers and local development experts who will work on the issue of CBHI scheme and health care seeking behavior for further in-depth inquiry.

1.5. Concepts and measurements of key terms

1.5.1. Conceptual definition

Community based health insurances: a scheme characterized by community members to prepay for healthcare services formed based on solidarity and voluntary collective pooling of their resources to share the financial risks of health care services and entitle to own the scheme and control its management (Wiesmann and Jutting 2000).

Healthcare seeking behavior: is a process of successive decisions about visiting(utilizing) health care that tends to be influenced by factors such as knowledge, attitudes, demographic and

socio-economic profiles, socio-cultural constructs, family resources such as income, wealth and access to insurance (MacKian 2003).

Illness: A subjective state or condition of suffering as a result of disease, injuries or sickness (Cockerham 1995).

Household: is defined as a person or group of people related or adopted legally, who live together and share a common pot of food (Jutting 2003).

Head of household: is a person who provides actual support and maintenance to other members of the household (CSA 2014^b).

Insured Household: household who share the same membership in community based health insurance card or are dependents of the same principal member.

Noninsured household: household who are not member in community based health insurance scheme, and uses out of pocket health care payment.

Healthcare Institutions: health oriented organizations that established formally including health posts, health centers, clinics, pharmacy and hospitals working in the study area.

Frontline health care Provider: Professionally trained health practitioner providing health care services directly to clients.

Risk pooling: A means of resource sharing for health care through cross subsidizations for sick and poor, from healthy and wealthy.

Traditional Medicine: is the sum total of Indigenous knowledge, skills, and practices, based on the world views and experiences to different cultures, used in the prevention, diagnosis, maintenance or improvement of physical and/or mental illness.

Universal coverage: access to adequate health care for all at an affordable price (WHO 2005).

Health care Service Utilization (Visits): is the receiving of healthcare services from formal healthcare providers or use of drugs that is intended to respond to perceived illness and diseases or to improve an individual's health status including inpatient and outpatient services.

1.6. Delimitation of the Study

Although, issues related to CBHI scheme and healthcare seeking behavior in rural communities are multifaceted, this research delimited on understanding and describing about CBHI scheme plan and implementation, healthcare seeking behavior and health service utilizations of households, and quality of health care service provisions due to the introduction of CBHI scheme. In addition, perception of health care providers and attitude of households towards CBHI were examined.

1.7. Organization of the Thesis

Contents of this research paper organized into five chapters. The first chapter introduces the main theme of the inquiry along with its justification and pillar objectives such as, the background of the study, statement of the research problem, research objectives, delimitation and significance of the study. The second chapter presents literature on theories and concepts of CBHI, healthcare seeking behavior, health care utilizations, and empirical researches conducted on the issue under investigation about Ethiopian health care system. Additionally, this chapter includes description of models and frameworks that guided the study. The third chapter comprises the description of the study area and the methodology employed to conduct the study. The fourth chapter presents results of, analysis and interpretation. The final chapter provides discussions of the study, implications, and set conclusions.

Chapter Two: Review of Related Literature

2.1. Fundamental Assumptions of Community Based Health Insurance Scheme

An ideal CBHI model entails to community health care financing that prepay for healthcare services, formed on basis solidarity and voluntary collective pooling of resources to share the financial risks of health care services is based on two fundamental assumptions. First, governments of lower and middle income countries like Ethiopia do not have sufficient funds or tax revenue to adequately fund the healthcare expenses for the near poor, poor and poor of poor people(Wiesmann and Jutting 2000; Hsiao 2001; FMoH 2010).

The second assumptions is that poor and near poor including the ones in the unorganized informal sector spend a significant amount of money on health care to both public and private providers which often leads to high health care spending pushing especially, rural families to poverty line. As a result, CBHI being greatly recognized as one of the potential ways to extend the health care insurance to the rural community and low income informal sector segment of population that enable households to protect against significant healthcare expenditure due to extensive reliance upon out-of-pocket payment (Hsiao 2001; Carrin, Waelkens and Criel 2005).

Empirical study conducted by Liu and Hsiao (2003) stated that one of the principal advantages of using CBHI over out of pocket payment is that the use of the CBHI scheme separates time of payment for health care from the time of use of services, which is better suited to rural households due to their seasonal disparities of income and expenditures. Because, poor people lack the resources to pay for health care; they are less likely than the rich people to seek health care services or to become indebted or impoverished trying to pay for health care services.

2.2. Design of Community Based Health Insurances

Community based health care financing mechanisms designed in the way that play an increasingly important role in the health care system of many low and middle-income countries. It is an emerging and promising concept that has attracted the attention of policy makers as it addresses health care challenges faced by the poor especially, for rural household and people who engaged in the informal sector(Jutting 2003).

In contrast to the history of social health insurance in most developed countries which were first introduced for formal sector employees in urban areas, recently emerging health insurance schemes have taken the form of local initiatives, informal sector and rural community based health insurances with voluntary membership. They have either been initiated by health facilities; member- based organizations, local communities or cooperatives and can be owned and run by any of these organizations (Jutting 2003; Bennett, Creese and Monasch 1998).

There are several possible ways to classify the designing of these schemes, according to: kind of benefits provided, degree of risk pooling, circumstances of their creation, fund ownership and management and the distinction whether the schemes focus on coverage for high-cost low frequency events or on low-cost, high-frequency events(Jutting 2003). Similar characteristics of these schemes are: voluntary membership, nonprofit character, pre-payment of contribution into a fund and entitlement to specified benefits, important role of the community in the design and running of the scheme, institutional relationship to one or several health care providers. In some countries CBHI scheme mobilized without government or nongovernmental organization subsidizations through risk pooling of members but CBHI scheme similar to Ethiopia, is subsidized by both government and non government organizations (Tabor 2005, EHIA 2015).

In designing and implementing of community based health insurances traditional solidarity organizations are important due to its nature of voluntary membership. Social solidarity and social network enable the scheme to enhance the awareness of people towards CBHI and to integrate members from different socio-economic status for the purpose of risk pooling and sustainability of the scheme. However, for most people living in developing countries “health insurance” is unfamiliar and the gaps that arise in designing and implementation are challenges on the feasibility and sustainability of CBHI scheme.

In Africa, countries like Ghana, Senegal, Tanzania, South Africa, Nigeria and Rwanda are among the leading countries that designed CBHI health care financing as a national health program for people engages in informal sector and rural population (Jutting 2003). The following table shows different designing features of community based health insurances.

Table 2.1, Different designing features of CBHI scheme

Type of CBHI	Design features	Management features	Organizational and institutional features	Role of government and NGOs	Role of the community	Strong side of the scheme
Government run community-involved health insurance	Designed by governments as part of the health financing system , Often includes both primary care and hospitalization, Membership may voluntary or mandatory	Schemes are organized and managed through a top-down approach by central and local governments but the community may also be involved in decision making processes	Government are strongly involved in the design, implementation, and evaluation of the scheme.	Government and NGOs may subsidize the scheme and provide exemption from premium payment for lower income groups	Pay premiums Communities may be involved in design and administration of the schemes	The possibility of subsidized Premiums, large size of scheme and enhanced sustainability
Community Pre-payment Health organizations	Financed by contribution from members , small financial contribution mainly to cover primary health care services, membership is on a voluntary basis	Strong community involvement in decision making and supervision	The provider is not involved in the administration of the scheme , the schemes may sign contractual agreement with local providers to obtain preferential prices and insure quality of services	NGOs often provide technical assistance and provide start-up funds, governments provide legal recognition and encourage their establishment	Pay premiums, all round community involvement in design, implementation and supervision	Trust and feeling of ownership
Provider based health insurance schemes	Designed by local health care providers (hospitals) to encourage service utilization, often cover expensive inpatient care, ,membership is on a voluntary basis	Providers involved in scheme management	Providers administer the schemes and collect premiums from providers may obtain technical assistance from the government and NGOs.	NGOs and governments may improve the facility of the providers	Pay premiums, provide feedback on quality	Does not require management and technical skills from the community, scheme management and service provision are integrated

Source: Anagaw et.al. (2013); Ekman (2004); Bennett (2007) and Jutting (2003)

2.3. Community Based Health Insurances in Africa

Recently, some African countries have introduced health insurance in order to improve their citizens' access to health care, provide financial protection of the sick/poor, mobilize resources for quality of service improvement, and ultimately contribute to improved quality of health as a strategy for achieving Universal Health Coverage (Enemark 2014). In sub-Saharan Africa including Ethiopia, formal and well functioning health insurance schemes commonly exist for the very few who are employed in the formal sector. For the majority, health care is accessed through out-of-pocket user fees expenditure, which in many instances may lead to use of low standard health care services. However, recently, community based health insurance scheme is promising alternatives for a risk pooling health care system which hopefully also leads to better utilization of health care services, reduce illness related income shocks and eventually lead to a sustainable and fully functioning universal health care system (Jutting 2003; Abebe 2010).

For the aforementioned reason, community-based health insurance scheme has been incorporated into the health financing strategies of governments and communities in several Sub-Saharan African countries. In those countries, out-of-pocket or user fee expenditure at the time of care amount to approximately 40% of total health expenditures, imposing financial burdens and limiting access to health care in those countries. Likewise, in Ethiopia out of pocket expenditure of households account to 37% which is difficult for rural household to cover the expenses when someone experienced illness or injuries within the household (Mbengue 2011; FMOH 2010).

2.4. Health care financing in Ethiopia

The state of healthcare financing in Ethiopia has been characterized by low government spending and minimal participation of the private sector. Health care expenditure in Ethiopia represented 6.2% of the total public budget and 1.8% of GDP in 2000. The per capita expenditure of public health care spending was about \$1.5, which is much lower than the average of \$14 for sub-Saharan Africa. While this spending increased slightly about 2.7% in 1996 and to 5% during 2004/05. The health sector is unable to meet the growing needs of the population and removed severely under financed. Only about 50% of the population has access to basic health services, and drug supplies are irregular in most of the available facilities (World Bank 2010; FMOH 2010).

Formal health insurance coverage has been limited in Ethiopia. Before the introduction of community based health insurance government and state owned enterprises refund 50% of medical costs incurred by employees. The Ethiopian Insurance Corporation (EIC) was the only commercial establishment providing health insurance as an optional extension to its life insurance policy and it covers only about 0.02 percent of the population. In an earlier review of several African countries, Ethiopia was rated the lowest in terms of feasibility of health insurance because of low rates of government spending and limited health care facilities (FMoH 2011, Wamai 2009).

2.4.1. Ethiopian Community Based Health Insurance

Most developing countries similar to Ethiopia implemented CBHI scheme for the propose of universal coverage and equity of health care access focusing mainly on risk pool resource mobilization, equitable access that promote utilization of health care, and protects the very poor, the poor and near poor from expensive out of pocket expenditures. Since the late 1990s, CBHI scheme become alternative mechanism to address universal coverage mainly for informal sector population in developing countries (Jutting 2003; Ekman 2004; FMoH 2011; Anagaw 2015).

The low and falling health care utilization levels and health care seeking behavior, combined with rising poverty, a high burden of communicable diseases and the emerging chronic illness, poor health outcomes, and a decrease in international assistance raised awareness of the urgent need for increased health care financing in Ethiopia (CSA 2014). As of June 2011, as part of Ethiopian government health sector financing reform program, the Ethiopian Government launched a pilot CBHI scheme in 13 districts in the four main regions (Tigray, Amhara, Oromiya, and SNNPR) of the country in an attempt to increase access to health care and reduce household vulnerability to out-of-pocket health care expenditure (FMOH 2008; FMoH 2011).

2.4.2. Designing of Community Based Health Insurance in Ethiopia

According to EHIA (2015), the design was set with regional administrative bodies selected these districts based on directions provided by the Federal Ministry of Health (FMoH). The community element to the CBHI scheme is that villages (*Kebeles*) decide whether or not to join (based on a simple majority vote of 50+1), and are subsequently involved in management and

supervision. Once a *Kebele* agrees to join, household enrolment is voluntary. To reduce adverse selection, enrollment is at the household level rather than the individual. Benefit packages, registration fees, premiums, and premium payment methods are similar within regions but vary slightly across regions. On average, the combined premiums for core household members (parents and underage children) amount to about 1–1.4% of household monthly non medical expenditure (FMoH 2011).

The benefit package includes both outpatient and inpatient service utilization at public facilities and private facilities in bureaucratic referral system. Hence, enrolled households may not seek care in private facilities unless a particular service or drug is unavailable at a public facility. The scheme excludes treatment abroad, kidney dialysis and treatments with large cosmetic value such as artificial teeth and plastic surgery (EHIA 2015). The referral procedure requires members to visit health centers before they referred to hospitals (district or regional). Those who do not follow this referral procedure need to cover half the costs of their medical treatment (EHIA 2015; FMoH 2008).

2.4.3. Implementations of Community Based Health Insurance in Ethiopia

A survey on willingness to pay for community based health insurance among households in the rural community of Fogera District, North West Ethiopia stated that the willingness to join the scheme was 94.7% and the poor were willing to pay up to 5% of their monthly income; which is more promising than other countries experiences (Adane, Measho, Mezgebu 2014). In addition, a study conducted by Zelalem *et al.* (2015) on the impact of Ethiopia's Community Based Health Insurance on Household Economic Welfare, CBHI scheme uptake reached 41% in 2012 and 48 percent in 2013 in the pilot Districts, which is high compared to experiences in other African countries. For example, a research in North Central Nigeria rural community revealed that 87% of the respondents were willing to pay for CBHI, and the mean amount of money were \$3.26 USD per household per annual(Jutting 2001) . Study in Rural area of Cameron indicates that rural households on average were willing to pay \$2.5 per person per month. Average household heads were willing to pay US\$ 8.6 per year in Burkina Faso ((WHO 2005).

2.5. Impact of Community Based Health Insurances scheme

Community based health insurance scheme become as an alternative to user fees to improve access, equity, quality and utilization of health care services in low-income countries and has the potential to increase health care seeking behavior, increased quality of services, protect households from high expenses for health care services by distributing the costs of health care across all members. It is also a health care financing option that may help to extend health care coverage to rural communities and the informal sector (WHO 2010; Hsiao 2001; Tabor 2005; Jutting 2003; FMoH 2010).

2.5.1. The Impact of CBHI on Access to Health Care Services

Proponents argue that CBHI schemes can be effective for reaching a large number of poor and near poor people who would otherwise have no financial protection against the cost of illness especially, in countries where national insurance schemes do not exist and/or where public health care funding is insufficient (Wiesmann and Jutting 2000). Community Based health insurance scheme is for the most part meant for people in the informal sector, rural population and for people who are poor or near poor (Msuya, Jutting and Abay 2007).

According to Tabor (2005), health costs, if paid by selling assets, not only have the potential to reduce current assets, but also reduce farm productivity, nutrition intake, and future stream of income. To avoid these costs, households tend to delay or forgone appropriate treatment, exposing them to greater health risks. However, recently, the role of CBHI in improving access to the formal health care services in low and middle income countries has been significant by providing financial security from the cost of seeking health care services, involves prepayment for health services by community members(Hsiao 2001; WHO 2005). For example, a study conducted Ranson (2002) found out that CBHI schemes allow many people's resources to be pooled to cover the costs of unpredictable health-related dealings. In addition, due to the introduction of the CBHI scheme in the Democratic Republic of Congo, the hospital admission rate among the insured increased dramatically, reaching 1.57 visits per individual per year and being five times (0.31) higher than among the non-insured. In Rwanda alike, the hospital admission rate among members of the was about 1.5 and only 0.06% among non-members,

which means that the insured used hospital care 23 times more than the non-insured did (Musau 1999).

Moreover, Ranson (2002) stated that in risk-sharing schemes, the insurance premium is unrelated to the likelihood that all the insured will fall ill and benefits are provided on the basis of need; hence, payments go to the people who are most ill because people with lower incomes and those who are less educated tend to be in poorer health condition than those with higher incomes and those who are more educated. In cross-subsidization schemes, premiums are indexed to the member's income, and access to health care for the poor is as good as (or better) than that for the wealthy. In such schemes, wealthy members subsidize health care costs for poorer members. The study conducted by (Oberlander 2013) in Burkina Faso argues that in the absence of private health insurance and statutory health insurance CBHI schemes have mushroomed in low and middle income countries. Typically, CBHI schemes target low-income segments of the population that otherwise needed to rely on informal insurance mechanisms.

Despite the aforementioned claim, CBHI schemes sometimes become unsuccessful to address the very low enrollment rates and lack of risk pooling for the people in the informal sector due to challenges for CBHI's scheme to strike a good balance between serving the poor and near poor, and carry on the financial sustainability due to low risk pooling and very moderate pre-payment for the scheme (Acharaya and Ranson 2005). In support of the above statement, for example, FMOH (2008) stated that due to the high level of poverty in Ethiopia expansion of health insurance could face serious challenge as the premium could be beyond the ability of the majority of the rural and urban poor.

However, wide-ranging empirical studies argued that CBHI scheme become an emerging concept for providing financial protection against the cost of illness and improving access to health services for low-income rural households and people in the informal sector who are excluded from formal insurance (Jutting 2003; Carrin *et al.* 2005).

2.5.2. The Impact of CBHI scheme on Quality of Health Care Services

Health insurance can increase health care seeking behavior by reducing the cost of care following a health problem. More importantly, exemption of payment at the time of services,

results effective treatment hence, households are able to seek quality health care without delay. Community based health insurance may increase care following a major health risk and it also increase routine and preventive health care (Jutting 2003).

Utilizations of health facilities will probably increase due to free accesses of health care at the time of services which brought a desirable effect on utilization of health care services in developing countries (Carrin, Mathauer and Evans 2008). However, under the supposition that there is high net income generation in spite of higher utilization rates, the hospitals or health facilities will make use of the financial means to improve quality of health care. For example, by increasing drug availability and purchasing more necessary medical equipment. Better quality of care will increase the expectations of people to get value for money in the case of illness and will again enhance demand for insurance. Therefore at least part of these pooled resources could be used up for expanding access and providing quality services (Jutting 2003; EHIA 2015).

More demand for insurance and accordingly increased membership could drive down the administrative cost of insurance provision per member, and risk pooling is enhanced as more people participate consequently, risks become more calculable (Jutting 2003). A study conducted by Jutting (2003) stated that public funding to subsidize premiums for the poor; promoting increased revenue collection from the “healthy and wealthy” so as to enhance cross-subsidization and risk pooling; improved CBHI management; and improved purchasing to enhance quality of care. Moreover, a study by FMoH(2008, pp 9) stated that;

The existence of high out-of-pocket expenditure on health care is an indication of capacity and willingness of households to pay for health service, which is a necessary precondition for the establishment of health insurance and patients are willing to pay up to double if quality of health service (reduced waiting time and improved availability of drugs, etc) is improved.

Community based health insurance enables to separate purchasers of services from providers. In most developing countries including Ethiopia, these roles are carried out by Ministries of Health either partially or substantially. However, mixing of these roles means that the process will be less effective, with issues such as lack of controls, excessive costs, loss of quality in health services, lack of accountability and patient and provider dissatisfaction(FMoH 2008).

2.6. Understanding Health Care Seeking Behavior

According to MacKian (2003), Health promotion programmes worldwide have long been premised on the idea that providing access for health care, affordability of health care services will go a long way towards promoting a change in individual behavior towards more beneficial health care seeking behavior.

Scholars have been interested in what make possible the use of health care services, and what influences people to behave differently in relation to their health condition. There have been different studies addressing particular aspects of this debate, carried out in different countries. For example, various studies confirmed that CBHI scheme is designed for risk pooling, financial protection especially for the poor, improved quality of services, universal coverage and access that facilitates health care seeking behavior of individuals and households to utilize modern health care services for the betterment of good health within the population.

More importantly, classifications of health seeking behavior and understanding fundamental assumption are important. For example, Tipping and Seggal (1995) classification of health seeking behavior approaches was assumed in conducting this research. Firstly, there are studies which emphasize the ‘end point’ (utilization of the formal system, or health care seeking behavior); secondly, there are those which emphasize the ‘process’ (illness response, or health seeking behavior) that drawing out the factors which enable or prevent people from making ‘healthy choices’, in either their lifestyle behaviours or their use of medical care and treatment (Ahmed, *et al.* 2000). These studies demonstrate that the decision to engage with a particular medical channel is influenced by a variety of socio-economic variables, sex, age, income, the type of illness, access to services and perceived quality of the service, wealth and health insurances (MacKian 2003).

This study focused on health care seeking behavior and services provision due to the introductions of CBHI scheme. Sequence of remedial actions (health care seeking behavior) that individuals within insured households undertake to perceive ill health and utilization of services (visits of formal health facilities) examined. Furthermore, the time span from symptom onset to contacting a healthcare provider, the type of healthcare provider chosen by the household, and the patient’s compliance for treatment included in this thesis.

2.6.1. Impact of CBHI Scheme on the Health Care Seeking Behavior of Households

Besides providing financial protection from the economic consequences of illness, health insurance is meant to improve equitable and affordable access, and reduces the cost of health care and thereby, promotes health care seeking behavior (Chen *et al.* 2007; Hsiao 2001). Chen *et al.* (2007) stated that it is precisely the most vulnerable (low income and rural) population groups who benefit most from CBHI scheme; by removing their financial barrier at the time of illness.

On the contrary, the use of alternative medical care like, self-medication and traditional healers was considered to be less reliable compared to the health care that was provided by the formal health facilities (health posts, health centers, or hospitals) for those CBHI scheme members than non members (Msuya *et al.* 2007). The study conducted by Msuya *et al.* (2007) confirmed that smaller proportions of individuals from CBHI members (4.0%) did go for alternative medical care compared to the non-members (27.9%). The difference is much higher for the poorest households. Nearly 37% of sick individuals in poor and non-members households seek alternative or traditional medical care. Additionally, Msuya *et al.* (2007) asserted that nearly 55% of non-member households relied on their own savings to finance their drug expenses compared to less than 11% for member households. More than 20% of non-member households were obliged to cover the health expenses for sick individuals by selling crops, while this downs to less than 10% for member households.

Correspondingly, in Ethiopian, an evaluation study conducted by EHIA (2015) stated that before the introduction of CBHI scheme per capital utilization of modern health care services was 0.3 visits per year. While after the introduction of CBHI over all utilization increase to 0.7 visits for CBHI members; 72.3 percent of CBHI members visited health facilities and the likelihood of CBHI members visiting a health facility when feeling sick was 26.3 percentage points higher than that of non-members.

2.7. Limitation and Constraints of Community Based Health Insurances

Community based health insurance scheme has been limited to attract and integrate large number of people that are intended to pool the risk of sharing health care expenses due to low utilization rate in some countries. For example, a study conducted in China by Liu and Hsiao (2003), look

into reasons for such low enrollment rates and found out that there is low demand despite great expectation for people to join such schemes due to voluntary involvement of membership. Furthermore, Allegri, Sanon and Sauerborn (2006) stated that lack of trust and level of awareness of the enrollee are reasons that keep them away from enrolling in CBHI schemes.

Research conducted by Sinha *et al.* (2006), in India indicates that CBHI scheme are more successful in providing health insurance to poor and rural people and attract more people because people have higher trust in such schemes. Yet, even though the demand is created, it is not indispensable that people enroll for CBHI schemes. The main reasons in the past malfunction of CBHI schemes have been managerial problems like poor design, mismanagement and misuse of the resources, lack of supervision mechanisms, low community involvement in management and administration of the scheme and corruption (Bhat and Rand 2006).

Another challenge is to address the issue of self selection of poor health status individuals to CBHI scheme (typically, the inclusion of people with chronic illness, and people who have limited potential to pay the premium) that results adverse effect on the sustainability of the scheme.

Moreover, a study in Burkina Faso stated that factors that affected membership of people to CBHI were: unaffordability, long distances to health care center, poor quality of health services like long waiting times and discrepancy in treatment depending on socio economic status of members, lack of health care seeking behavior due to poor quality of health care services and cultural beliefs and practices (Allegri, Sanon and Sauerborn 2006). In addition, Jutting (2003) also indicated that lack of adequate knowledge and past appalling experiences with such CBHI schemes are main reasons that prevented people's membership in such scheme.

Moreover, another fundamental challenge for such schemes is to have adequate and clear communication and information flow between people who are managing the schemes and the beneficiaries. Adequate communication has been described as a sufficient condition for poor members to enjoy greater share of scheme benefits (Liu and Hsiao 2003).

According to Jutting (2003), moral hazard problem become the main challenge in CBHI scheme which arises because of the tendency of individuals within the insured household to behave, in

such a way that raise the likelihood or size of the risk which results negative implication on financial sustainability of a scheme. The moral hazard problem is of two kinds: ex ante moral hazard and ex post moral hazard problem. The ex ante moral hazard problem arises due to reduced positive health behavior or preventive measures of health after joining a scheme. The ex post moral hazard problem arises due to over-utilization of medical services and the need to get expensive medical services even for minor health problems(Ahuja and Jutting 2003). The study conducted by Jutting (2003) also supported that adverse selection (typically the engagement of frequent ill individuals to CBHI scheme) and moral hazard problems generally observed in health insurance are common in existing CBHI schemes as well. Moreover, according to Musau (1999), the degree of community participation in the design and running of the CBHI can vary widely and is usually greater if the schemes are owned and managed by the members themselves than if schemes are run by health facilities.

2.8. Conceptual and Theoretical Framework of the Study

To establish the theoretical foundation for empirical research, this section presents reviews of most common theoretical literature related to community based health insurances and health care seeking behavior frameworks for identifying gaps and guiding principles. Accordingly, this study employed two theoretical models: first, the socio-behavioral model of health care utilization employed to examine health care seeking behavior and health care services utilization, second, health belief model used to investigate individual's perception of illness and actions to treat and prevent disease.

2. 8.1. Andersen's Socio-Behavioral Model of Health Service Utilization

The most common framework used to understand access to health care, health care seeking behavior and health care utilization is the behavioral model of health services use, also known as the socio-behavioral model of the Andersen model that developed in the 1968 by Ronald Andersen (Andersen and Newman 2005). According to Andersen (1995), socio-behavioral model considers an individual's use of health care services to be a function of three types of factors: First, predisposing factors represent the tendency to utilize health care services where an individual is more or less likely to use health care services based on demographics, position within the social structure, and values and beliefs of health services benefits. An individual who

believes health care services are useful for treatment will likely utilize those services. Second, are the enabling factors, which include resources that found within the households and within the community; health insurances is one among enabling factors that affect utilization of services . Family resources comprise economic status and the location of residence and community resources incorporate access to health care facilities and the availability of persons for financial support. Third, need-based factors, which include the perception of need for healthcare services, whether individual, social, or clinically evaluated perceptions of need. For example, need for treatment for acute and chronic illness.

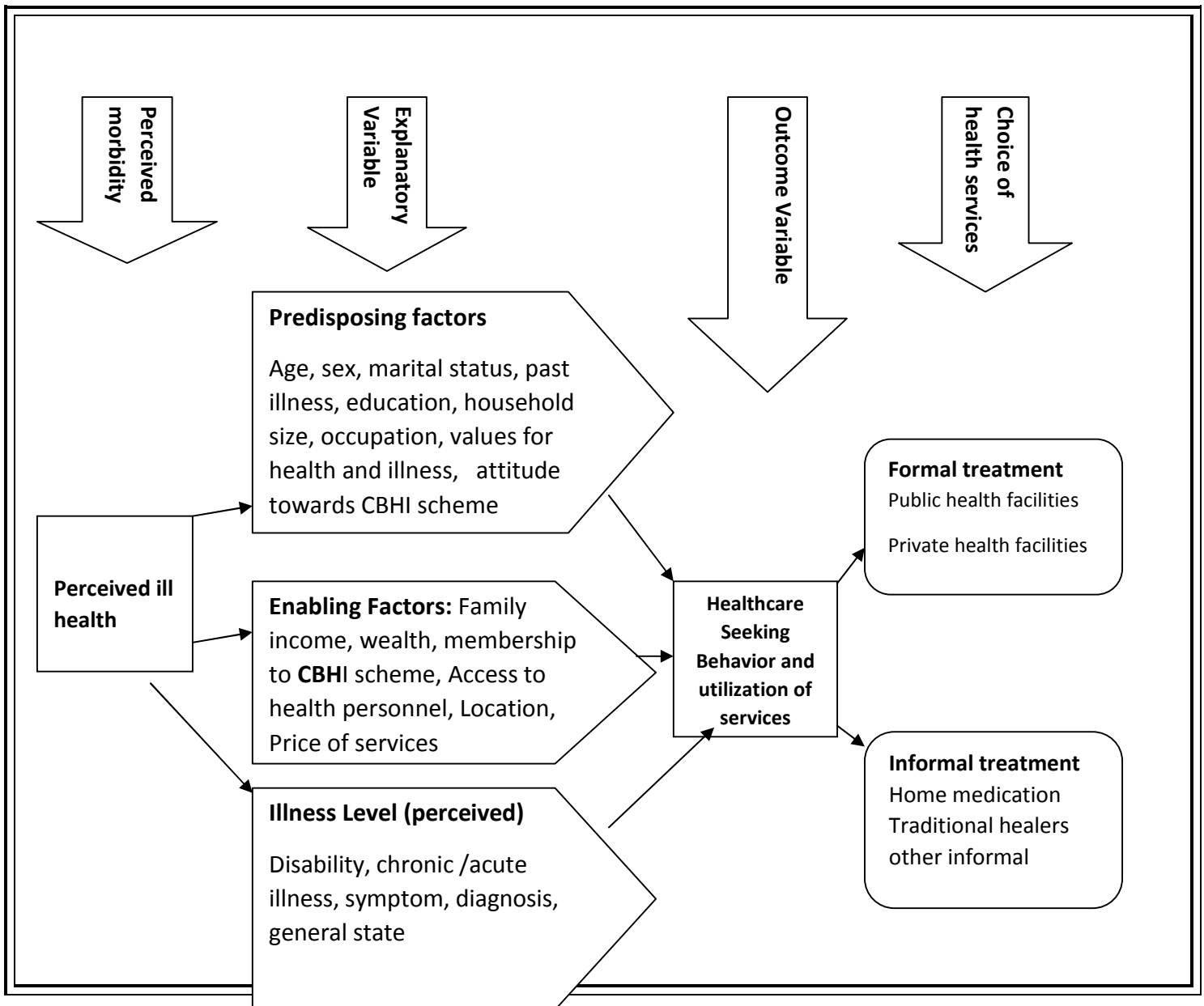
According to Andersen and Newman (2005), over the years, Andersen's socio-behavioral model has been adapted and expanded in the way that distinguish between measures of potential access for example, whether or not a person has a usual access of care, and measures of realized access such as use of services and patient satisfaction, quality of services . In addition, it has been revised to include environmental factors, health behavior, health outcomes, equity, efficiency, effectiveness, and health and well-being.

Community based health insurances is the main enabling factors which brings a potential of risk pooling through community resources mobilization for health care financing which in turn results better health care utilization of individual in particular and households in general.

According to Andersen and Newman Behavior Model, the enabling factor CBHI scheme is a variable that determine health care seeking behavior, quality of health care services, health care and households' attitude to the scheme. Similarly, enabling factors such as, economic status; measured by household income level, membership to CBHI scheme and distances from health facilities were assumed in the analysis. For the need factors, self reported presence of illness condition was used as the indicator for healthcare serves needs. Self reported utilization of health facilities (**visits**³) had been used as an indicator for measuring health services utilization and the process before utilization was conceptualized as health care seeking behavior.

³ **Visit:** *The ideal measure of health care service utilization is number of physician visit in one year. But, this measure does not work in the rural communities' duet to absences of physicians in health centers. Consequently, the number of visits to healthcare facilities was considered as substitute measure of health service utilization.*

Fig: 2.1, Healthcare seeking behavior based on Anderson and Newman Model of Health Care Utilization (2005)



2.8.2. Health Belief Model (HBM)

HBM is the first theory that was developed exclusively to explain health-related behaviors. As one of the oldest and the most widely used theories of health behavior (Glanz and Lewis 2002), it is regarded as the origin of systematic and theory-based research in health behavior. HBM was developed as a systematic method to identify, explain, and predict preventive health behavior.

According to Rosenstock (1966), the original goal of the developers of the HBM was to focus the effort of researchers who aim to improve public health by understanding why people do not take preventive measures to health promotion. The HBM postulates that an individual's likelihood of engaging in a health-related behavior is determined by his/her perception of the four variables: Perceived Susceptibility, an individual will seek preventive health services if he or she believes they are vulnerable to disease; perceived Severity, if a person does not perceive the illness as serious, he/she will not seek treatment or prevention; perceived benefit, the individual's rational perception of benefits versus costs, an individual will not take action unless the treatment or prevention is perceived as having greater benefits than costs; and perceived barrier, the individual's cues to action including media, friends, family, or well known citizens can provide an impetus for prevention. The absence of cues to action will reduce the likelihood of prevention. Thus, the individual's choice to utilize health services is contextually dependent (Wolinsky 1988).

Each of these variables, individually or in combination, has been used to explain health behavior. These four variables have been broadly categorized into two main aspects of individuals' representations of health and health behaviors: Perceived Threat and Behavioral Evaluation (Abraham and Sheeran 2005). Generally, health belief models deal with the idea of decision making through perceptions and evaluations (Prosser 2007).

2.8.3. Synthesizing Socio-Behavioral Model of Health Service Utilization and Health belief model

Healthcare seeking behavior is complex and no one-single method may be used to explain or establish the pattern during the process of seeking care and utilizing services. Healthcare seeking behavior is a reflection of the prevailing conditions, which interact synergistically to produce a pattern or process of care seeking since the occurrences of illness or injuries within broader socio-cultural and economic context. Understanding healthcare seeking behavior from different perspective through different models is essential. In this paper, socio-behavioral model of health care utilization and health belief model were considered most relevant. Accordingly, these models have theorized that predisposing factors, consisting of socio-demographic variables combined with attitudes and beliefs interact with enabling factors mainly of economic variables,

membership to community based health insurance, and distances from health care facilities to produce the conditions under which a person is or is not likely to seek healthcare services when need factors such as symptoms of illness experienced. Different statistical techniques such as t-Test, one way ANOVA, chi square, correlation and regression, employed among others to arrive at the general finding to examine difference differences of health care utilization among different groups(categories), relationship between the dependant variable(health care utilization) and different predicting variables to examine and foresee utilization behavior. In general, results from these studies showed that most component of the model correlated with households use of healthcare services, but the need factor was more important than enabling and predisposing components and the enabling factor was most important while the need component was least important (Enabling > Predisposing > Need).

Healthcare service utilization model was supplemented by health belief model. The reason for including this model was to provide a leverage to establish the existence of a dichotomy between before and after introduction of CBHI health services utilization behavior and to examine healthcare seeking behavior in relation to perceived suitability, cost of treatment, severity and access for information about health care seeking behavior. Health insurances is a means of coping strategy for perceived illness, people will become a member of CBHI scheme if he or she believes they are susceptible to disease and individual's perception of illness severity or people with chronic illness joins CBHI scheme to access health care. If a household does not perceive the illness as serious, they do not seek treatment or prevention and they have less possibility to become member of CBHI since individuals rationalize the cost of premium payment for the scheme and their health care visits or utilization episode. Additionally, access to health information and members' level of education provided impetus for prevention and health care utilization. The absence of cues to action will reduce the likelihood of prevention and services utilization even though an individual is member of CBHI scheme. On the other hand, the absences of cost at the time of services increase health service utilization from modern health care facilities.

Chapter Three: Research Methodology

The method section of the study includes description of the study area and justification of study site selection, the research approaches, study design, methods and instruments of data collection, sampling design, sources of data and procedures of data collection, methodological triangulation, method of data analysis, data quality assurances, limitation of the study, experiences learned, and ethical considerations had been incorporated and presented as follows:

3.1. Description of the Study Area and Justification of Study Site Selection

3.1.1. Description of the Study Area

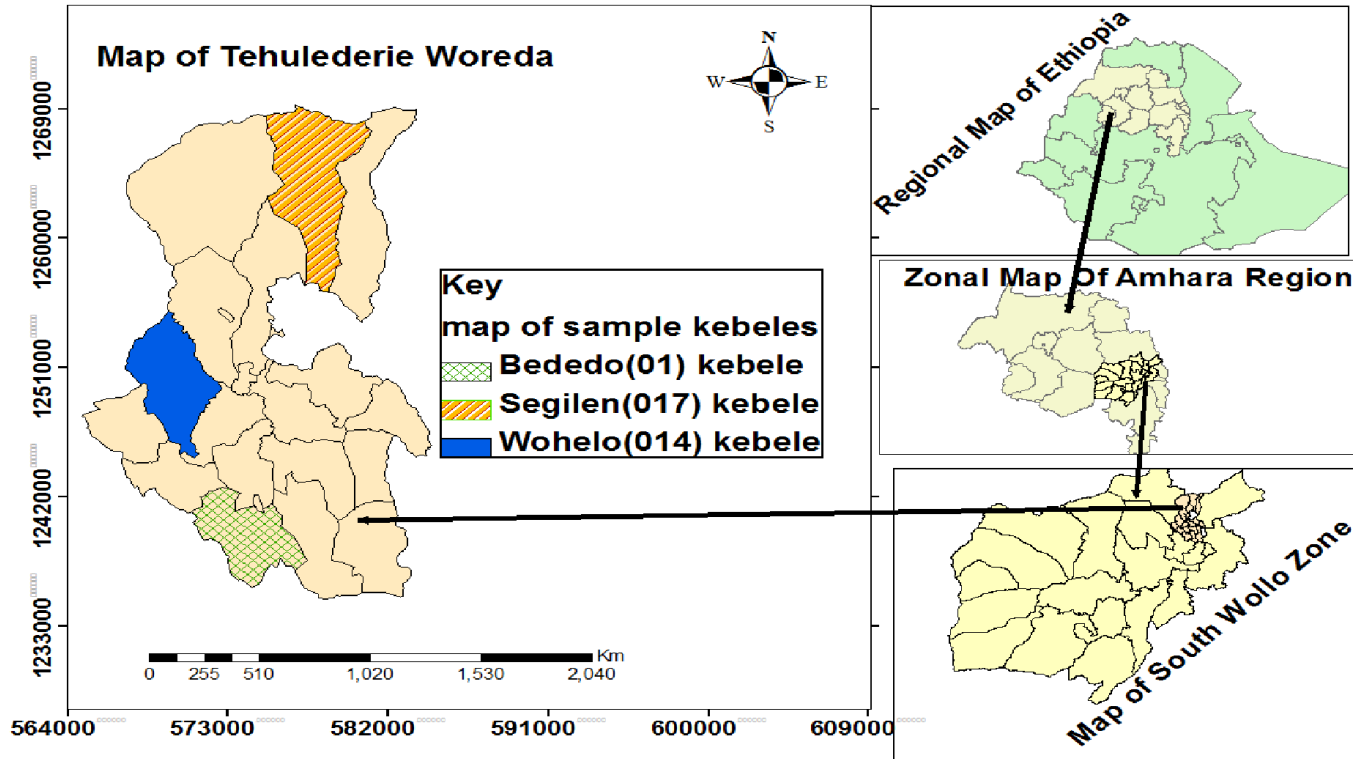
Tehuledere is one of the twenty two Districts in South *Wollo* Administrative Zone of Amhara National Regional State. *Haik* town is the administrative town of *the District* which is located 30 kilometers from Dessie (the Zone's capital), 445 kilometers from Bahir Dar (capital of Amhara Region) and 430 kilometers from Addis Ababa on the main road to Woldiya and Mekele (*Tehuledere* District Administrative Office 2017). It shares immediate borders in the North with *Ambassel* District, in the South with *Dessie Zuria* District, in the East with *Worebabo* District and in the west with *Kutaber* and *Ambassel* Districts.

Tehuledere District is one of the most populous areas in Amhara Region with a population of 110,226 among this, 59,238(53.74%) are males and the remaining 50,988(46.26%) are females. Majority of the population 107, 055(97.12%) are rural population and only 3,171(2.88%) are urban population (*Tehuledere* District Administrative Office 2017). According to the District CBHI scheme office there are an estimated 20, 070 households in the District among this, 14, 703 households are covered by community based health insurances scheme in 2017 (*Tehuledere* District CBHI scheme Office 2016/2017).

According to *Tehuledere* District Agricultural Office 2017, the District has a total area of 44010 hectares and subdivided into a total of 26 *kebeles* among which 21 are rural and 5 are urban *kebele* administrative. Altitude of the District ranges from 1480-2900 meters above sea level and the District has three ecological zones of “*Dega*” (13%), “*Weina Dega*” (72%), and “*Kolla*” (15%). The topography of the land in the *Woreda* is mountainous (26.4%), plain (13.3%), valley (12.3%) and the remaining 40% moderate, among which 8% cover by water of two lakes (*Ardibo* and *Logo* which are

source fish product). Annual temperature ranges 9-26 degree centigrade and average annual rainfall recorded as 1030 milliliters.

Fig.3.1: Map of the study area



Source: Ethiopian Mapping Agency (Ethio-GIS-1)

With regard to economic activities in the District, there are many income generating activities undertaken by individuals. These include farm, non-farm and informal sector income generating activities. Farming is the major livelihood strategy; mainly crop production followed by animal husbandry. Nonfarm income generating activities, includes income gained outside of farming in which individuals may or may not pay tax which depends on the type of business they run and the amount of capital they have had in running their business (*Tehuledere* District Administrative Office 2017). The third income generating activity includes informal sectors, activities do not pay tax, which makes it different from nonfarm income generating activities.

Infrastructural facilities such as road and transportation are among the most important aspects for better access for healthcare service. For instance, transportation facility and good road access

shortens distance from home to health facility and promote utilization of healthcare service. More than half population in the district is unable to read and write (*Tehuledere* District Administrative Office 2017). With regard to health facilities *Tehuledere* District has 26 health posts (one for each *kebele*) and five health centers (*Haik* health center, *Sulula* health center, *Hara* health center, *Segilen* health center and *Kosro* health center). However, there is no hospital in the District; patients should go to *Dessie* or *Boru Meda* hospitals to get referral services.

3.1.2.. Justification for Study Site Selection

Tehuledere District, was selected due to the fact that following the introduction of new health insurance strategy in 2010/11 in Ethiopia , the District was one of 13 pilot Districts where the community based health insurances schemes initiated at the national level . According to USAID (2011), the average enrollment rate for *Tehuledere* District reaching 91% which is significantly higher acceptances rate of CBHI than the national average (52.4%) of the eligible households nationally. Moreover, familiarity of the researcher about the study area is also another motivation. Those rationales enabled the researcher to address the intended objective and grasp detailed information about the gap in design and implementation of CBHI scheme, access of health care services, and quality of health care services, healthcare seeking behavior and utilization of services among the insured households. Furthermore, attitude of households and perceptions of frontline health care workers about CBHI scheme were investigated.

3.2. Study Design

Mainly, cross-sectional study design employed to gather factual data from 344 head of household respondents and purposively selected informants. Additionally, due to the nature of this study and relevant data in past; this design was supplemented with approximation of longitudinal survey to collect relevant data concerning the community based health insurances, healthcare serves utilization and illness frequencies or episodes of participants in the past through retrospective questions and institutional documents (Creswell 2003; Babbie 2008; Henn, Weinstein and Foard 2006). According to Abramson (1985), a cross-sectional study design enables the researcher to collect data relates to a single specified time and also includes some historical information.

3.3. Research Approach: Quantitative and Qualitative

This study employed mixed research approach; it included both qualitative and quantitative approaches. Mixed approach encompasses both quantitative and qualitative data helps to comprehensively understand a research problem and address the issue under study in holistic perspective (Creswell 2013; Ridenour and Newman 2008). Converging concurrent methodological triangulation employed which enable the researcher to triangulate numerical trends, illness episodes and statistical data from quantitative and detailed information from qualitative research approach. Triangulation method makes possible to obtain statistical, quantitative data from a representative sample survey, and individuals with CBHI scheme members and health care providers to probe or explore more deep information from qualitative data.

Mixed approach reconcile between the limitations with the representativeness from qualitative approach and reductionist nature of the quantitative approach (Chambers 2001). Household survey had been administered to gather quantitative data on access, health care seeking behavior and utilization of health care services. Additionally attitude of insured households towards CBHI was collected through Likert scale. On the other hand, an in-depth-interview, key informant interview and FGD were used to collect qualitative data that supplemented quantitative data on the issue under study.

3.4. Method and Instrument of Data Collection for Quantitative Data

3.4. 1. Household Survey

In order to give each respondent within the population an equal and/ or measurable chance, simple random sampling (SRS) was considered relevant (list of head of the households was available) to collect quantitative data from representative sample using semi-structured questionnaire that comprises close ended questions supplemented with open-ended questions to extract post-coded data based on the pattern of response (Miller and Brewer 2003; Bernard 2006).

The survey of sampled head of households intended to examine health care seeking behavior, quality of service provisions and their attitude towards CBHI scheme. Multistage stratified

sampling technique was employed to represent the diverse agro-ecology in the District. An updated list of CBHI member households was used as a sample frame for selecting sample head of households for the study.

3.4.2. Study Population and Sampling Design for Household survey

A multistage proportional stratified random sampling technique employed to select participant head of households in accordance to a subgroup's proportion in the overall population and simple random sample was drawn within each subgroup. *Kebeles/tabias* (the lowest administrative unit in Ethiopia) were the primary sampling units were. Twenty one rural *kebeles* in the District (urban *kebeles* were not included do to the fact that mostly CBHI currently practiced in rural areas since 2011) were stratified in to three different agro-ecological zones to capture difference in illness episode, health risk factors and healthcare seeking behavior. The following table describes the sample size determination for household survey.

Ecological Zone	<i>Kola</i>	<i>Woyina Dega</i>	<i>Dega</i>	Remark
Tehuledere District	21 Rural Kebeles			
No. of <i>Kebeles</i>	4	14	3	Stratified in agro-ecological zones (data from District Agricultural office)
Selected <i>Kebele</i>	017(Segilen)	014(Wohelo)	01(Bededo)	Lottery method
Total insured paying households	887	749	835	List from CBHI scheme office (N=2471)
Total Sample size	$n=N/(1+N(e)^2)$ $n=2471/(1+2471(0.05)^2)=344$			Using simplified sample size determination formula
Samples for each <i>kebele</i>	124	104	116	Determined through proportion

Table: 3.1: Sample size determination for household survey

As depicted in table 3.1, three ecological Zones were considered (*Kola*, *Woyina Dega* and *Dega*) to get representative samples from the population from each Zone. After stratifying to different ecological Zones, sample *kebeles* were selected from each ecological Zone for representation to each Zone through lottery method because the numbers of *kebeles* are very small and lottery is applicable. Then, three *kebeles* one from each stratum had been selected; so, kebele 017 (Segilen) from four *kola Kebeles*, 014 (*Wohelo*) from fourteen *Woyina Dega kebeles* and

01(*Bededo*) from three Dega *kebeles* were selected randomly for each ecology zone. In *kebele* 017 there were 887 payer insured households; in *kebele* 014 there were 749 payer insured households; in *kebele* 01 there were 835 payer households. Then, the total paying households with in the three *kebeles* become (**N**) = **2471**. Fee waivers were excluded from the study due to the fact that, health care seeking behavior and services utilization did not influence due to the introduction of the community based health insurance, since they were indigents before the introduction of CBHI and they are not influenced by out of pocket health care expenditure before and after the introduction of CBHI scheme.

Sample size was calculated using simplified proportion sample size estimation formula;

$n = \frac{N}{1 + N(e)^2}$ provided by Yamane (1967), to determine the required sample size at a confidence level of 95 %, and a 0.05 margin of error. Where;

- n is the sample size to be selected
- e- is the acceptable sampling error
- N-the population size and 95% confidence level, and p=0.5 are assumed

Accordingly, final sample size was 344 households from the total population of 2471 households.

After determining the sample size, the samples (344 head of households) were allocated in proportion for each *kebele* through $(nk = (NK * n) / N)^4$. As a result, 121 sample households were selected from *Segilen kebele*, 104 and 116 sample households were selected from *Wohelo* and *Bededo kebeles* respectively.

Questionnaire deign and Likert Scale measurements

Household interviews were carried out, using pre-test semi- structured questionnaire (to give respondents the opportunity to include concept related to the study) was administered to collect information from randomly selected households. The questionnaire was administered for head of

⁴ **nk**= sample for each kebele, **NK**= total number of paying insured household in the population for each kebeleds, **N**=total population (paying insured households for three kebeles) *=sign for multiplication.

a household; who has the most decision making power in the family or the spouse in the absences of the head of household. The questionnaire was administered in local language (Amharic) to ease the interview processes. In the questionnaire one scale were included to measure attitude of respondents towards community based health insurances scheme.

Likert Scale

Kothari (2004) assumptions of summated scale measurement were employed to measure attitude of households. Thus, a ten item statements assessing role of CBHI scheme on health care seeking behavior and promoting quality of services , affordability of the scheme, thrust and ownership, treatment of patients, risk pooling and sustainability of the scheme (*See annex -I section VI for detail information*) were developed to measure the perceived attitude of respondents. At one extreme of the scale there is strong agreement with the given statement and at the other, strong disagreement, and between them lie intermediate points. Then responses to these items are summed to create an overall score for each respondent.

Summated scales (or Likert-type scales)⁵ were developed to express either a favorable or unfavorable attitude towards the given object of study to which the respondent is asked to react (Kothari 2004). The respondent indicates his/her agreement or disagreement with each statement in the instrument. Each response is given a numerical score, indicating its favorableness or unfavourableness, and the scores are totaled to measure the respondent's attitude. In other words, the overall score represents the respondent's position on the continuum of favourable and unfavourableness towards an issue (Uebersax 2006, Kothari 2004). Response indicating the least favourable towards Community based health insurances is given the least score (1) and the most favourable is given the highest score (5). This way the instrument yields a total score for each respondent, which would then measure the respondent's favorableness toward CBHI scheme. Ten items Likert was assumed which yield the following score values.

$10 \times 5 = 50$: Most favorable response possible towards CBHI scheme

⁵ Named after Dr. Rensis Likert, a sociologist at the University of Michigan, who developed the technique of Likert scale in his original work entitled "A Technique for the Measurement of Attitudes", was published in the Archives of Psychology in 1932.

$10 \times 3 = 30$: A neutral attitude towards CBHI scheme and

$10 \times 1 = 10$: Most unfavorable attitude towards CBHI scheme

The scores for any individual would fall between 10 and 50. If the score happens to be above 30, it shows favorable attitude to Community based health insurances, a score of below 30 would mean unfavourable view and a score of exactly 30 would be suggestive of a neutral attitude.

3.5. Method and Instrument of Data Collection for Qualitative Data

Qualitative approach was used to investigate the contextualization of community based health insurances design and implementation, quality of health care services, health care seeking behavior, and perceptions of frontline health services providers about CBHI scheme. Hence, qualitative approach is best suitable for portraying and interpreting the practice of households on their healthcare experiences. Qualitative research is an approach conducted for exploring and understanding the meaning individuals or groups attribute to a social phenomenon in which they are experiencing (Creswell, 2009). Accordingly, qualitative research provided rich information on how illness constructed, when and where health care utilization needed, and provides an opportunity for the emergence of different views and meanings via varied experiences and interpretation of illness experiences from the research participants' point of view.

3.5.1. Study Population and Sampling Design for Qualitative Data

Setting clear inclusion criteria for selecting study participants is crucial for the purpose of guiding the data collection process and for the sake of choosing the appropriate targets from which the data gathered was considered. In doing so, this research was purposively including six groups of participants for qualitative data gathering. These are: patients who are insured and available at health facilities for patient exit in-depth interview, selected insured head of households for FGDs, health care professionals who provides services in the health center, health extension workers and *Kebele* leaders in the selected *Kebeles*, professional in District health office and key informant from community based health insurance office were included to elicit qualitative data. Three health care institutions (*Segilen* health center, *Haik* health center and *Sulula* health center) that have been contracted with CBHI scheme and provide health care

services for selected sample *Kebeles* were selected. Then, health care professionals and patients in those institutions had been interviewed.

Consequently, six in-depth-interviews with patients (two from each institution) were conducted. Moreover, key informant interview had been made with three health extension workers (one from each *kebele*), three *kebele* leaders (one from each *kebele*), one CBHI scheme worker (District CBHI office team leader), seven health care professionals (two from each institution and one from District health office) were interviewed. In addition, three FGDs (one from each *kebele*) had been made with member head of households who participated in the survey. In focus group discussion, the researcher and facilitator were actively encouraging discussion among participants on the topics of interest. Discussants for FGDs (seven participants for *Segilen* and eight participants for *Wohelo* and *Bededo kebeles*) were selected purposively who have knowledge regarding the theme under investigation and hence provide adequate data. In average, interview lasted 35-45 minutes, and FGDs were completed within 45-60 minutes.

3.5.2. In-depth interviews

Interviews provide a way of generating data by asking people to talk about their everyday lives and issues related to understudy which helps to provide a framework in which respondents can express their own thoughts in their own words. An in-depth interview (IDI) is a type of interview that allows a researcher to better understand the perspectives of the interviewees about the situation under study (Holloway and Wheeler 2002).

For the purpose of this research unstructured patient exit in-depth interviews were made with some purposively selected (in their conveniences in the selected health care facilities) insured patients. Insured patients were interviewed to generate illness narratives how they respond to their illness and their experiences from illness occurrences to utilization of services, and quality of services provision such as, waiting time, their satisfaction, availability of drug, the referral system, how they treated by health care providers, their adherences to the prescription given by the health care workers, their perceptions of the impact of CBHI on improving access to health care services, and utilization of services. Open-ended questions that allow participants to have a flexible atmosphere were prepared along probing questions.

3.5.3. Key- Informant Interview

As part of the qualitative survey, KIIs were carried out using a guide developed for this purpose and attached as Annex. People (expertise) who are responsible for implementing CBHI scheme and health care provision were participants in this study. Participants who have better understanding of health care financing in general and CBHI scheme implementation in particular on key issues such as design and implementation, management and governance, regulatory framework, sensitization, capacity building, and CBHI scheme parameters (premium, benefit packages, general and targeted subsidies, etc.). Furthermore, quality of care, work load and related incentives were investigated. Hence, key informant interviews with people who know what is going on in the particular environment, who have firsthand knowledge about the issue at hand, who can provide insights on the nature of problems, and offer recommendations for solutions. Key informant interviews were undertaken with health extension workers, community based health insurances official, *kebele* leaders and health professionals from health facilities and District health office, in order to get diverse perspectives.

3.5.4. Focus group discussion (FGD)

Focus group discussion (FGD) used to better understand communities perspective and consensus regarding benefit package, quality of services provision, health services utilization and treatment of members by health care providers that the participant provide and acquire wider scope of validity data. “FGD is particularly suited to be used when the objective is to understand better how people consider an experience, idea, or event, because the discussion in the FGD meetings is effective in supplying information about what people think, or how they feel, or on the way they act”(Freitas 1998). Accordingly, in each study site (*Kebele*), one FGD was conducted. FGDs were formed from purposively selected head of households so that all sections of the community represented. Taking in to account the homogeneity of the study participants in terms of status, awareness level about CBHI scheme, level of education, the researcher was carried out three FGDs; two FGDs consisting of eight participants and one consists of seven participants.

A question guide was used to elicit information on the theme of the study which was used to understand information regarding the gap in the design and implementation of CBHI scheme like, how they became member of the scheme, premium payment, benefit package and control of

community over management and administration of the scheme were investigated; since those issues are common for all insured members. Moreover, quality of services and their view about CBHI scheme were investigated.

3.6. Sources of Data

3.6.1. Primary Source of Data

Primary data is data generated by the investigator from the subject of the study or observation unit for the purpose of this research at hand. Primary data are those which are collected afresh and for the first time, and thus happen to be original in character. Accordingly, the researcher collected primary data through survey, in-depth interviews, key informant interviews and focus group discussions. Since, employing both primary and secondary data on a single research increases the validity, reliability and comprehensiveness of the research (Kothari 2004), secondary sources also employed in this thesis.

3.6.2. Secondary Data Sources

Official government documents, office reports, service provision manuals, and guidelines concerning community based health insurances and health care seeking behavior, health care utilization trends, and quality of services in the country in general and in the District in particular had been reviewed. Ethiopian healthcare financing policy through CBHI scheme, mainly, the design and implementation of main parameters in District level health care provision for insured households were critically examined. In addition, information on the existing disease pattern and healthcare seeking behavior is essential to provide need based health care delivery to any population. Health care institutions data remains the main source of information regarding the disease pattern, community based study can very well reflect the preferences in seeking health care services. As for health care system, in almost all the developing countries, the health institutions provide epidemiological data (Jutting 2003).

Secondary data are those which have already been collected by someone else and which have already been passed through the statistical process. Intensive reviews of related literatures were the crucial source of secondary data that were used in this research undertaking. Books, articles, other researches work, and published and unpublished materials were utilized to conduct the

research and to get deep understating about the subject of the study, draw the gap in the existing literature and derive useful concepts and methods. Additionally, reports, CBHI scheme guidelines and data from different stakeholders in the District, health facilities and *kebeles* were also incorporated to support primary data. For the purpose of time validation, literatures were taken from publications since 2000 unless, there were indispensable to cite sources published before this time; that have been cited frequently.

3.7. Procedures of data collection

Data collection was started by asking *Tehuledere* District administrative office with a formal letter of request written by Addis Ababa University Department of Sociology. Then, with the formal letter from the District administration for each *Kebele and* District CBHI scheme office, the researcher went to the selected *Kebeles*. After having permission and formal letter from each *kebele* administration, eligible participants were identified and selected (those households selected from sample exist in CBHI scheme). The list of samples was given to the District health insurance offices and *Kebele* administrative to facilitate the process at the time of data collection. After the preparations completed the selected participants were asked.

Brief explanation about the purpose of the study and issue of confidentiality was given by researcher and trained data collectors. Assuring them that their response was not at all used to harm them and there is no need to write their name or any identification on the questionnaire which was helpful to obtain their consent. In addition, they were informed that they can withdraw from the study at any point if they feel unpleasant. Having the participants consent, the researcher/data collectors were encouraging them to give honest response. The researcher/data collectors were conducted the study in open places to avoid disturbances.

Semi-structured and pretested questionnaire was used and full-scale data gathering exercise was carried out by researcher/data collectors mainly consisting of those who have background about health profession (three) and three third year undergraduate students from Wollo University were trained and familiarized about the process of the research and the information being sought. Finally, the process of actual data collection takes place between March 4th to and April 7th, 2017. Qualitative data were collected concurrently with the quantitative data. Data from KIIs

and IDIs were collected by the researcher, and data from FGDs were collected by the researcher with trained facilitator.

3.8. Operationalization of Concepts

Table 3.2 Operationalization of Concepts

Concepts	Variable	Indicator	Measurement
Sex	Sex	Sex of head of household	Male/Female Nominal Scale
Age	Age	Age of head of household in complete Year	Age in numbers Interval/Ratio Scale
Religion	Religion	Religious affiliation of the head of household	Name of the religion Nominal scale
Household Size	Household Size	Total Number of family size in the household.	Response in Number Interval/Ratio Scale
Level of Education	Educational level of Household head	The Highest level of education attained by household head	Level of education Ordinal scale
Income	Income level	Household level of income	High, middle, low Ordinal scale
Community based health insurances scheme	Awareness about CBHI scheme	Awareness level about CBHI scheme	High, medium, low Ordinal scale
	CBHI Membership	How you become member	Voluntary /compulsory Nominal scale
	Benefit package	Provision of promised services at the time of membership	Yes/No
Quality of care	Quality of health care services provide	Improvements in service after CBHI scheme introduced such as ; overall quality, availability of drug, waiting time, etc...	Yes/NO/
Healthcare seeking behavior and Services utilizations	Symptom of disease	Occurrences of injuries or illness among household members in the last three months	Yes/ No Nominal
	Immediate response for the latest injuries or illness	Immediate treatment response, home medication traditional healers, modern healthcare providers, holy water etc...	type of consultation Nominal scale
	Treatment choices	Type of health care facility that mainly patient visit at the time of illness before and after introduction of CBHI	Traditional healers, modern healthcare etc... Nominal scale
	Timing of treatment	When did you / your family member seek modern healthcare services after symptom experienced(for the latest illness)	Count average number of days delayed Interval/ratio
	Visit of modern health facilities	Do CBHI scheme motivate you to seek modern healthcare services frequently	Yes/ No Nominal scale
	Visits	How many times you/your family members visit modern healthcare facilities for the last three months	Count Number of visits Interval/ Ratio level
	Patient Compliances	Adheres with the direction of prescription regarding taking medication	Likert scale score Ordinal scale
	Patient satisfaction	Are you satisfied with the services deployed by the modern health care services providers	Likert scale Ordinal scale
Attitude about CBHI scheme	Attitude of insured households about CBHI	Likert scale to measure attitude about CBHI scheme	Likert scale score Ordinal scale or summated interval scale

3.9. Methodological Triangulation

Methodological triangulation was employed through interactive continuum of quantitative and qualitative approaches. Triangulation avoids the dichotomy differences and limitation of quantitative and qualitative approaches and helps to develop type of mixed methods as holistic approach that enabled the researcher to overcome the limitation of one approach by the strength of the other approach. Triangulating data sources were used for seeking convergence across qualitative and quantitative data. In this study, both qualitative and quantitative data were gathered in one phase of data collection and incorporate in to the interpretation of the overall results. . Converging concurrent methodological triangulation or simultaneous analysis in themes to synthesis qualitative and quantitative data was employed.

Table: 3.3: Methodological triangulation

Objectives	Unit of analysis (information on what/study of what?)	Observation unit/data source (information/data from whom)	Methods of data collection (how to collect information/data)
To study the consistency between the plan and implementation of scheme in the study area;	Gap in design and implementation of CBHI scheme as a whole	<ul style="list-style-type: none"> i. Health professionals ii. CBHI official iii. secondary sources iv. FGDs 	<ul style="list-style-type: none"> A. Key informant interview B. Documents C. FGDs
To investigate quality of health care services in terms of overall quality, drug availability, waiting time, treatment of clients in relation to the introduction of community based health insurance in the study area;	Quality of health care services	<ul style="list-style-type: none"> i. Insured households ii. Health care professionals iii. FGDs 	<ul style="list-style-type: none"> A. Household Survey B. In-depth interview C. Key informant interview D. FGDs
To examine the role of community based health insurance scheme on healthcare seeking behavior and health service utilizations of households;	Health care seeking behavior and services utilization	<ul style="list-style-type: none"> i. Insured households ii. Health care providers iii. secondary sources iv. Health care professionals 	<ul style="list-style-type: none"> A. Household Survey B. In-depth interview C. Key informant interview D. Documents
To examine the attitude of insured households and perception of frontline healthcare workers towards community based health insurance scheme in the study area.	Attitude about CBHI Perception of health services providers	<ul style="list-style-type: none"> i. Insured households ii. Health care professionals 	<ul style="list-style-type: none"> A. Household Survey B. Key –informant interview

3.10. Method of Data Entry and Analysis

Obviously, the raw data has no meaning by itself unless it is arranged and analyzed properly. First, the quantitative data was cleaned, coded and entered into SPSS and was analyzed. The analysis was carried out using the statistical package for social science (SPSS) version 20. The analysis was done using descriptive and inferential statistics.

Descriptive statistics were employed to summarize the sample characteristics. Descriptive statistics particularly percentage, graphs and tables were used to describe socio-demographic characteristics and health care seeking behavior of respondents. Keeping in mind the assumptions of statistical tests and models of the study, T-Test and one way ANOVA were employed to examine group differences in services utilization and attitudinal differences towards CBHI scheme due to predisposing and enabling factor variables. Each outcome variable was then investigated and 95% confidence interval was assumed. Results were considered significant at the $p \leq 0.05$ significant level. More importantly, Pearson correlation used to see the relationship between age and health services utilization; and household size and health services utilization.

Qualitative data analysis conducted under the assumption of organizing of data, breaking it into manageable units, synthesizing it, searching for patterns, discovering what is important and what is to be learned. Consequently, after the collection of the data, the researcher transcribed the tape recorded data and data resulted from note taking activities. Reading the transcripts and studying the notes, all of the key issues, concepts, and themes were identified and the raw data were rearranged according to the appropriate part of the thematic framework to which they relate. Subsequently, based on the similarity of the themes, qualitative data were integrated with the quantitative ones concurrently based on themes in sequences of the study objectives.

3.11. Data Quality Assurance

Reliability of the research assures whether or not research findings would be repeated if another study conducted using the procedure or instrument (Creswell 2013). The instrument was piloted with 15 respondents' interview and the reliability was checked to estimate the internal consistency/reliability.

On the other hand, the validity of findings or data is understood as the correctness or precision of research findings (Creswell 2013). In relation to the validity of the quantitative data, standard measurements and instruments were employed to maintain validity of measurements. In addition, the pilot study used to improve the quality of the questions; formats, arrangements, scales and the language used thereby enhance the validity of the data.

The quality of the qualitative data was assured by different means. Among many, building good rapport, clarifying the objectives of the research to respondents, approaching respondents friendly and getting trust and respecting the cultural values of the participants were some of the procedure to improve the trustworthiness of the data. Moreover, colleagues-check which is presenting the data to the colleague was employed. Triangulating the data collected through different method of data collection was also utilized to substantiate the trustworthiness of the data.

In order to ascertain validity of the instrument, the initial version of the questionnaire for multidimensional CBHI and health care seeking behavior (English version) was translate into local language (Amharic version) by professionals from Public health department and was checked by PhD candidate from English language and literature department. Statistical measurement consistencies checked by a colleague from statistics department. Subsequently, careful examination of the translation was made to avoid the difference in meaning.

3.12. Limitations of the Study

The first limitation of the study is with regard to sampling; the researcher determined sample size for the total number of households from three selected *kebeles* and administered proportionate to size of *kebeles* that would not fully represent the study *District* due to resource constraints. The sample size would have been large and more representative if additional *kebeles* included in the study. Second, absences of regression analysis to examine health services utilization with different socio-demographic variables lack specific strong predictor of health services utilization.

3.13. Field Challenges and Experiences

Conducting research is sometimes hard due to different reasons. For example; during data collection from March 4th to April 7th, 2017, some interviewees were unenthusiastic to provide

some information by assuming the researcher was among the government official who was trying to investigate issues regarding their income to increase premium payment for next year despite the fact that the researcher and data collectors clarified the objective of the study. Moreover, there were some participants who tried to confirm with social desirability's and inclined completely positive towards CBHI scheme since, they thought the program may phases out if they told the truth.

3.14. Ethical Consideration

In the progress of research, researchers need to respect the participants and the sites for research (Creswell 2009). Support letter was obtained from Addis Ababa University Department of sociology for *Tehuledere* District administration so that, the District administration office write a letter of cooperation for *Tehuledere* District health insurances office, selected *Kebeles*, selected health institutions, health and agricultural offices before information assessed. Additionally, permission was sought from the *Kebele* administration before conducting the study.

Brief explanation about the purpose of the study and issue of confidentiality was given by researcher and trained data collectors for respondents and informants. Assuring them that their response will not used to harm them and there is no need to write their name or any identification on the questionnaire which was helpful to obtain their consent. In addition, they were informed that they can withdraw from the study at any point if they feel unpleasant. Informed verbal consents were obtained from the respondents and informants and oral agreement was reached. Having the participants consent, the researcher/data collectors were encouraging them to give honest response. The researcher/data collectors conducted the study in open places to avoid disturbances. The data were conducted on the spot where the participants live to avoid difficulties of the participants. Generally the data were collected in a way that did not harm the participants' wellbeing and privacy.

Chapter Four: Data Presentation, Analysis and Interpretation

In this chapter, the major findings of the study, based on the data obtained through household survey; in-depth interview, key informant interview and FGD are presented, analyzed and interpreted. The data are presented and organized in a sequential order in line with the specific objectives stated under the first chapter of the thesis. The chapter consists of five sections and various sub-sections in order to incorporate all the relevant information collected from the field. Additionally, Secondary data from different offices were also supplement the primary data.

4.1. Background Characteristics of Respondents

The background characteristics of respondents consisting of their sex composition, age group, marital status, household size, highest educational level of head of the household and ownership of cultivable farm land.

4.1.1. Sex, Age Composition and Marital Status of the Respondents

Of the total head of household respondents, 77% of them were male and the remaining 23% were female. Table 4.1, shows that the majority of respondents (43.9%) were in the age group 36-50, followed by age groups 51-64 and 65 and above which comprises 20.3% and 19.2% respectively. The remaining age group, 18-35 accounts less number of respondents which is 16.6%. The Majority (83.4 %) of respondents were above the age of 35. Age groups were formed based on the supposition of youth, young adult, and adult and old age groups' classifications. Though there are religious variations, majority (94.2%) of household heads were Muslim, 5.5 % were Orthodox Christians and Catholic accounts a small portion (0.3%) of respondents. With regard to marital status, 301 (87.5 %) were married, and 5 (1.5%) of the respondents were never married, the remaining 20 (5.8%) and 18(5.2%) were divorced and widowed correspondingly.

Table 4-1: Socio-economic and Demographic Characteristics of Respondents

Socio-Economic and Demographic Characteristics of Respondents		Frequency	Percentage(%)
Age group of Respondents	18-35	57	16.6
	36-50	151	43.9
	51-64	70	20.3
	65 and Above	66	19.2
	Total	344	100.0
Religious Affiliation of Respondents	Orthodox	19	5.5
	Muslim	324	94.2
	Catholic	1	.3
	Total	344	100.0
Marital Status of Respondents	Married	301	87.5
	Never Married	5	1.5
	Divorced	20	5.8
	Widowed	18	5.2
	Total	344	100.0
Household Size	1	5	1.5
	2-3	33	9.6
	4-5	169	49.1
	6-7	106	30.8
	Above 7	31	9.0
	Total	344	100.0
Highest Educational Level of Head of the Household	Can't Read and Write	183	53.2
	Can Read and write	79	23.0
	Primary Education (1-6)	62	18.0
	Secondary Education(7-12)	20	5.8
	Total	344	100.0
Ownership of Cultivable Farm Land	Do not Have Farm Land	9	2.6
	Less than 1 Hectare	151	43.9
	1.1-2 hectare	142	41.3
	2.1-3 hectare	37	10.8
	Above 3 hectare	5	1.4
	Total	344	100.0
Level of Household Income	High	50	14.5
	Middle	135	39.3
	Low	159	46.2
	Total	344	100.0

Source: Sample Survey, 2017

4.1.2. Family Size of the Respondents

As presented in table 4.1, nearly half of the respondents (49.1) reported for having a family size⁶ of 4-5 individuals. A sizeable number of respondents (30.8%) were reported for having a family

⁶ *Family size: according to respondents, having large number of children considered as recourses; demand of labor from the children is common tradition in Ethiopian rural society in general and the study area in particular.*

size of 6-7 in their households. The total number of respondents in the household, having 2-3 individuals accounts 9.6%, and 9.0 % of sampled respondents have more than 7 household members, only 1.5% of resonant have family size of one.

4.1.3. Educational Level of Respondent

According to table 4.1, the majority of respondents (53.2%) cannot read and write that shows the problem of illiteracy is one of the major challenges in the study area. Respondents who can read and write are (23.0%) which were dominated by those who either got religious education or basic adult education in the literacy campaign(*Meserete timiret*⁷) of *DERG* regime. Those respondents who completed primary education (1-6) comprise (18.0%). Of the total respondents, less portions (5.8 %) secondary education (7-12) .

4.1.4. Respondent ownership of Cultivable Farm Land

Table 4.1, shows that majority of the respondents have less than one hectare (43.9%) followed by 1.1-2 hectare (41.3). Among the respondents 10.8% households have 2.1- 3 hectare cultivable farm land and only a small portions 2.6% did not have farm land. Those households having above 3 hectare covers only 1.5% of respondents .

4.1.5. Respondents Level of Income

According to the district Agricultural office report (*Tehuledere* District Agricultural Office 2017) households were categorized into three income level (A= high, B= Medium, C= low for the year 2016/2017 or 2008/2009 EFY harvest season. Accordingly, among the respondents, 46.2% were in low income level category and the remaining 39.3% and 14.5% were in middle and high income level categories respectively.

4.2. Planning and Implementation of CBHI Scheme in the Study Area

Community based health insurance is an emerging and promising concept that has attracted the attention of policy makers especially, in developing countries including Ethiopia, to address

⁷ *Meserete Timiret*: education mobilization program; ” primary education for all” in the period of Dirge regime, in Ethiopia.

universal healthcare coverage. Although, certain designing features (parameters) are common to most of the CBHI schemes (*see chapter two section-2.2 for further information*) that can be readily identified, such as, the voluntary participation of the people, inclusion of benefit package, prepaid payment, not-for-profit objective in organizing the scheme, scheme management by the community itself, and some degree of risk pooling, gaps existed in the implementation of these scheme parameters.

However, sculpting an appropriate scheme and implementing it, sometimes brought differentiation on the scheme sustainability. Besides building incentives and appropriately designing CBHI scheme success of depends also on the implementation of designed parameters.

4.2.1. Planning of CBHI scheme in *Tehuledere* District

The planning feature of Ethiopian community based health insurances build on certain pillar parameters such as, membership decision and enrollment condition , level of membership , premiums , financing the very poor (indigents), general subsidy⁸ , provider payment mechanism ,housing of CBHI scheme , benefit package, community involvement in management and administration of CBHI scheme, free services inclusion, criteria to re-join to CBHI scheme, line of referral and main aim of the program were considered main features in the designing of CBHI scheme in Ethiopia in general and in *Tehuledere* District in particular. In this thesis, adoption (contextualization) of main features from federal and regional guidelines to the District, and gaps during implementation were examined and presented in the following table.

⁸ **General subsidy:** *central government of Ethiopia provided amounting to a quarter of the premium collected at District level from 2011 to 2013 for 13 Districts during pilot implementation. After scale up (since 2014) the general subsidies minimized to 10% of premium collected; due to the assumptions that the scheme can maintain its financial sustainability. In 2015 the number of Districts implementing CBHI scheme were more than 190, and the plan to achieve universal coverage, and set a target of 80% health insurance coverage in 2020(EHIA 2015; FMHoH 2011).*

Table. 4.2. Plan and implementations of community based health insurances in Tehuledere District, major parameters

No.	Major Parameters	Federal Guidelines	Regional Adaptations (Amhara)	District Adaptations (Tehuledere)- design	District Adaptations (Tehuledere)-implementation
1	Membership decision and enrollment condition	Enrollment taken by <i>kebele/tabia</i> ⁹ in simple majority (50+ votes) and 100% voluntarily.	Membership determined collectively at <i>kebele/tabia</i> in simple majority (50+ votes) and 100% voluntarily	Membership determined at <i>kebele/tabia</i> collectively in simple majority (50+ votes) and 100% voluntarily	Of the total respondents, 86.9% responded membership was voluntary the remaining 13.1% responded that membership was Mandatory
2	Level of membership	* ¹⁰	Membership based on household level to avoid adverse selection	Membership based on household level to avoid adverse selection	Membership based on household level to avoid adverse selection
3	Registration fee and premiums	*	Registration fee set by regions 10 ETB and premium fee 240 ETB for any number basic family members ¹¹ of household members	Modified, for household members (1-5) is 10 birr registration fee and 240 premiums; for households ≥ 5 additional 48 birr per individual is required.	Among the total respondents 263 (76.5%) paid 240 birr for premium, 43 (12.5%) paid 336 birr per household, and the remaining 38(11.1%) paid 288 and more per household. Registration fee remains constant for all households (10 birr).
4	Financing the very poor (indigents¹²)	Regions and District pay registration fee and premiums of the very poor. Payment of this contribution covered 30% by the district and 70% by region.	Regions and District pay registration fee and premiums of the very poor. Payment of this contribution covered 30% by the district and 70% by region.	Regions and District pay registration fee and premiums of the very poor. Payment of this contribution covered 30% by the district and 70% by region.	Payment for 2505 fee waiver households contribution covered 30% by the district and 70% by region in 2009 E.C.
6	Federal subsidies	*	25% of the total amount collected from members during pilot implantations, and change to 10% since 2014/15.	25% of the total amount collected from members during pilot implantations, and change to 10% since 2014/15.	25% of the total amount collected from members during pilot implantations, and change to 10% since 2014/15.
7	Provider payment	Fee-for-service	Fee-for-service	Fee-for-service	Fee-for-service

⁹ *Kebele/tabia*: is the smallest administrative unit established in management and administration of CBHI scheme.

¹⁰ *Open to modify by implementing regional state and there is no nationally common accepted guidelines for implementation.

¹¹ **Basic family members**: include husband/wife and their spouses, children either adopted legally or born naturally.

¹² **Indigents**: are people (10% from the total population of the District) who are poor of the poor and are unable to afford premium payment of CBHI scheme. The kebele screens applications from poor of the poor households and the District makes the final determination of who is eligible (EHIA 2015).

	mechanism				
8	Housing of CBHI scheme	*	Determine by region and district CBHI General assembly	District administrative office	District administrative office
9	Benefit package	All services available in health centers and hospitals, excluding tooth implantation, plastic surgery, eye glasses purchase and dialysis	All services available in health centers and hospitals, excluding tooth implantation, plastic surgery, eye glasses purchase and dialysis	All services available in nearest health centers and referral services in <i>Dessie</i> hospital and <i>Boru Meda</i> hospitals, excluding tooth implantation, plastic surgery, eye glasses purchase and dialysis	All services available in nearest health centers and referral services in <i>Dessie hospital</i> and <i>Boru Meda</i> hospitals, excluding tooth implantation, plastic surgery, eye glasses purchase and dialysis.
10	Community involvement in management and administration of CBHI	High community involvement in management and administration of the CBHI scheme	High community involvement in management and administration of the CBHI scheme	High community involvement in management and administration of the CBHI scheme	Among respondents, only, 51.5% and 16.6% of them agree and strongly agree respectively. 17.7% were neither agree nor disagree and the remaining 10.7% and 4.7% were disagreeing and strongly disagree correspondingly.
11	Free services inclusion	At least 10% of the total insured population who is poor of the poor	At least 10% of the total insured population who is poor of the poor	At least 10% of the total insured population who is poor of the poor	About 10.08%(2505 households) from total household(20,070) got free services
12	Criteria to re-join to CBHI scheme	*	Any household can rejoin any year within the renewal time framework.	To rejoin household should pay the back payments since the withdrawal year.	To rejoin household should pay the back payments since the withdrawal year.
13	Line of referral	*	All health care services referred to the nearby contracted hospital	All health care services referred to <i>Dessie</i> or <i>Boru Meda</i> hospitals	All health care services referred to <i>Dessie</i> or <i>Boru Meda</i> hospitals
14	Main aim of the program	Improve access; increase utilization, improve quality and mobilize additional resources	Improve access, increase utilization, improve quality and mobilize additional resources	Improve access; increase utilization, improve quality and mobilize additional resources	More than 30% exposed for out of pocket extra expenditure of healthcare services. However, utilization increases from 0.33 in 2011 to 1.44 in 2017 E.C. In terms of overall quality of care, 59.9% of respondents confirmed the increments of quality of services

Sources: survey, 2017 and different Ethiopian CBHI scheme documents obtained from Tehuledere District CBHI office and HSFR project

4.2.2. Implementation of CBHI scheme in *Tehuledere* District

Before launching the pilot in 2011, extensive training and sensitization were given to regional and District officials, *kebele/tabia* officials, CBHI executive staffs, community workers, community members, and other CBHI stakeholders (*Tehuledere* District CBHI Office 2016/17). According to *Tehuledere* district CBHI scheme Office (2016/17), membership for enrollment is done voluntarily on a household not on an individual basis, to reduce the possibility of adverse selection¹³. Free waivers or indigents are eligible to be members of CBHI schemes. The *kebele* screens applications from poor of the poor households and the *district* makes the final determination of who is eligible. CBHI benefit package covers all outpatient and inpatient services at the health center and nearby hospitals (Dessie and *Boru Meda*) level except false teeth, eyeglasses, and cosmetic procedures and dialysis. After joining a CBHI scheme, members have a one-month waiting period before they can use healthcare services. Beneficiaries are allowed to access hospitals without penalty with a health center referral. Members who bypass the referral system are required to pay an OOP bypass fee of 50 percent.

4.2.3. Level of awareness and membership condition to the scheme

Respondents were asked about their level of awareness about CBHI schemes. Although, 161(46.8 %) of respondents have high awareness about CBHI, the remaining 139 (40.6%) and 44(12.8%) of the total respondents level of awareness were moderate and low respectively. The household survey showed that most households in the study area correctly understand the role and concept of CBHI scheme. However, one of the key informants (health professional) stated households awareness as misguided and limited to client perspective.

Patients (members) did not have better awareness about CBHI scheme and their claim to use health care services. CBHI scheme office did not give adequate awareness how, when and where to use services. Members only claim their right without understanding their responsibility. CBHI officials only concerned on increasing members without creating

¹³ **Adverse selection:** is self selection of poor health status individuals to CBHI scheme typically, the inclusion of people with chronic illness, and people who have limited potential to pay the premium.

awareness; this brought problem to provide services (male, age- 41 and 9 years work experiences).

In addition to the above claim, participants of the FGD (Male, age-57) strengthen the argument as follows:

Awareness about CBHI is low, even some people did not know how much they paid because payment collected with other tax payments (for example with land tax, fertilizer payment) this brought even misunderstanding even they thought that they paid more than the payment set on the guideline. Additionally, different payments at once brought inability to pay for every payment once and he suggested that payment should separate from other payments.

On the other hand, respondents were asked the condition of membership to the scheme and majority of the respondents (86.9%) responded that membership for CBHI scheme was voluntary and the rest of respondents (13.1%) responded that membership to the scheme were mandatory(*see annex –III*).

Similar to the above statement participants of the FGDs provided their perspective and consensus on the membership condition and criteria to re-join the scheme as follow: sometimes, members forced to pay the premium payment even if they did not want to. *Kebele* leaders forced members to pay both premium payment and other payments together unless they did not accept other payments (like land tax payment, fertilizer payment) if they did not pay the payment of CBHI scheme first. Moreover, if someone failed to afford for one year and withdraw from the scheme, to rejoin he/she forced to pay the back payment/s for services he/she did not use for nothing. These principles discourage households to rejoin CBHI scheme. These types of mechanism to collect payments to the scheme brought suspicion; some people believed CBHI scheme is a means of revenue collection for government like tax's. According to data from survey and FGDs, though, the principle of membership to the scheme is voluntary; there are conditions in which households forced to pay the premium payment to the scheme in the study area.

4.2.4. Benefit package and Community Role in Managements and Administration of the Scheme

Households were asked whether they get the appropriate services they agreed during membership (the benefit package) and, majority (79.7%) responded that they received health

care service according to the scheme agreements, while and the remaining (20.3%) claimed that they did not receive the services they have to receive. Another parameter that determines the sustainability of CBHI scheme is community participation in the management and administration of CBHI scheme. Accordingly, among respondents, 51.5% and 16.6% of them agree and strongly agree respectively. 17.7% were neither agree nor disagree and the remaining 10.7% and 4.5% were disagreeing and strongly disagree correspondingly about their role in management and administration of the scheme(*See annex –III*).

4.2.5. Reasons for Membership to community based health insurance

Members were asked why they joined CBHI scheme to know the reason/s for membership. Multiple choices were given to identify various reason/s why they become member for CBHI scheme and the two prime reasons were first, 65.9% of respondents joined the scheme because premium payment is minimum compare to out of pocket payment, and second, 55.7% joined the scheme to finances healthcare expenses once; percent of case were considered important in this case because one person may chooses more than one reason for membership. Similarly, 27.1% and 23.6% of the respondents became member of CBHI scheme due to needed health care services for child/ children aged less than 5 years and for mother/mothers respectively.

Table 4.3, Reason/s for membership to community based health insurance

Reasons for member to CBHI scheme (<i>Multiple responses possible</i> ¹⁴)	Frequency	Percent of responses	Percent of cases
Illness or injuries occur in the household frequently	20	2.8%	5.8%
Child/ children aged under 5 years needed health care services	93	12.9%	27.1%
Mother/mothers needed health care services	81	11.2%	23.6%
Old household member need health care services	56	7.8%	16.3%
Premium is minimum compare to out of pocket payment	226	31.3%	65.9%
pressure from <i>kebele</i> administrative	54	7.5%	15.7%
To finances healthcare expenses Once	191	26.5%	55.7%
Total	721	100.0%	210.2%

Source: Sample Survey, 2017

¹⁴ **Multiple responses:** When respondents are provided with a list of possible items in a survey question, answers do not necessarily fall into one of several mutually exclusive categories; question may allows participants to choose one or more responses from a list to get all information available and to avoid missing of information. For example, there may be questions in a questionnaire that will allow a respondent to select **each of the responses** as an answer which needed multiple responses. The **frequency** column indicates how many respondents mentioned each response. The **Percent of Responses** column indicates what percentage of the total number of responses mentioned is contained in each category. The **Percent of Cases** indicates what percentage of respondents used responses of each given type. The reason that it is possible to have over 100% is because each respondent can select more than one category.

Needed health care services for old household member (16.3 %) and pressure from *kebele* administrative (15.7%) were also their reasons for membership to the scheme. Only small portion of responses were forwarded as a reason for membership as a result of frequent illness or injuries occurrences in the household (5.8%); chronic illness occurrences were included under this category.

4.2.6. Duration of Membership and Premium to Community Based CBHI Scheme

Majority of households (59.6%) have been member to the scheme since the introduction of CBHI in 2003 E.C. followed by 20.3% in 2004 E.C and 10.2% in 2005 E.C. Among households only (9.9%) were joined since 2006-2009 E.C. The household survey showed that dropout rate were limited and most households renew their membership over years but new membership to the scheme relatively declines. Regarding amount of payment, majority (76.5%) paid 240 birr premium payment, 12.7% and 10.8% of the respondents paid 336 and above, and 288 birr for 2009/10 E.C. premium payment respectively (*See annex-VI*).

Moreover, households were asked about level of payment for CBHI scheme; consequently, fairly large number of respondents (44.5%) replied that price is moderate followed by 21.8% very cheap. Among the respondents, 19.8% and 11.6% responded that price is cheap and expensive respectively. Very small portion of households (2.3%) replied that price is very expensive.

To know extra out of pocket payment conditions, households were asked how much extra payment they expense for health care in addition to CBHI scheme premium payment. Majority (71.5%) were not charged. However, 9.6% of households were exposed for additional payment of more than 400 birr for the last three months followed by 8.4% who expensed 100-200 user fee payment. Of the total respondents, 6.4% and 4.1% paid extra out of pocket payment of less than 100 and 201-400 birr correspondingly.

According to the survey, yet, considerably large numbers of respondent households were exposed for additional healthcare payment in the last three months even if they are member to CBHI scheme. Paying out of pocket is a problem for members who have already paid premium for CBHI scheme may not have household budget left for these contracted services.

In addition to the survey one informant stated premium for the scheme and increments of payment over the year as, unplanned and did not consider their (households) conditions through his statement:

Payment to CBHI scheme increases year to year, it was 36 birr first then 180 birr and now we have to pay 240 birr even if we did not use any service. This is not the only problem; we forced to pay with other payments. The payment should request twice a year independent of other payment so that we can afford it easily (in-depth interviewee man, age- 73).

However, one of the informants stated the relative advantage of CBHI scheme compared to out of pocket payment in relation to price as follows:

“I paid 240 birr for one year. If I go to private health facility for example, hospital 240 birr is used only for two times card payment; there are private hospitals in Dessie that cost 120 birr for card only. So, the price of CBHI scheme is very cheap. Know a day’s 240 birr is a price of one hen; we can use one year service for all family members. However, if we tried to get services in private institution in out of pocket we price of ox may not cover for one year health care services. I do have a friend who is not member of the CBHI scheme, in August, 2008 E.C. his wife were very sick and referred to hospital and she admitted to a week in hospital. He told me that he sold a cow to afford the price and this year he becomes member to the scheme (man, 56 -year old- in- depth interviewee).

Another in-depth interview informant supports the above claim and narrated his experience about the price of CBHI scheme as:

Community based health insurance is very cheap to pay for and I believe every one can afford the premium payment and get better advantage from it. For example, I was very sick three months ago and I came to Sulula health center. But the nurse referred me to Boru Meda hospital. However, the drug and the laboratory were not available. The doctor told me that I can get services from private hospital [Selam hospital], as he told me, I went there and got treatment with out of pocket payment. I was admitted for inpatient services for three days. After three days somehow I got relief but they cost me 4800 birr which was very expensive to afford and above my ability to manage to pay for. However, thanks to

CBHI scheme, the payment I paid reimbursed to me, that means I got a bonus of 4560 birr by paying 240 birr premium payment(male, age-44).

In general, data from household survey, KIIs, FGDSs and IDIs showed that implementations in most parameters coincided the designing of the scheme in the study area. However, in some parameters such as, membership condition and awareness about CBHI scheme were limited and did not implemented as designed though, they are fundamental for CBHI scheme to be sustained and capacity building is important for sustainability of the scheme. Without necessary skills and knowledge of CBHI concepts among both recipients of health care services and those providing services, success is unlikely. In the study area, people have general concepts about community based health insurance, however most of them are unclear about detail concept and procedure of community based health insurance especially, about reimbursement procedures. They do not have clear and detailed information about the benefit package and related responsibilities they have and what type of opportunities and challenges are there. Furthermore, though, there are different points of view regarding the payments and benefit package of CBHI scheme, the study showed that payment for CBHI scheme for most households is affordable and CBHI protected households from high out of pocket payments, and most households received services according to the scheme agreements.

4.3. Impact of CBHI Scheme on Quality of Health care provision, access and customer satisfaction

Quality of health service provision from healthcare institutions have been addressed by various issues discussed in table 4.4, presented below. The issue of quality of health care from supply side before mobilizing demand and possibility to set up a viable insurance scheme is one of the necessary conditions because if people feel that they will get no “*value for money*” at the hospitals or health center, they would be unwilling to pay premiums. To investigate the benefits that CBHI has brought to the quality of care, from the perspectives of member households, patients and health professionals various measures were set such as, overall quality of services, drug availability, improvements in laboratory services, waiting time, referral system, staff motivation, availability of staff and cleanness of the health care facilities.

Table 4.4, Quality of healthcare services provisions after the introduction of community based health insurance

Quality of healthcare service provisions		Frequency	Percentage (%)	Quality of healthcare service provisions		Frequency	Percentage (%)
Overall quality of healthcare services	Increases	206	59.9	Improvements in Referral System	Increases	199	
	Decline	73	21.2		Decline	71	
	Similar	56	16.3		Similar	65	
	Don't Know	9	2.6		Don't Know	9	
	Total	344	100.0		Total	344	344
Availability of Drug	Increases	154	44.8	Improvements in Staff Motivation	Increases	154	
	Decline	104	30.2		Decline	98	
	Similar	77	22.4		Similar	83	
	Don't Know	9	2.6		Don't Know	9	
	Total	344	100.0		Total	344	344
Availability of Laboratory	Increases	136	39.5	Improvements in Cleanse of Healthcare Institution	Increases	246	
	Decline	109	31.7		Decline	37	
	Similar	90	26.2		Similar	52	
	Don't Know	9	2.6		Don't Know	9	
	Total	344	100.0		Total	344	344
Improvements in Waiting Time	Increases	159	46.2				
	Decline	124	36.0				
	Similar	52	15.2				
	Don't Know	9	2.6				
	Total	344	100.0				

Source: *Sample Survey, 2017*

4.3.1. Improvement in overall quality of Health Service Provision

To investigate the views of households about improvements in service quality since the introduction of CBHI schemes, they were asked whether the services provision quality increase, decline, similar or do not know about it. Most informants and respondents have seen improvements in overall quality of services.

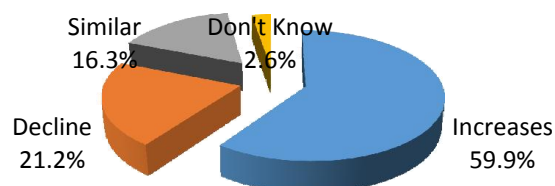


Fig.4.1, Overall quality of healthcare services provision after the introduction of community based health insurance

Source: *Sample Survey, 2017*

As showed in Fig. 4.1, of the total respondents, 206 (59.9%) responded that overall quality increase, on the other hand, 73(21.2%) perceived that overall quality declines, 56(16.3) households view that there is no change in general services provision quality, and only 9(2.6%) did not know whether services provision increase, decrease or remain the same in all measurements of quality of health services provision showed in table 4.4, above. Moreover, general quality of services provision had investigated from different informants' perspective. For example, one of the health professional key informants (male, age- 39 and 11 years work experiences) in the visited healthcare institution [*Sulula* health center] asserted the beginning of CBHI scheme and its role in the improvements of overall quality of care as follows:

After the introduction of CBHI scheme we [health care professionals] have get some degree of freedom to prescribe the appropriate diagnostic test and drugs without any reservations about the ability of the CBHI member to pay. Prior to the introduction of CBHI we would either discuss with patients about their financial capability or write prescriptions based on what we thought the patients could afford, which is a relief professionally and key to improve the general quality of services.

On the contrary, one of the professional stated his experiences about general qualities of health care services as follows:

*After the introduction of community based health insurances, even if there are increments in utilization, there are covert problems. For example, people come when they feel the symptom, we prescribe tablet for them for a week or two weeks but they are not interested to finish their medication; they come after three or four days and say the medication is not working and we have to change the medicine for them; they become the professional not the patient, [but those none members did not come if they did not finish their medication because they paid for it and they understand the value of money.] None compliances of members to the prescription creates **medical resistance**. For example, (MDR-TB) medical resistance tuberculosis is among the cases which are difficult to treat easily. After medical resistances created, the patient needed high cost of treatment or sometimes difficulties even for recovery at all (Male, age-37and 7 years work experiences).*

In the same vein to the above argument, one of the in-depth interviewee narrated her experience as follow:

Despite my frequent visit to health facility, my health condition is not improved. I came here [Segilen health center] five times within the last three months though I did not get any solution. My health condition worsen from time to time but the drug they[health care professional] gave me did not working. I thought my illness condition adopted the medication they gave me. Know my only chance is praying to get referral services to hospital. The medicines in this institution do not have quality; which did not give relief even after a week; that is why I did not finish the prescription, and came again to try another type of drug (Female in-depth interviewee, age- 47).

The data from informants uncover that medical resistances created due to non adherence for medication worsen the health conditions of the patients in particular and communities wellbeing in general. Moreover, high costs for serious illness caused by medical resistances bring financial difficulties in the sustainability of CBHI scheme.

4.3.2. Improvement in Availability of Drug Supply

To know the availability of drug supply households were asked about availability of drug and, as presented in table 4.4, about 44.8% of respondents replied the increments of drug availability, 30.2% and 22.4% responded the decline and similarity of quality of services in terms of drug availability after the introduction of CBHI scheme respectively. The above survey result indicated that drug availability did not increase for more than half respondents and one of my key informants (health professional stated drug availability as follow:

Regarding drug supply, in our health center [Segilen health center] drug stock out become limited especially in each quarter year due to high utilization, patients come frequently but they did not use the drug properly. Some patients even through it away because they are not interested to take drug rather prefer to get injections. More importantly, contracted health facilities, especially in hospitals, experience drug stock-outs and so patients often must buy items from outside private retailers. Limited stock-outs in Pharmaceutical Fund and Supply Agency (PFSA) hubs have been the major reason that brought drug shortages (key informant, 37 and 7 years work experience).

Moreover, one health extension worker stated the compliances of patients and misused of drugs as follow:

This place is kola agro-ecological Zone where most people have limited awareness about modern health care services and medication. Let me tell you one case; one day I went to the remote village of our keble [Segilen], people were gathered together and having “Duwa”¹⁵, that was not the surprise, everybody brought the drug they accumulated overtime and put in different color category and the one who feel sick took one from each category. They told me that the color they like is the best medicine for their illness. This showed that even though people took drugs frequently they are not complied with prescription of the professional. This misused brought shortage in drug supply in healthcare facilities (key informant, female; age-36 and 11years work experience).

One in-depth interview participant stated her course of statement as:

I was very sick, I think it was “berd” [pneumonia¹⁶], I went to health center and the doctor (health care professional) prescribed tablets to me for seven days. I beg him to give me one injection but he did not lesson me. I ask for him because I know, “ለ ብርድ ፍቱን መድሃኒት ቱ መጠጫ እንጅ ከኒና የጨረራ እዳ ነው።” [medication for pneumonia should be injection not tablets because tablets case gastritis]. [How do you know?] I have a son who was sick like me and he recover within one day because he got injection. The next day the tablet did not give me any relief so, I went back to the health center. I was lucky I got “chewa hakim” [cultured health care professional], but I did not told him that I was here yesterday and he give me one injection and tablets for seven days. I got relief immediately and there were no need to take the table (female in-depth- interviewee, age-38).

4.3.3. Improvement in availability of laboratory services

Laboratory services are among measures that proved indications of quality of services in a certain health facility. Accordingly, respondents were asked about the improvements of laboratory services in healthcare facility and the table 4.4, showed that from the total respondents, 39.5% answered the improvement of laboratory services, among the respondents 31.7% and 26.2% were replied the decline and similarity of laboratory services given in the

¹⁵ **Duwa:** A ceremony in which people come together and pray for their health and wellbeing.

¹⁶ **Pneumonia:** According to the health care professionals pneumonia is scientific name for Berd or Wurchi.

healthcare institution after the introduction of community based health insurance respectively. Similar to that limitations quality of services in terms of laboratory services stated by one of FGD participants (male, age-46) as follow that strengthen survey results:

Only few people got laboratory services but most people got prescription of drug through oral examination which results low quality of services and miss utilization. I have neighbor who have seven family members, among them five were insured and two were non insured. One day, one of the two non insured was sick, his father was not interested to take the non insured and pay out of pocket payment, rather one of the insured family member went to health center and told the professionals the symptom that his brother feels (non insured feels). [How] because they now that most of the time there is no laboratory services, drug prescribe based on oral examination. Then he brought two kinds of drug which prescribed for seven days. [The insured brought the drug but the non insured took it], luckily he recovers. As stated above, low quality of services and low laboratory services brought misuse of drug indirectly and diminishes quality of health care services.

The above statement supported by one health professional key informant and he stated the laboratory services as:

Instruments for laboratory services are limited. Those instruments which we have in the past, most of them are out of use; they are not repaired or replaced by new. Purchase for new equipment takes time and have process. In line with this, currently, utilization of services increases so, we have to work hard to give services for all than focusing for quality. Serving many clients make us tired and lack concentrations which have also an impact on quality of services (male, informant; age- 37 and 7 years work experiences).

4.3.4. Improvement in waiting time to get services

As showed in table 4.4, respondents were asked about the improvements in waiting time to get services after they arrived the institution, and fairly large number of respondents (46.2%) answered the improvements in waiting time to get services. However, more than 50% of the respondents responded that they wait much longer or similar time to get services after the

introduction of CBHI scheme. Accordingly, 36.0% replied the decline in the improvements of waiting time and 15.2% responded similarities in waiting time respectively. Of my informant (female, age- 42) stated the waiting time as:

Among other things I do not like is waiting time. I wake up early (around 11:00 P.M. local time), my village is far from the health facility [Segilen health center]; at least it took two hours on foot. When I arrived here there were many people registered by the security man of the health center to get services. He told me I may get the services in the afternoon but I did not have the choice. The health professionals came at three o'clock local time and they started giving services and then they stopped at six o'clock. As the security man told me, I did not get the services in the morning; after waiting for six hours, I got services at eight o'clock in the afternoon.

In addition to the above claim, health professional informant (male, age-47 and 17 years work experiences) stated the situation of waiting time for referral services:

After they had become member to CBHI scheme, patients (especially chronically ill) requested surgical services for illness conditions that stayed for long period of time. We did not have the capacity to give surgical services in our health facility [Haik health center]; thus we referred them to Dessie or Boru Meda hospitals. Similarly, different patients come from different health centers and patients may wait until four months unless it is emergency health problem.

4.3.5. Improvement in referral system

As depicted in table 4.4, 199 (57.8%) of respondents replied that referral system increases after the introduction of community based health insurance, and 71 (20.8%) responded the decline of referral system after the introduction of community based health insurance. Of the total respondents, 65 (18.9%) responded no change at all. On the other hand, one of the in-depth interview participants stated the referral system as follow.

My mother was very sick; I brought her three times here [Haik health center] she did not recover. I asked her [the health professional] to refer us to Dessie or Boru Meda hospital. But she told us she will be fine however, things were not as her wish; here condition became very serious. I took her to private hospital and I paid 750 birr, then she

got relief from here suffering. They only write refer for people who are nearly ill to die (female interviewee, age 38).

However, people who were chronically ill have been benefited from referral system. For example, one of my male in-depth informants, mal, age-73 stated the referral condition as follow:

I was sick of “Inkirt” [goiter] for my entire life. I am poor who not capable to pay for surgery but, now thanks for CBHI scheme, as you look at me [indicating the surgery he got on his neck], I got operation in Dessie referral hospital. If I was not member to CBHI scheme I will die with my Inkirt; at least now I got relief.

Similar to that, one of the FGDs participants, age- 56 stated the referral condition as follows:

I have a son who was learn in collage, suddenly, he was ill; when I took him to health center [Haik health center] they referred him to Borun Meda hospital. He was examined by the doctor and they told us he has to admit for a week for inpatient services, after that they give him a nine months medication and told him to come every month for checkups. He finished his medication after nine months and he recovered; but I did not pay any extra money. Now, he is fine. He will continue his school next year and he will be graduated after two years. If there was no CBHI scheme, I cannot afford his treatment expenses. I do have one ox, even that may not be enough and I might loss my son. We are lucky to get this program.

Moreover, one of my key-informants strengthens the above statement about the referral condition as follows:

Before the introduction of CBHI, we were worried to write refer for patient because they may not have the ability to afford for services. But now, for example, any surgery is referred to Dessie or Boru Meda hospital without any pre-condition if they are member to CBHI scheme. Patients now have been getting surgery for prolonged chronic illness even being sick for their entire life (like goiter, tumour or gland and prolonged testicular infection). However, most of the time patients claim referral services for minor illness because of the misguided claim [patients think they can access any services if they become member to the scheme] they have the right to get referral services if they are member of CBHI even for conditions that can be treated in our health center (male, key informant, age -39 and 11 years work experiences).

4.3.6. Improvement in staff motivation

According to table 4.4, 154 (44.8%) of head of households replied that staff motivation were improved to treat clients, 98(28.8%) responded the decline of staff motivation and 83(2.1%) answered similarities in staff motivation prior to CBHI scheme and after the introduction of community based health insurance. Additionally, data were gathered from informants and one of the in-depth interview participants (female, age -47) stated the how health care professionals treated them in the following statement:

When we fall ill we come to health center but they did not treated as patients. “ከእግዚአብሔር በታች ለጠፎችን ያሉን አለኝታዎች ሀኪሞች ናቸው ፡፡ ነገር ግን ይህንን በደንብ አልተገነዘብንም ፡፡” [we relied on health care providers, they are our hope for our health next to God but they did not understand that]. Some professionals did not understand our pain and suffering, they think that we come frequently because of free access of services [at the time of services] after we pay the premium for CBHI scheme. But we are human beings who can rationalize; we did not come frequently even if the service is free.

Similar to the above statement other informant claim how they are treated by health care providers:

After we become member to CBHI healthcare professionals are demotivated and mistreated us even though we did not know the reason. “ሀኪሞች ይሚረሉኝ፣ አይስቁም ፈገግታ አያሳዩም ያልተሟላ ሰው በዚህ ግባ በዚህ ውጣ ስትለው ይደናገራል ህመምም ይባባሳል፡፡ ከዚህ ያለው ሁኔታ እንደዚህ ነው ፡፡” [professionals caviling, they did not laugh or smile, when you mistreated uneducated person his/her illness will worsen, this is the reality in this health facility] [Haik health care] (female, In-depth interviewee, age 42]

4.3.7. Improvement in cleanness of the healthcare institution

Of the total respondent in table 4.4, 71.5% responded the improvements of cleanness of the healthcare institution, and 15.1% responded the similarity of cleanness of the institution after and before the introduction of CBHI scheme. Similar to the survey, cleanness of the health facilities increases in all health facilities. For example, key informant, age -25 and 5 years work experiences stated the cleanness of their health care facility as follow:

We do have case team in each professional category in front of our office, the compound classified for each case and each case team is responsible for cleanness around their offices. As you see, [pointing to the plants and flowers of each case team] everyone is responsible for inside and outside cleanness of our health center [Sulula Health center], our compound seems like a garden not health center. We hope this can be best experience for other health centers.



Fig. 4.2, Midwives case team Green Park at Sulula health center

However, 10.8% of respondents responded the decline of cleanness in the institution and the remaining 2.6% replied as they did not know about cleanness of the health care institution.

4.3.8. Impact of CBHI scheme on Customers satisfaction

Apart from the issues of access and quality mentioned above, the study indicated that members of the scheme felt very positive about the scheme. As depicted in table 4.5, 44.5% of respondents were satisfied before the introduction of CBHI scheme while, after the introduction of CBHI scheme this percentage rise to 47.1%. In addition, 28.2% of respondents were very satisfied after the introduction of the scheme though, this percentage was 16.6% prior to CBHI scheme.

Table 4.5, Level of satisfaction about health care services received from modern health care facilities before and after the introduction of CBHI scheme

How do you level the satisfaction about health care services you received from modern health care facilities?				
Before CBHI scheme introduced			After CBHI scheme introduced	
Responses	Frequencies	Percentage (%)	Frequencies	Percentage (%)
Very Dissatisfied	27	7.7	21	6.1
Dissatisfied	91	26.5	64	18.6
Neutral	16	4.7		
Satisfied	153	44.5	162	47.1
Very Satisfied	57	16.6	97	28.2
Total	344	100.0	344	100.0

Source: Sample Survey, 2017

On the other hand, before the introduction of CBHI scheme 26.5% dissatisfied, and 7.7% of respondents were very dissatisfied. However, relatively a small portion 18.6% and 6.1% were dissatisfied and very dissatisfied respectively after the introduction of CBHI scheme.

Furthermore, as stated in table 4.6, respondents were asked what made them satisfied by the services they received, and 78.2% of respondents' reason/s for satisfaction or very satisfaction were the absences of out of pocket payment at the time of services followed by availability of adequate drug supply (50.4%) in the second place. Low waiting time to get services (34.5%) and improved laboratory services (33.7%) were other reasons for satisfaction. Improved referral system (33.3%) and good treatment by healthcare providers (25.8%) were listed as the last two reasons for their satisfaction.

In contrast to satisfaction, those dissatisfied or very dissatisfied households were asked to sort out the reasons for their dissatisfactions and limited drug supply (53.3%) and low laboratory services availability (45.7%) were the two prime reasons.

Table 4.6, Reasons/s for satisfaction or dissatisfactions by services received from modern health care facilities after the introduction of CBHI scheme

What is the reason/s for your satisfaction or dissatisfaction by the services you received from modern health care facilities after you become member of CBHI							
Reason for satisfaction or vey satisfaction				Reason for dissatisfaction or vey dissatisfaction			
Responses	Frequency	Percent of responses	Percent of cases	Responses	Frequency	Percent of responses	Percent of cases
Absences of payment in the time of services	197	30.5%	78.2%	Extra out of pocket payment for healthcare services	6	2.8%	6.5%
Adequate Drug Supply	127	19.7%	50.4%	Limited Drug Supply	49	22.9%	53.3%
Low waiting Time to Get Services	87	13.5%	34.5%	Long Waiting Time to Get Services	41	19.2%	44.6%
Good treatment by Healthcare Providers	65	10.1%	25.8%	Mistreatment by Healthcare Providers	32	15.0%	34.8%
Improved Laboratory Services	85	13.2%	33.7%	Poor Management of CBHI scheme	30	14.0%	32.6%
Improved Referral System	84	13.0%	33.3%	Low Laboratory Services Availability	42	19.6%	45.7%
Total	645	100.0%	256.0%	Low Referral System Availability	14	6.5%	15.2%
				Total	214	100.0%	232.6%

Source: Sample Survey, 2017

Additionally, long waiting time to get services (44.6%) and mistreatment by healthcare providers (34.8%) were listed in fourth and fifth place as a reason for dissatisfactions. Poor management of CBHI scheme (32.6%) and low referral system availability (15.2%) were also listed as reasons for dissatisfactions and lastly extra out of pocket payment for healthcare services (6.5%) brought dissatisfactions or very dissatisfactions of households about the services they received after the introduction of community based health insurances.

4.3.9. Impact of CBHI Scheme on Access to Healthcare Services

According to data obtained from respondents, KIIs, FGD participants and IDIs, membership to community based health insurance provided opportunities for members for better access to modern health care facilities than non-members. The probabilities of frequent visit of modern health care facility were high for members than non members. This study shows that the formation of a CBHI scheme for households in rural areas result in a better access to health care for otherwise excluded people especially, for the poor and chronically ill; hence, poor can benefitted by indigents entitlement and the chronically ill can be cross –subsidized by the healthy. In additions, individuals can access better health care if they are utilizing preventive and curative health care when needed and in a timely manner. Affordability of CBHI scheme provides an opportunity for rural households to use health care services when they feel sick; hence, rural households are unable to get cash when they needed; they have to sell animals or crop to get money. Accordingly, by avoiding out of pocket payment, CBHI scheme become instrument to achieve universal health coverage.

In general, as argued in the literature by Jutting (2003), FMOH 2008 and Carrin, Mathauer and Evans (2008), quality of services increases under the likelihood that there is high net income generation in spite of higher utilization rates.

Correspondingly, the finding of this study showed that quality of services provision improved in most parameters of quality indicators after the healthcare facility contracted with community based health insurances scheme. More importantly, as shown in table 4.6, both CBHI members and health care providers recognize improvement in overall quality of services provision and in most measures of quality of care. However, drug availability, waiting time, laboratory services,

staff motivations and treatment of patients in all visited health facilities become major concerns that needed attentions for improvement.

4.4. Impact of CBHI Scheme on Healthcare Seeking Behavior and Health Service

Utilizations

Healthcare seeking behavior more emphasize in the process of utilization of formal (modern) health care institution on the other hand health services utilization is the end point in the process of health care seeking behavior. This study demonstrates that the decision to engage with a particular medical channel is influenced by a variety of socio demographic variables like, sex, age, household size, level of education the type of illness, access to services and perceived quality of the service after illness experienced.

Multiple forces determine how much health care people use, the types of health care they use, and the timing of that care. Some forces encourage more utilization; others deter it. CBHI scheme become one of the potential for promoting health care utilization from modern health care facilities without delay. Being a member in the scheme, increases the level of utilization because of decrement in household cost for illness. Accordingly, members of CBHI scheme are highly utilize health care and are more likely to visit health care facilities even for simple sickness.

In support of the above argument, respondents were asked whether CBHI scheme enables them to seek modern healthcare services frequently. Significant majority of them (95.6%) responded that CBHI scheme promotes health care seeking behavior from modern health facilities. Only 4.4% of respondents thought that CBHI do not promote health care seeking behavior (*see annex –III*).

Furthermore, respondents who though CBHI motivated households to seek modern health services (*329 respondents*) were asked further why they motivate to seek modern health care frequently, and majority (96.7%) of respondents assume that free of payment at the time of services was a prime reason. In addition, 59.4% of respondents also consider improvement in quality of healthcare services enhances health care seeking behavior from modern health care facilities. However, some of the respondents(*15 respondents*) though that CBHI do have a role in

seeking health care services, and majority of them (84.6%) forwarded that mistreatment by health providers for members were the main reason that discharged them to seek healthcare services. Limited availability of drug supply (76.9%) and lack of availability of laboratory services (69.2%) were other main reasons that put off households to seek health care services frequently. The remaining 53.8% and 30.8% of them responded that long waiting time to get services and poor referral system were reasons that discourage member households to seek health care services(*see annex –III, table-A.1, for further information*).

4.4.1. Occurrences of Illness and Immediate Responses

The process of seeking health care services start with occurrences of illness or injuries followed by immediate responses. Accordingly, respondents were asked whether any members of the household had been ill in the past three months, as depicted in table 4.7, a significant number of respondents (77.0%) were reported the occurrences of illness or injuries within the household, and the remaining 23% replied the absences of illness or injuries in the past three months. Illness conceptions understand from subjective interpretation from the perspective of individuals within the households. While individuals experiences illness or injuries, they tried different responses. In this study, households who experienced illness or injuries were asked what were their immediate treatment responses for the occurrences of illness or injuries for family members, illness or injuries. The majority of households (89.4%) responded that they visited modern health care institutions, 6% used home treatment/healing and the remaining 2.3% and 1.9% were visited traditional healer and go to holy water respectively.

Table 4.7, Occurrences of illness and immediate responses

Have you or any members of the household been ill in the past three months? (N=344)			
Yes		No	
Frequency	Percentage (%)	Frequency	Percentage (%)
265	77.0	79	23.0
What was yours or your family member’s immediate treatment response for the occurrences of illness or injuries?			
Responses	Frequency	Percentage (%)	
Visit Traditional Healers	6	2.3	
Visit Modern Health care Institution	237	89.4	
Use Home Healing	17	6.4	
Got to Holy Water	5	1.9	
Total	265	100.0	

Source: Sample Survey, 2017

To support the above responses, in-depth interview was used and one informant narrated his experiences as follow:

After I became member to CBHI scheme, I did not worry to go to health facilities immediately. [Why? Can you clarify your reason?] Before CBHI scheme, when someone in the family become sick, we can't access money immediately; either we have to wait the market day or we have to borrow from someone but, now no one is willing to give you any money. [Thinking for while] so, it was hard to go the clinics since money for rural people is hard to find. The only option we had been tried any possible solutions until patient visit health facilities. [What about now]. Now the only thing that you have to worry is having your card [CBHI membership card] and you will get any services any time you want. Consequently, I never left my card out of my pocket because it is my life insurance. Currently, we went to clinic immediately even for common cold because common cold may change to TB after a while (male, age-44).

4.4.2. Impact of CBHI Scheme on Treatment Choices

To examine the choice of treatment households employed, respondents were asked to identify what sort of treatment actions they undertake when feeling ill before and after being member to scheme and the significant number of respondents (91.0%) have responded that they visited modern health care institutions, and almost half of the respondents (51.9%) considered traditional healers as a means to remedy. Among them, only 25.7% considered to taking home remedies to get relief from illness and 1.5% go to holy water in the time of illness and injuries before they become member to CBHI scheme.

On the other hand, as indicated in table 4.8, after households join CBHI scheme considering modern health care facilities take the lion's share and almost all (99.4%) visited health care institutions for sake of remedies from illness and injuries. The reason behind such action is free accessibility of modern health care services at the time of services, and nearly all respondents consider visiting modern healthcare institutions as their first and best option of treating illness after they become member to CBHI scheme.

Table 4.8, Types of treatment that the family member/s employed before and after member to CBHI scheme

Which type of treatment/s had you or your family member employed when someone become ill the family? (Multiple responses possible)						
Before membership to CBHI scheme				After membership to CBHI scheme		
Responses	Frequency	Percent of responses	Percent of cases	Frequency	Percent of responses	Percent of cases
Visit Traditional Healers	178	30.3%	51.9%	57	12.3%	16.6%
Visit Modern Healthcare Facilities	312	53.2%	91.0%	342	73.7%	99.4%
Use Home Healing	88	15.0%	25.7%	61	13.1%	17.7%
Go to Holy Water	9	1.5%	2.6%	4	0.9%	1.2%
Total	587	100.0%	171.1%	464	100.0%	134.9%

Source: Sample Survey, 2017

However, considering other means of medication declined after the introduction of CBHI, only 17.7% considered home remedies as a means of relief from their illness and injuries. Only, a small portion 16.6% and 1.2% used traditional healers and holy water to get relief from their illness and injuries respectively.

4.4. 3. Preference to Health Care Institutions

Table 4.9, presents, the choice of households, healthcare institutions they preferred to visit in the time of illness. Consequently, the majority (65.3%) of them noted health centers as their primary choice. Of the total respondents, 16.6% showed preference to public hospital to get treatment, and 12.8% prefer to receive services from private clinic. The remaining 3.8% and 1.5% of respondents identified private hospital and village health posts were their choices as the healthcare institutions they preferred to get health services respectively.

Table 4.9, Institutional preferences to get treatment

Which medical institution do you prefer mainly to visit in the time of illness?	Frequency	Percentage (%)
Village Health Post	5	1.5
Public Health Center	225	65.3
Private Clinic	44	12.8
Public Hospital	57	16.6
Private Hospital	13	3.8
Total	344	100.0

Source: Sample Survey, 2017

4.4. 4. Access to Information and Adherences for Prescriptions

Access to information about health is important factor in health care seeking behavior. One of the assumptions of Health belief model (perceived barrier), emphasize on the individual's reminder to health care seeking behavior action including media, friends, family, or well known citizens can provide an impetus for prevention and services utilization. The absences of cues to action reduce the likelihood of prevention and services utilization. Thus, the individual's choice to utilize health services is contextually dependent (Wolinsky 1988).

Accordingly, table 4.10, presents the health seeking behavior of respondents depending on consultation habit and information accesses about healing of diseases in modern health facilities and majority 94.5% of respondents have been accessed information from health extension workers, and more than half (%50.9%) were able to get information from healthcare service providers from health center and hospitals. In additions, nearly half (47.1%) of respondents did have access information from medias such as, mobile(mobile radio), radio, television and the remaining 40.4% and 4.4% access information from CBHI workers and their neighbors respectively. Furthermore, small portion of the respondents (2.9%) got information from their family members about healing of diseases in modern health facilities.

Table 4.10, Information access about treatment of diseases in modern health facilities

How do you get information about healing of diseases in modern health facilities (<i>Multiple responses possible</i>)	Frequency	Percent of responses	Percent of cases
Family Members	10	1.2%	2.9%
Neighbors	15	1.8%	4.4%
Health Extension Workers	325	39.3%	94.5%
Community Based Health Insurances Workers	139	16.8%	40.4%
Healthcare Service Providers from Health Center and Hospitals	175	21.2%	50.9%
Mass Media	162	19.6%	47.1%
Total	826	100.0%	240.1%

Source: Sample Survey, 2017

Moreover, access in terms of distances from health facilities differs among respondents. Depending on the information gathered from respondents (*see annex –III, table-A.1, for further information*), the time it takes to visit closest health center and hospital from home in hour/s for an adult person varies much significantly. Accordingly, fairly large number of respondents (46.5%) got access to health center within 1 to 2 hours journey. Considerably large number of

number of respondents (29.4%) travel between 2-3 hours to get health center. The remaining 21.5% and 2.6% can access health center less than 30 minutes and between 3 and 4 hours of travel on foot respectively. However, majority of the respondents (66.3%) should travel a journey of more than 6 hours on foot to get hospital and 27.1 % of respondents expected to travel between 2 and 4 hours. Only 5.4% can access hospital less than two hours travel on foot and the remaining 1.2% can get hospital with in 4 and six hours.

However, data from informants and respondents showed that being membership to CBHI scheme did not bring changes in terms of access in closest distances. All health facilities established before CBHI scheme implemented.

Regarding adherences, KIIs uncover that though, patients' services utilization increases, their level of awareness about compliances limited. For example, one of my key-informant stated the condition of patient compliance as follow:

Despite increase in services utilization, due to low awareness, insured patients insist to get specific drugs especially, injections without the prescription of the health professional. Other patients visited health care frequently and change drug frequently though, they did not know the side effect (health professional, age-47 and 19 years work experiences).

4.4.5. The Impact of CBHI in Promoting Delay and Utilizations of Healthcare Service

One of the prime objectives of CBHI scheme is to facilitating conditions that brought remarkable change in the health services utilization of the rural community. Thus, the facilitating role of CBHI scheme on visit of health facilities and minimizing delay¹⁷ could be assessed from the perspectives of the rural dwellers (member households) and real actors or healthcare providers. Accordingly, health service utilization or numbers of visits of healthcare facilities for the last three months presented in table 4.11, as a result, nearly half (45.3%) of respondents have visited 1-2 times. Of the total respondents, considerable number of respondents (33.3%) did not visit health care facilities. Moreover, 16.3% of respondents visited 3-4 times and 4.4% of respondents

¹⁷ **Delay:** for the purpose of this study, delay referred for patients who forgo seeking medical treatment at least for two days, after illness occurred.

visited 5-6 times in the past three months. A small portion of respondents (1.7%), were visited health care facilities seven and more times in the past three months.

Table 4.11, Health service utilizations and delay

Health service utilizations, delay and reasons for delay		Frequency	Percentage (%)
Health service utilizations or number of visit for the last three months	0 (Zero)	111	32.3
	1-2 time/s	156	45.3
	3-4 times	56	16.3
	5-6 times	15	4.4
	7 and more	6	1.7
	Total	344	100.0
Number of days delayed after illness occurred	0(No Delay)	122	50.4
	2-4 Days	101	41.7
	5-7 Days	7	2.9
	8-10 Days	8	3.3
	After 15 Days	4	1.7
	Total	242	100.0
Reasons for delay to seek modern Health facilities	Home Treatment	20	16.8
	Visit traditional healers	4	3.4
	Got to Holy Water	5	4.2
	Forgone Minor Illness or Injuries	90	75.6
	Total	119	100.0

Source: Sample Survey, 2017

Furthermore, one key informant explained the condition of change in services utilization as:

Throughout the year, there are high rate of utilization especially at the end of agreement season. Some households come to health facility even if they are not sick. They side that they paid a one year service agreement, but the agreement will expired within days before they use it once even though others used for several times. However, within the time of agreement and renewal period no one come to health facility because within that gap [maximum of one month] payment is out of pocket; the one who came to get service go back without getting it and said I will come when CBHI scheme became functioning. Within that time frame work “we have annual leave even though, we are in duty” because only few patients come to health facility. This showed that CBHI scheme have

the potential to promote health care seeking behavior and health service utilization. “ሠው ታሞ አልጋ ላይ ተኝቶ ህመሙን የሚያዳምጥበት ጊዜ አብቅቷል፡፡” [currently, no one stayd in bed and lesson their suffering] they went to health facility any time for any case (male, age-41 and 9 years work experiences).

The above narration showed that in rural communities, drug and injection did not considered equally as a medication for illness even though scientifically they considered equal medically in different circumstances. Most people prefer injection over drugs.

Following their visit, households asked when they visited health care services after they experienced symptom of illness or injuries, to examine delay, and about half of respondents (50.4%) responded that they visited modern health care facilities without any delay and a considerable significant number of respondents (41.7%) were visited within 2-4 days after they experienced illness or injuries. Among the respondents, 3.3% were delayed 8-10 days to visit health care facilities and the remaining, 2.7% and 1.9% of them responded 5-7 days and after 15 days since they experiences illness or injuries respectively.

In addition to data from survey, one of the key informant health care professional stated the impact of CBHI scheme on delay as follow:

CBHI scheme minimize delay to seek health care services. Nowadays, people come when feel the symptom because they did not expected to find money or sell anything to get money for payment; it is free once they paid the annual premium. They come immediately, this reduce before they expose to serious health problem due to delay which also protects the health facilities from much expenditure because when delay exist, the illness become serious that needed costly health care services. Households also benefited because they can turn back to work without delay since they can recover after a while. Patients come for every type of illness without any delay. However, non members' come after a week or 15 days when their condition worse and they exposed for high cost and prolonged treatment (male, age-47).

However, as presented in table 4.11, respondents who have delayed to visit healthcare institutions (119 respondents) were further asked to indicate the reason for their delay. Consequently, majority (75.6%) of respondents forgone minor illness or injuries; they believed that their illness were not serious that can be heal without seeking medical attention but they are

prone to go to medical facilities if their condition worsen. Of the total delayed respondents, 16.8% and 4.2% of them delayed due to their choice to recover from their illness through home treatment or healing and holy water respectively. Only 3.4% of them responded visit traditional healers were their main reason for their delaines to receive health care services from modern health care institutions. In addition, one in-depth interview informant stated why she delayed to seek medical services immediately as follow:

Though, I am member to CBHI scheme, I did visit health facilities immediately hence, I thought I might be fine without seeking medical treatment. I prepared “atsmit” [gruel] and took it. I waited four days but I was not recovered from my illness so, I came to health facility today (Female, interviewee, age-28).

4.4.6. Frequency of Healthcare Utilization in terms of Sex and Age Categories

Fig. 4.3, depicted, the percentage of illness in terms of sex and age for the last three months, and female aged 15-64 years (31.2%) visited health services more frequently followed by male aged 15-64 years, and children aged below 5 years (20.4%) put in third place. Among the respondents, female aged 6-14 years accounts 11.2%, and male aged 6-14 years constitutes 6.8%, the remaining 3.6% and 1.2% covered by female and male aged 65 and above years respectively.

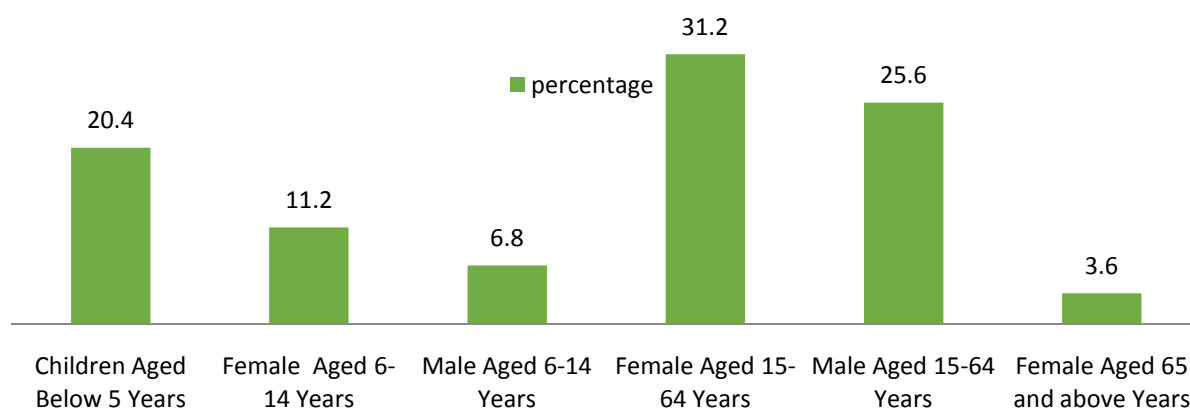


Fig 4.3, percentage of health care service utilizations in sex and age categories

Source: Sample Survey, 2017

4.4.7. Predisposing Factors (Socio- Demographic Characteristics) and Health Service utilizations

Different inferential statistical were employed to examine variations in health services utilization socio-demographic factors following socio- behavioral model of Anderson and Newman. In view of that, T-Test and one way ANOVA were used to test group differences and Pearson correlation for correlation test. T-test was used to test whether there is statistically significances difference between male and female headed households health services utilization. The result of the test showed that the test statistics is significant at $\alpha = 0.01$. Consequently, the test statistics implied that men and women did not have similar visit of modern health facilities in the last three months.

Table 4.12, Socio-demographic (predisposing) characteristics and health services utilization of Respondents

		Health services utilization or number of health facility visits		
Predisposing factors (characteristics)		Frequency and Percentage	Test statistics	Significances at $p \leq 0.005^*$ or $p \leq 0.001^{**}$
Sex	Male Female	265(77.0%) 79(23.0%)	T-Test	0.001
Age	18-35 36-50 51-64 65 and Above	57(16.6%) 151(43.9%) 70(20.3%) 66(19.2%)	Pearson Correlation	0.002**
Religious Affiliation	Orthodox Muslim Catholic	19(5.5%) 324(94.2%) 1(.3%)	One way ANOVA (F-Test)	0.586*
Marital Status	Married Never Married Divorced Widowed	301(87.5%) 5(1.5%) 20(5.8%) 18(5.2%)	One way ANOVA (F-test)	0.198*
Household Size	1 2-3 4-5 6-7 Above 7	5(1.5%) 33(9.6%) 169(49.1%) 106(30.8%) 31(9.0%)	One way ANOVA (F-Test)	0.002*
Household Size	1 2-3 4-5 6-7 Above 7	5(1.5%) 33(9.6%) 169(49.1%) 106(30.8%) 31(9.0%)	Pearson Correlation	0.001**
Highest Educational Level of Head of the Household	Can't Read and Write Can Read and write Primary Education (1-6) Secondary Education(7-12)	183(53.2%) 79(23.0%) 62(18.0%) 20(5.8%)	One way ANOVA (F-Test)	0.033**

*= significant at $p \leq 0.005$, significant ** at $p \leq 0.001$

Source: Sample survey, 2017

One way ANOVA was employed to examine group differences of health services utilization due to different predisposing variables were tested; between different household size, level of education, religious affiliation and marital status. As a result, the former two predisposing variables are statistically significant at $\alpha = 0.05$. The test statistic provided evidence on variations in household size and level of education brought variations in health services utilization between each group. However, the test statistics for religious affiliation and marital status do not provide statistical significance at $\alpha = 0.05$. Provide that, there are no variations in services utilization between different religious groups, between different marital status, and level of income.

To examine relationship between continuous variables such as age and services utilization, and household size and services utilization Pearson correlation was employed. As a result, the test statistics showed that there is statistically significant slightly weak positive relationship between age and services utilization from modern health facilities for the last three months ($r=0.16$ at $p<0.01$). Similarly, between household size and services utilization there is statistically significant strong positive relationship at ($r=0.73$ at $p<0.01$). The above two claims confirm with results from different literature. For example, Jutting (2003) claim that health services utilization is strongly correlated with age and family size, added that, chronic illness is more common in old age group which results frequent visits of health facility, and when family size become large the probability of illness in the household increases that brought demand of services utilization.

4.4.8. Enabling factors and health services utilization

Enabling variables are among factors that promote or discourage health services utilization from modern health care facilities. Accordingly, from the enabling factors being membership to CBHI scheme and access to information (means of communication like, TV, radio, mobile) that provide health information on health services utilization tested through T-Test. As a result, being membership to community based health insurances and being non member is statistically significant at $\alpha = 0.01$. The test statistics proved that being membership to the scheme and non membership did have differences in health care utilization. Similarly, access for means of communication is statistically significant at $\alpha = 0.01$. Those members who have means of communication and those who did not have them varied in their health services utilization.

Table 4.13, Enabling variables and health services utilization of Respondents

		Health services utilization or number of health facility visits		
Enabling factors (characteristics)		Frequency and Percentage	Test statistics	Significances at $p \leq 0.005^*$ or $p \leq 0.001^{**}$
Bing membership to community based health insurance	Yes	313(91.0%)	T-Test	0.000
	No	31(9.0%)		
Level of Household Income	High	50(4.5%)	One way ANOVA (F-Test)	0.382
	Middle	135(39.3%)		
	Low	159(46.2%)		
The time it takes to visit closest health center from home in hour/s for an adult person	30-59 minutes	74(21.5%)	One way ANOVA (F-Test)	0.948
	1-1 Hours and 59m minutes	60(46.5%)		
	2-2 Hours and 59 minutes	101(29.4%)		
	3-3 Hours and 59 minutes	9(2.6%)		
Access to media that provides information about health	Yes	192(55.8%)	T-Test	0.000
	No	152(44.2%)		

***= significant at $p \leq 0.005$, significant ** at $p \leq 0.001$**

Source: Sample Survey, 2017

However, the test statistics from one way ANOVA indicated that time takes to visit nearest health center is not statistically significant at $\alpha = 0.05$. Peoples from different distances and their utilization of services were similar due to the fact that, 97.4% of respondents can access health center within three hours. Moreover, the test statistics is not statistically significant at $\alpha = 0.05$ for groups who have different level of income. Households who have high, middle or low income did not differ in their health services utilization from modern health facilities in the last their months. Hence, the prime role of CBHI scheme is to cross-subsidize households and reduce financial barriers so that every member can use health services any time; when services needed.

4.4.9. Change in health services utilizations over years in the study area

As indicated in the table 4.17, below, since the beginning of CBHI scheme both membership to the scheme and health care services utilization increased over years. However, visit to modern health care services or utilization of services increase more than membership and rate of health care utilization increases over time. The data from *Tehuledere* District offices showed that utilization rate (total visit per person per year) increase dramatically from 0.33 visits per individual in 2011 to 1.44 visits in 2016 from modern health facilities.

Table 4.14, Change in services utilization from modern health facilities (2011-2017)

Year	2011	2012	2013	2014	2015	2016	2017
Total member (household level)	9,338	7,214	12,450	13,910	12,830	11,998	14,703
Total member (individuals level)	38, 439	24, 897	50, 262	61, 550	63, 175	65,238	Data not available
Total visit(utilization) inpatient + outpatient	12,829	32,290	46,815	78,492	82,657	94, 247	
Annual rate of health care utilization (visit per individual)	0.33	1.29	0.93	1.27	1.31	1.44	

Source: Source: Tehuledere District CBHI Office, 2016/2017

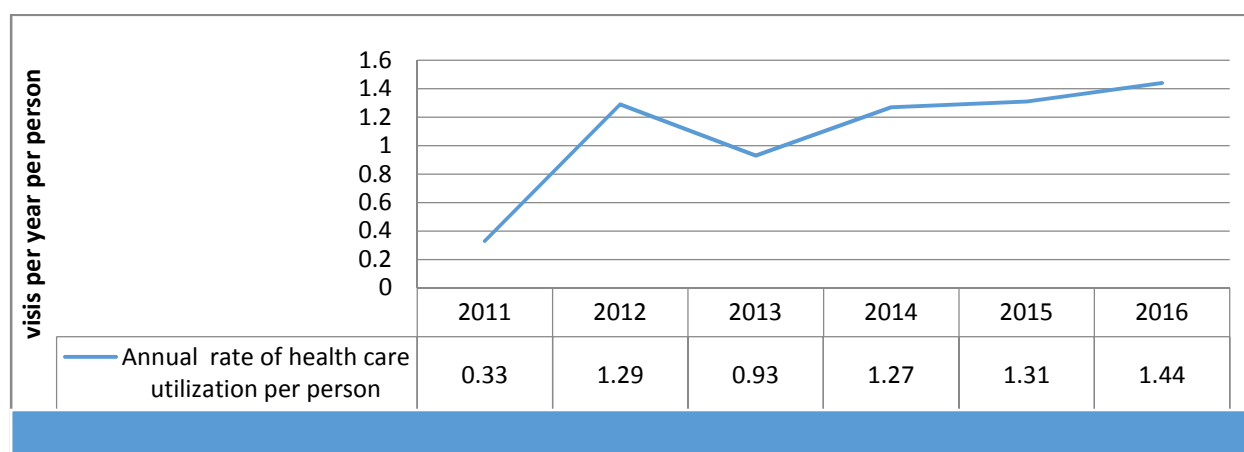


Fig.4.4, Annual rate of health service utilizations per individual (2011-2016)

Source: Tehuledere District CBHI Office, 2016/2017

In general, the data obtained from respondents, KIIs, FGD participants and IDIs, membership to community based health insurance enables households to access health facilities frequently without difficulties of payment at the time of services. Removal of out of pocket payment directly or indirectly affects delay to seek services from modern health facilities. In additions, CBHI scheme increases access and utilization because of lowers the price of health care. Consequently, based on the results of the study enabling variables (especially being membership to CBHI scheme) was more significant in determining health services utilization than predisposing or need characteristics.

However, this study also revealed that, being covered by community based health insurance can be expected to affect individual healthcare seeking behavior through several district mechanisms. First, individuals feel safer with CBHI and thus take on more risk (preventive care declines) in the presence of insurance, which brought moral hazard problem. Second, insurance may change

the choices individuals make once health problem arise. Data from KIIs and IDIs confirm that households needed referral services and high cost treatment such as X-ray and Ultrasound for minor health and a shift towards increased service utilization. Last, non compliances for prescription and low adherences rate bring unintended dysfunction. For example, Medical resistances created due to non adherence for medication. After medical resistances created, the patient needed high cost of treatment. Moral hazards and unintended dysfunctions bring negative health outcomes directly or indirectly on patients in particular and communities in generals.

4. 5.Attitude of member households and perception of frontline health services providers towards CBHI scheme

4.5.1. Households attitude towards CBHI in prompting health condition of the community

Summated scales used to examine overall score represents the respondent’s position on the continuum of favourable and unfavourableness towards an issue (Uebersax 2006, Kothari 2004). Accordingly, a ten item statements assessing role of CBHI scheme on health care seeking behavior and promoting quality of services , affordability of the scheme, thrust and ownership, treatment of patients, risk pooling and sustainability of the scheme (*See annex -I section VI for detail information*) were developed to measure the perceived attitude of respondents.

Table 4.15, Likert scale measurements Adopted from Kothari, 2004 and Likert, 1932

1	2	3	4	5	
Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Common Likert scale measurement of attitude
10(minimum)	20	30	40	50(Maximum)	Sum of score for the 10 items likert scale
Measurements (10-29) unfavorable attitude towards CBHI scheme		Measurement(30) A neutral attitude towards CBHI scheme	Measurements (31-50) favorable attitude towards CBHI scheme		Attitude towards CBHI scheme
Most unfavorable	Unfavorable	Neutral	Favorable	Most Favorable	Degree of attitude towards CBHI scheme

As a result, summated measure of attitude of respondents about Community based health insurances in promoting health promoting health condition of the community was classified into three levels based on Kothari (2004) measurement and analysis of Likert scale. Accordingly, table 4.16, shows that vast majority of respondents 321(93.3%) have favorable attitude towards

CBHI scheme in promoting health condition of the community, the remaining 17(4.9%) and 6(1.7%) have unfavorable and neutral attitude towards CBHI scheme respectively.

Table 4.16, Households’ attitude towards community based health insurances.

Attitude of insured household towards CBHI Scheme in promoting health condition of the community		Frequency	Percentage (%)
unfavorable attitude towards CBHI scheme	10-29	17	4.9
A neutral attitude towards CBHI scheme	30	6	1.7
favorable attitude towards CBHI scheme	31-50	321	93.3
	Total	344	100.0

Source: Sample Survey, 2017

In addition to the summated scale results informants were asked to investigate their view regarding CBHI scheme. Accordingly, one of in-depth interview informant narrated her perception about CBHI scheme as:

Since the introduction of CBHI people become equal when it comes to health care, after we paid 240 birr. ጠፍ መድሃኑን ልክ እንደ ፈጣሪ ሁሉን በአንድ አይን ነው የሚገኝ ከተውደሀኛ ሀብታም አይለይም ሁሉም እኩል ነው። ሌላ ወምነ ገር እንዲህ በሆነ፡፡ (CBHI treated everybody equally like God, there is no difference between rich and poor, I hope everything happen to be similar to CBHI) “ጠፍ መድሃኑን የደህ የሀይወት ዋስትና ነው” (CBHI is life insurance for the poor) (female, age-42).

4.5.2. Attitudinal variations in various group category towards CBHI scheme

Inferential statistics was employed to see attitudinal differences and relationship of following socio-behavioral model of Anderson and Newman. In line with this, T-Test and one way ANOVA were used to test group differences. T-test was used to validate the significance of sex of the respondents and their attitude towards health insurances. The result of the test showed that the test statistics is significant at $\alpha = 0.01$. Consequently, the test statistics showed that men and women did not have similar attitude towards CBHI scheme.

Table 4.17, Attitude of insured household towards Community Based Health Insurance Scheme in promoting health condition of the community

Predisposing factors (characteristics)		Frequency and Percentage	Test statistics	Summated scale score values about attitude towards CBHI scheme Significances at $p \leq 0.005^*$ or $p \leq 0.001^{**}$
Sex	Male Female	265(77.0%) 79(23.0%)	T-Test	0.000*
Age	18-35 36-50 51-64 65 and Above	57(16.6%) 151(43.9%) 70(20.3%) 66(19.2%)	One way ANOVA	0.608*
Highest Educational Level of Head of the Household	Can't Read and Write Can Read and write Primary Education (1-6) Secondary Education(7-12)	183(53.2%) 79(23.0%) 62(18.0%) 20(5.8%)	One way ANOVA	0.001*
Level of Awareness about community based health insurance	Low Moderate High	44(12.8%) 139(40.4%) 161(46.8%)	One way ANOVA	0.000*

*= significant at $p \leq 0.005$, significant ** at $p \leq 0.001$

Source: Sample survey, 2017

Furthermore, one way ANOVA was employed to examine group differences towards CBHI scheme due to predisposing variables such as, age group, highest educational level of head of the households' and level of awareness about community based health insurance. In view of that, test statistics for age was not statistically significant which confirms that variations in age group did not have impact in health care services utilization. However, the various educational levels of respondents have an impact on the attitude of community based health insurances. Similarly, level of awareness about community based health insurance is significant at $\alpha = 0.05$. This implies, having different level of awareness (low, medium or high) due have an impact on attitude towards CBHI scheme.

4.5.3. Community based health insurances and work load on health care services providers

The introduction of community based health insurances have been enabled health professionals to provide services in some degree of freedom to prescribe the appropriate diagnostic test and drugs without any reservations about the ability of the CBHI member to pay. Before the introduction of CBHI scheme prescriptions were based on what they thought the patients could afford. However, free of payment at the time of services alter households' perceptions about healthcare utilization. Unbalanced increase between health care utilization and healthcare

professional brought work load on health care providers in general and frontline workers in particular.

Professionals pointed out that CBHI scheme has increased their workload without increasing their financial (salary) and/or non-financial compensation and incentives. For example one of key informant stated the work load as follow:

One day one household come with his entire family member (5 members) and he needed five cards. However there were patients who were severely ill. There was a fight with the man who gives card service to wait at least until those who serious ill got services. But he claims he has the right to get check up any time he want for all his family because they are all insured. This type of misused and over utilization brought problem in quality because if there are many clients the professional focused on giving services for all than assuring quality. Due to long waiting time laboratory service become difficult to provide for everybody (health professional, male, age-41 and 9 years work experiences).

According to data from professional KIIs, people misunderstand the program and misused the services. Sometimes members perceived that once they become member to CBHI they claim to get services any time without any regulation.

For example one of my key informant health professional stated his experiences about the work load in the health facility as follow:

They needed services in the weekend (Saturday and Sunday) at lunch time, even if it was not emergency services. Over pass to hospital without any referral, is another challenge, members thought that they can get reimbursement for their out of pocket payment for the services they used in hospital any time without referral. However, if they did not follow the right procedure set in CBHI guidelines they did not get re-fund. During this time they developed negative attitude towards CBHI scheme (professional, male, age-37 and 7 year work experience).

Similar to the above claim, one of the health professional in Segilen health center stated work load is rippled:

After the introduction of CBHI work load on professional tripled due to increase utilization of services. For example in the past our health center [segilen] give services for 50-60 patients per day, but currently this number tripled and we have provided services 150-160 patients per day. However, number of staff did not increase proportionally with the increased in demand of utilization (key informant health professional, age -43 and 11 years work experiences).

Similarly, another female health professional, age- 35 with 7 year work experience stated the work load as follow:

Sometimes patients come twice a day. In the morning, they came and examined by one professional, if the professional prescribe drug (tablets), they threw it away and come back in the afternoon to seek injection by other professional by having new card for afternoon. They claim they did not come before and have new card because if they use the card they use the morning the professional know his morning visit on the chart.

According to professionals in all health centers, work load increase due to increase in health care services utilization. Utilization before and after the introduction of community based health insurance in the sample healthcare facilities is provided in the following table. Similar to the results of KIIs from health care providers work load tripled in all health institutions as indicated in the following table. For example, in *segilen* health center health service utilizations increase from 50-60 patients per day to 150-160 patients per day. Similarly, in *haik* health center utilizations increases from 40-70 per day to 250-350 patients currently.

On the contrary from the professional side, there have been cases of reported moral hazard on the part of providers and their staff. For example, lack of professional motivation and poor treatment of members, over-prescription of services including drugs and diagnostics, prescribing the same medicine repeatedly although it is not helping the patient; which brought difficulties on services utilization of members in particular and the sustainability of the scheme in general. Moreover, regarding the condition of work load and workers perception, one of the key informants among the health professionals stated professional moral hazards as follow:

There are health care professionals who are not interested in the implementation of CBHI program. [Why?] Before the implementation of the program most of them did not have work load. But now, all healthcare professionals work load tripled in most health care facilities. On the other hand, there are no incentives that compensate the work load. Consequently, some professionals are interested if the program phase out and they mistreated members of CBHI scheme to force them to drop out from the program (male, key informant, age- 47, and 17 years work experiences).

Furthermore, one of the health professional key informants (female, age-37 with a 9 years work experiences) explained her experiences how their work load become perpetuate as follow.

I was here for nine years and I know the behavior of this community. [Can you explain?] Before the introduction of CBHI, no one come unless their health condition is worse because they expected to pay for any services they get. But know there are people who come for shopping to the market; as you look the health center is near the market [pointing to the market place], after completing their shopping they drink alcohols and chew kchat, and they come to us and claim they feel headache. When we check up, we are not looking a patient rather a drunken man and smell of alcohol. They come because it is free, if you told them why they drink and come they allege that they have the right to use whenever they went because they once paid, and that is the agreement they have with CBHI scheme.

In addition, one of the health care professional key informants strengthens the above claims in the following statement:

The introduction of CBHI brought additional work load to us. Currently, we have many responsibilities for example, community mobilization in rural village, organizing 1 to 5 development army for health care and examining patients in the office. የሚሰጠው ጤና አገልግሎት ለአገልግሎት ለሌሎች ጥሩ ለአገልግሎት መገኛ ነው፡፡ [CBHI is good for clients (members) but bad for health care providers.] Some patients come to health facility without having their membership card and needed the services which is impossible to do. Some others have two names for one individual (one name in patient card and anther name in membership card). If the two mismatch it is not possible to give services. This showed low awareness of

households about CBHI scheme. However, for patients who come in proper channel they can get services amount equals to 60,000 birr services once they paid 240 for membership premium (key informant, female age- 35 and nine years work experiences).

In general, this study revealed that most member households do have positive attitude towards community based health insurance. Community based health insurance become an opportunity to enhance affordability of health care services, and promote access for health care services utilizations in the study area. However, some households do not have positive attitude towards the scheme; especially due to poor treatment by health care professionals and low quality of services. On the other hand, work load tripled due to high services utilization; which brought high work load on health services providers. Moral hazards from members and health care professionals were an issue that did not get attention but hinders health care provisions in the study area.

Chapter Five: Discussion, Implication and conclusion

In this section, summary of major findings, implications (policy intervention, theory and research implications) and concluding remarks presented accordingly.

5.1. Discussion

The ultimate goal of this study was to examine and understand health care seeking behavior and services provision in response to the introduction of community based health insurance scheme in rural Ethiopia; particularly on *Tehuledere* District in *South Wollo Zone*.

To this end, though, issues related to this topic of the study are multifaceted, the study set out to examine the following specific objectives: understanding and describing about the appropriateness in CBHI scheme plan and implementation, examine change in health care seeking behavior and services utilization, investigate quality of health care services due to the introduction of the scheme, and investigate attitude of member households and perceptions of frontline health services providers about CBHI scheme. In line with this, extended basic community based health insurances model, socio-behavioral healthcare utilization model and health belief model were employed to guide the study.

To this effect, mixed research approach used to gather data from 344 respondents (70% male and 30% female) through household survey and informants of IDIs, KIIs and FGDs. Accordingly, primary data were collected from the aforementioned respondents and informants to address the objectives of the study. Additionally, Secondary data were also used to review; research documents, community based health insurances guidelines, for supporting the research findings and theoretical framework as a guide with the study findings. By systematically analyzing the information gathered from various data sources (household survey, IDIs, KIIs, FGDs and secondary sources) insight and experiences the researcher has drawn possible substantial account of the issue being studied and major findings were presented.

According to the data obtained from the survey, socio-demographically, most respondents were male since in rural areas decision making power is more common for male and public activities (process during membership) were more determine by men. As far as age concerned, majority (46%) respondents were with age group of 36-50, and significant majority (94.25%) belongs to

the same religious category (Muslim), among the respondents, most of them (87.5%) are married. Regarding family size, half of respondents do have family size of 4-5 members and more than half respondents can't read and write; which is common in most rural society, and most of them belong to middle and low income level.

Community based health insurance is voluntary membership in principle that prone to the so-called adverse selection problem: the people most likely to join a voluntary scheme are high-risk individuals such as the chronically ill, family with large family size and old aged who anticipate a high need for care. Due to this self-selection, the claims made to the scheme will exceed its revenues by far if premiums are based on the average risks in the community. An evaluation of the community health fund in rural Tanzania found that 52 % of the sampled member households reported at least one person suffering from a chronic ailment. But as only about 6% of the target population was insured and premiums were pooled with revenues from user fees paid by the non-insured (Musau 1999).

Unlike, the above claim, the finding of this study verified that Ethiopian community based health insurance in general and study area in particular membership to the scheme is at household level to enroll; to make sure that membership is composed of both healthy and sick people. Furthermore, waiting periods should be established to prevent people from joining just after they have fallen ill. To avoid adverse selection based on health condition and family size all members expected to pay similar amount of payment or 240 birr for one to five family member household, and additional 48 birr requested for additional family member that grants financial sustainability and avoid adverse selections.

According to Musau (1999), the degree of community participation in the design and running of the CBHI can vary widely and is usually greater if funds are owned and managed by the members themselves than if schemes are run by health facilities to avoid moral hazards (Musau 1999 ; Jutting 2003). However, different to the finding of the above study, this study revealed that community sense of belongingness and ownership in management and administration of the scheme is limited to *Kebele* administrative, District officials and some community members; considerably large number of respondents (32.1%) were either disagree or undecided about their

participation in CBHI scheme management and administration. The reason for this was having low awareness about rights and responsibilities included in the scheme frameworks.

Successful CBHI models show that there are important conditions for CBHI to consider during plan and implementations for example, existence of a minimal level of (perceived) quality of care and gradual improvement of quality at the supply side, sustainable risk pooling system and additional resources mobilization for health, instituting adequate organizational practice and design including responsiveness to people's felt needs by the scheme management (Anagaw *et.al* 2013; Bennett 2004; Ekman 2004). Furthermore, government commitment and political will with clear action plans, national, regional and local scope of implementation, existence of regulatory frameworks, the unequivocal commitment to subsidize and finance the premium for the poorest in society, voluntary membership and appropriate benefit package are pillars in the implementations of CBHI scheme.

Accordingly, Ethiopian community based health insurances bases the aforementioned important conditions and additional contextual parameters during the design of the scheme.

This study revealed that though, concurrence noticed in most parameters design and implementations, there were gaps in the design and implementations of CBHI scheme in the study area. For example, currently, the *kebele/tabia* administration plays a critical role in registering scheme members and collecting premiums. However, some *Kebele* administrative force households during collecting premiums, enrolling new members, the existing principle of premium collection on a voluntary basis are sometimes violated. Provide that, 13.1% of member households claimed that they were forced by *Kebele* administrative memberships to join the scheme. Similarly, awareness level about community based health insurances showed limitations; most of the times, according to FGD discussants and KIIs awareness raising trainings have been limited to few *Kebele* and District officials; most members do have erroneous or low attitude about the scheme.

On the other hand, all health facilities visited by the researcher asserted that they provide all of the services that are expected at their level, which were confirmed by majority of respondents (79.7%), were received appropriate benefit package services in those health facilities. *Tehulerdere* District is exemplary in providing services for indigents (fee waivers) about 10.08%

of the District population entitled to fee waiver services which is more than what was designed (10%). Premium payment collection for extra family members (when family member greater than five) is considered as best opportunities for sustainability of the scheme and to avoid adverse selection.

In addition, the finding of the study disclose majority respondents (59.9%) and most informants said that the introduction of CBHI has increased overall quality of health services both in inpatient and outpatient services, especially, laboratory services, referral system and cleanness of the facilities. In addition, by increasing utilization, CBHI scheme generating more resources for contracted health facilities, resources that they can invest in improving quality of care. Yet, beside increase in overall quality of services, due to high utilization and patient in flow, quality of services in some indicators such as, long waiting time, drug shortage and miss treatment by health care providers were considered challenges that brought less quality during service provisions.

Based on the study finding, satisfactions of members got from health facilities relatively increased due to the introduction of CBHI; prior to CBHI scheme, only 61,1% were satisfied by the services they received, however , this percentage rise to 75.3% after the introduction of community based health insurance due to absences of payment and increases in overall quality of services. Yet, some portion of households (24.7%) were dissatisfied as a result of mistreatment by health services providers, limited drug supply, limited laboratory services and long waiting time.

Before the introduction of CBHI scheme, by triggering high economic costs for health care services, households were severely threaten by high out of pocket payments and patients were vulnerable for prolonged chronic illness that come from delay to seek treatment. Despite this great risk in many often neither the government nor the market offers appropriate and affordable health insurances for poor households. Results suggested reduction in out of pocket expenditures; of the total sampled households 71.5% of households protected from extra out of payments (other than premium payment for the scheme). However, due to problem of reimbursement and lack of awareness about the procedure in services utilization through community based health insurances channel, considerably large numbers of respondent (28.5%)

households were exposed for additional healthcare payment (ranging from one to more than four hundred birr) in the last three months even if they are member to CBHI scheme; which may result dropouts from the scheme. However, this study indicated that 86.1% of respondents considered the payment level with in very cheap and moderate categories; they prefer payment of the scheme over user fee payment.

The study confirmed that most households (77%), experienced illness or injuries of one or more family member in the last three months. Following their illness, majority of respondents(89.4%), and all of the IDIs prove that their main immediate response were visiting modern health facilities due to the fact that, following the introduction of community based health insurance; better financial protection (free services at the time of use) for members when seeking care were main reason to seek care soon.

Moreover, the sensitization program by CBHI scheme officials when schemes were established continued community mobilizations efforts of the facilities, awareness from health extension workers, information from media, motivations by neighbors and family members were reasons to seek care from modern health care institutions, which was not the case before. In line with this, nearly all (99.4%) participants are interested to visit modern health facilities after the introduction of CBHI; which were 91.0% before the introduction of CBHI scheme. On the other hand, significance of visiting traditional healers decline from 51.9% before to 16.6% after the introduction of CBHI scheme and their preferences of health care institution were mainly (65.4%) public health centers.

The finding of this study similar to other studies; for example, after the introduction of the CBHI, in the Democratic Republic of Congo the hospital admission rate among the insured increased dramatically, reaching 1.57 visits per individual per year and being five times (0.31) higher than among the non-insured. In Rwanda alike, the hospital admission rate among members of the was about 1.5 and only 0.06% among non-members, which means that the insured used hospital care 23 times more than the non-insured did(Musau 1999). Comparable, health services utilization in the study area increases from 0.33 visits per person in 2011 to 1.44 visits in 2016; which 4.4 times from the previous services used.

Furthermore, the finding of the study discloses the differences and association of predisposing (socio-demographic characteristics), enabling and need variables with the test variable health services utilization through different inferential statistical analysis such as, T-Test, One way ANOVA and Correlation (Pearson correlation) analysis. Consequently, the test statistics infers predisposing characteristics such as, sex, household size and educational level were statistically significant; and shows group differences on the aforementioned variables in services utilization in the last three months. Additionally, positive relationship between age and household size to health services utilization is notice. Unlikely, differences in religious affiliation and marital status is not significant, and there were no differences in services utilization between those group categories. What is more, significances of enabling factors were tested and being membership to the scheme and accesses to information about health brought variations on healthy services utilization. However, having different attitude towards CBHI scheme and distances from nearest health center is insignificant to create variations in services utilization among groups.

According to data from IDIs, KIIs and FGDs, in some health facilities, health professionals (newly employed) did not have adequate awareness of CBHI principles and of what is expected of them. This is one reason for reports of provider's mistreatment of members during health service utilization. In addition, limited health providers understanding of CBHI functioning brought confrontations with clients, and discourteousness toward clients.

There is general agreement that the defined benefit package is adequate. However, improving quality of care were limited in health facilities in some indicator of quality, specifically, adequate and sustainable drug supply, proportional professional per patient composition, adequate medical equipments, awareness raising both for members and providers are important to promote quality of care. Yet, some health facilities are not complying with the contract they signed. They do not provide the complete benefit package. They lack drugs and medical supplies and so, refer members to other facilities for certain services and commodities. Similarly, for example, a study by EHIA (2015) verifies that availability of drugs and required diagnostics at the facility of first contact is the most important factor for households to join and/or sustain CBHI membership. If these problems are not addressed, CBHI achievements might not be maintained.

As noted above, some contracted health facilities lack drugs and medical supplies and so refer members outside the network for services. It is often difficult and sometimes impossible for these members to get reimbursed for the cost they incurred at out-of-network facilities because most of them are not will aware the process of reimbursements needed.

Delay to seek medical services are now improved due to free access at the time of services it helps to remove barriers to access to health care, which means that utilization of formerly under-utilized facilities increases and patients show up before their illness become serious. However, CBHI can also cause moral hazards and inefficiency if no referral is required at hospitals: people will go directly to the hospitals to seek treatment even when suffering from minor ailments that could be taken care of at local health center or health posts. Even if care at both primary and secondary facilities is included in the benefit package, many people prefer to go directly to the hospitals in case no referral is required, because they expect the quality of care to be superior there. As the provision of care is more expensive at the secondary level, the introduction of community based health insurance can worsen existing inefficiencies in the absence of a proper referral system (Jutting 2003, Bennett 2004)

Moreover, this study revealed that, being covered by community based health insurance can be expected to affect individual healthcare seeking behavior through several district mechanisms. First, individuals feel safer with CBHI and thus take on more risk (preventive care declines) in the presence of insurance, which brought moral hazard problem. Second, insurance may change the choices individuals make once health problem arise. Data from KIIs and IDIs confirm that households needed referral services and high cost treatment for minor health and a shift towards increased service utilization.

In addition, non compliances for prescription and low adherences rate bring unintended dysfunction. Accordingly, this study confirmed that, even though utilization increases, problem of compliances become common in all visited health facilities. Patients visited health facilities frequently and took medication; when the prescription is in the form of drug (non injection) they are not adherences to the prescription; KIIs reviled that most patients visit health services again before they finish their prescriptions that brought medical resistances and misused of recourses and threatens the sustainability of CBHI scheme. Medical resistances created due to non

adherence for medication. After medical resistances created, the patient needed high cost of treatment or sometimes difficulties even for recovery at all. Moral hazards and unintended dysfunctions bring negative health outcomes directly or indirectly on patients in particular and communities in general.

Regarding members' attitude towards community based health insurances, the Likert summated scale measurement confirmed that 93.3% of the respondents have positive attitude towards community based health insurance scheme. Promote frequent health seeking behavior from health services. Moreover, most IDIs viewed that CBHI scheme does have optimistic role in promoting health condition of the community. To see attitudinal differences among different groups statistical test were employed. Consequently, predisposing variables such as, sex, highest educational level of head of the household and level of awareness about community based health insurance do have attitudinal variations in each group categories.

Furthermore, some factors that contribute to success or failure of schemes are related to health care providers that offers services to the insured. Decisions taken by the health care provider have an impact on mobilizing demand for CBHI as well as on the financial balance of the scheme. According to data obtained from this study, introduction of community based health insurances have been enabling health care providers to prescribe the appropriate diagnostic test and drugs without any reservations about the ability of the CBHI member to pay. However, CBHI has increased their workload without increasing their financial, non-financial compensation and motivation. On the other hand data obtained from KIIs from CBHI office and health facilities as well as from IDIs, showed that moral hazards were noticed on some professionals, as a result of work load, some professionals tried to miss treated patients to withdraw from the scheme and over prescription of drugs were noticed; that results difficulties in health care services provisions in particular, and CBHI scheme sustainability in general.

5.2. Implications of the Study for Policy, Theory and Research

In this sub section, based on the major findings of the study the researcher provided the implication of the study policy framework, theoretical understanding, and possibilities on further research.

In Ethiopia, health has been one of the important components of Ethiopian Sustainable Development and Poverty Reduction Program (SDPRP) and recently completed five-year poverty reduction plan known as Plan for Accelerated and Sustained Development to End Poverty (PASDEP) for 2005/06-2009/10, health sector transformation plan one (HSTP-I) and, current Health Sector Transformation Plan for 2015/16-2019/2020(HSTP-II). Fundamentally, socio-economic feature of Ethiopia is predominantly rural/agricultural and informal economy covering 83.6% of the population with low health services utilization rate and high user fee expenditure for health care (FMoH 2010; CSA 2014^a). The low and falling health care utilization levels and health care seeking behavior, combined with rising poverty issues call urgent need for increased health care financing in Ethiopia through community based health insurance risk pooling system. Thus, CBHI scheme is a viable opportunity for the country's need and socio-economic situation. Community based health insurance scheme needs to be an integral part of a national health financing strategy so that, addressing the inherent problem of health services provisions feasible.

Based on the study finding of various empirical works, affordability and get rid of out of pocket payment for health services is important but may not be enough to positively influence health status of the society. Improving affordability is a necessary condition, but careful consideration should be given to other dimensions of design and complementary interventions during implementations of basic parameters of the scheme. Attentions needed whether the planning and implementation of CBHI scheme meet the target objectives, examining increase utilization services and quality of services provision; sometimes, increase utilization in the expenses of quality become eminent in most CBHI schemes. Furthermore, and adverse selection both in members and providers needed strong policy framework implementation in national, regional and District level. Awareness about services utilization, benefit package, services provision and

community mobilizations for risk pooling and additional revenue collection, alternative finance generating mechanisms needed inter and intra sectoral linkage for the sustainability of the scheme. Generally, the supply side (designing and implementation, quality of services provision should compliment with demand side (health services utilization and attitude and perception about the scheme) in order to function its purposes.

The finding presented in this paper still leaves a number of unanswered questions for which more research is call for. Foremost, this study employed socio-behavioral and health belief model in analyzing the role of CBHI scheme on health care utilization and quality of services provision at the household level. The findings of this study indicated that employing sociological theories would make the study of community based health insurances and its role more complete and inclusive. Researchers can integrate social capital (social network) theory in to the analysis of rural households' health care seeking behavior and role of CBHI scheme to examine issues like, enrollment and drop-outs to support scale up nationwide; hence the country plans 80% coverage of insurances for 2020. Furthermore, more researches needed on the role of CBHI scheme on financial protection, challenges and opportunities in implementing CBHI critically. What is more, comparative analysis is needed to understand inter and intra household variations of services utilizations among members and non members needed further research in Ethiopia in general and in *Tehuledere* District in particular.

5.3. Conclusions

Community based health insurance is no “magic bullet” to improve health care systems by itself rather it could do with proper design and implementation of major parameters which are critical in the sustainability of the scheme. An efficient and equitable health care system is an important instrument to break up the vicious circle of poverty and ill health conditions, hence, countries economic development is closely interrelated with the health status of its population.

Like other, empirical researches the finding of this study discloses that community based health insurance has turned out to be a useful financial tool in the health sector reform in Ethiopia in general and in the study area in particular. Hence, the out of pocket for health care services have had very limited impact because it failed to cover informal sector poor workers and the rural self-

employed, who constitute the majority of the countries' populations, CBHI scheme turnout to be realistic option to access health care for all, and to meet universal health coverage(UHC).

However, in many sub-Saharan African countries including Ethiopia, due to low and unstable tax revenues and cutbacks in public budgets, the aim to provide “free health care for all” was never achieved. Though, community based health insurance is an exogenous concept largely inspired by European history and occidental values, this does in no way disqualify its significance to local populations because it allows adaptation and contextualization's to local conditions. Accordingly, in responses to high user fee payment and low utilization rate CBHI scheme was designed in Ethiopia in 2011 and the study area was one of the pilots District where CBHI first launched.

Though, CBHI scheme requires a not yet clearly defined minimum boundaries about the management and administration of the scheme, both government and members played a significant role in the sustainability and functioning of the scheme in Ethiopian community based health insurance. Accordingly, most literatures similar to the finding of this study, showed that actual implementation of CBHI schemes needed collaborate effort so far, success and viability of the scheme largely depending on design and management of the scheme by the government and the society full participations. In addition, searching better option and viable experiences, establishment of strong policy frame work for implementation based on national, regional and local demands and supplies in health care provision; on the base of socioeconomic and cultural milieu is fundamental concern for the scheme to work properly, and serve its function.

Examining, healthcare seeking behavior due to the introduction of CBHI scheme is complex and no one-single method may be used to explain or establish the pattern during the process of seeking care and utilizing services. Healthcare seeking behavior is a reflection of the prevailing conditions, which interact synergistically to produce a pattern or process of care seeking since the occurrences of illness or injuries within broader socio-cultural and economic context. Understanding healthcare seeking behavior from different perspective through different models is essential. In this thesis, socio-behavioral model of health care utilization and health belief model were considered most relevant. Accordingly, these models have theorized that predisposing factors, consisting of socio-demographic variables combined with attitudes and

beliefs interact with enabling factors mainly of membership to community based health insurances, access to media and distances from health care facilities to produce the conditions under which a person is or is not likely to seek healthcare services when need factors such as symptoms of illness experienced. In general, results from this study showed that most component of the model were statistical significances with households use of health services, but enabling factor (being membership to CBHI scheme) was more important than need and predisposing components.

More importantly, the result of the study revealed that proper design and management through community involvement and benefit package at best; complimented by quality services provision promote health services utilization from modern health care facilities. Moreover, members' attitude towards CBHI scheme and perceptions of health services providers grants the sustainability of the scheme through risk pooling and hold back moral hazards.

Generally, impact of community based health insurance on access to care and equity in services utilization is viable in Ethiopian CBHI scheme in general and study area in particular. Accordingly, the purpose of community based health insurance is threefold: increase access and use by making health care services more affordable and equitable, improve health status of population through increased access, quality and use of health care services, and mitigate the out of pocket financial consequences of ill health by distributing the costs of healthcare across all members of a risk pool within the scheme.

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Annex I: Data Collecting Instruments

Addis Ababa University
College of Social Sciences
Department of Sociology

Questionnaire for Household Survey

Preamble

Dear respondent! The aim of this questionnaire is to collect data for the study entitled “*Role of Community Based Health Insurance on Health Service provision and Healthcare Seeking Behavior of Households in Rural Ethiopia: the Case of Tehuledere District, South Wollo Zone.*” Generally, this questionnaire is designed to examine and understand health care seeking behavior in response to the introduction of community based health insurances scheme in rural Ethiopia; to draw lesson on the plan, implementation and benefit of community based health insurances scheme for rural households. Trust that the information you will honorably provide is strictly confidential and serve for academic purpose. This study is indispensable in providing information about CBHI and health seeking behavior of rural households in Ethiopia especially, in the study area. To this end, your participation and genuine response to the questions is invaluable to the success of the study. No need of writing your name or any personal identification. Thus, I kindly ask your cooperation in filling this questionnaire truthfully.

Thank you for your cooperation!!

Section 1: Identification and Certification

Section 1: General Information

Interviewer's Name: _____ signature: _____

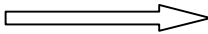
Supervisor's Name _____ signature _____

Date (western, DD-MM-YYYY) : _____

Respondent's Kebele Name: _____

Questionnaire ID Number: _____

General instruction: In giving your answer please write the number of your choice in the corresponding response space provided. But, if you have different answer other than the given options, use the space provided (**YOU ARE NOT RESTRICTED TO THE SPACE PROVIDED FOR OPEN ENDED QUESTIONS**).

No	Part II: Demographic and Socio-Economic Characteristics of Respondent		
	Questions Items 	Response/s	
1	Sex (Male=1,Female=2) –fill as observed		
2	Age of the respondent in complete year		
3	Religious Afflation (Orthodox = 1 , Muslim = 2, Catholic = 3, Protestant = 4, Other specify_____)		
4	Marital Status (Never Married = 1, Married = 2, Divorced =3, Widowed = 4)		
5	Household Size		
6	Highest Educational Level of Head of the Household attained (Illiterate =1, reading and writing =2, primary education (Grade 1-6)=3 , secondary education (Grade 7-12) =4, vocational training=5, tertiary education=6)		
7	What is your main source of income (Farmer = 1, Commercial Activity = 2, Heady craft =3, other= 4		
8	Ownership of Cultivable Farmland (Do not have Farmland= 1, One Hectare and less =2, 1.1-2 Hectare=3, 2.1-3 Hectare=4, Above 3 Hectare =5) (Note that: one hectare is equivalent to Four tsimad)		
9	Household Income (High =1, Middle =2, Low =3)		
	Part III: Design and Implementation of Community Based Health insurance in the study area		
10	Your level of awareness about CBHI (High =3, moderate =2, low=1)		
11	How did you become member of CBHI scheme (voluntary = 1, Mandatory =2)		
12	Reasons for member of CBHI (Illness or injuries occur in the household frequently = 1, Child/ children aged under 5 years needed health care services =2, Mother/mothers needed health care services = 3, Old household member need health care services = 4, Premium is minimum compare to out of pocket payment = 5, pressure from <i>kebele</i> administrative =6, To finances healthcare expenses Once = 7, Others specify_____) multiple answer possible		
13	When did you become member of CBHI(since 2003 E.C. =1, in 2004 E.C. =2, in 2005 E.C.=3, in 2006 E.C.=4, in 2007 E.C.=5, in 2008E.C.=6, in 2009 E.C. =7)		

14	Wow much money did you pay for the household to become member of CBHI scheme for this year in (write the response in ETB) .	
15	Did you paid any extra payment for healthcare services of the household other than payment for the scheme for the last three months? (No extra payment=1, 50-100 birr =2, 101-200 birr=3, 201-300 birr=4,301-400 birr=5, more than 400 birr=6)	
16	How do you view the premium payment for CBHI scheme (Very Cheap =1, Cheap = 2, moderate =3, Expensive =4, Very Expensive = 5)	
17	Do you think that you received the services that promised(the benefit packages) during membership(Yes=1, No=2)	
18	CBHI scheme members play significant role in managements and administrations of the scheme (level your agreement) (strongly agree=5, agree=4, neutral = 3, disagree=2, strongly disagree=1)	
Part IV: Access and Quality of health care provision due to Introduction of CBHI scheme		
19	The time it takes to visit closest health center from home in hour/s for an adult person (less than 30 minutes =1, 30 minutes to 59 minutes=2, 1- 1 hours and 59 minutes =3, 2-2 hours and 59 minutes =4, 3- 3 hours and 59 minutes =5 , 4 – 4 hours and 59 minutes =6, 5 – 5 hours and 59 minutes =7, more than 6 hours = 8)	
20	The time it takes to visit closest hospital from home in hour/s for an adult person (less than 30 minutes =1, 30 minutes to 59 minutes=2, 1- 1 hours and 59 minutes =3, 2-2 hours and 59 minutes =4, 3- 3 hours and 59 minutes =5 , 4 – 4 hours and 59 minutes =6, 5 – 5 hours and 59 minutes =7, more than 6 hours = 8)	
21	Do you think that being member to CBHI scheme enables you or your family members to get health care services in closest distances (Yes=1, No=2)	
22	Do you have access to means of communication (like TV, radio, mobile radio, mobile TV) that provides you information about health?(Yes =1, No =2)	
23	How do you get information about healing of diseases in modern health facilities (Family Members = 1, Neighbors = 2, Health Extension Workers =3 , Community Based Health Insurances Workers = 4, Healthcare Service Providers from health centers and Hospitals =5, Mass Media =6, Others Specify_____)- multiple responses possible	

24	Improvements in service quality since this health facility has been contracted by the CBHI scheme (increase, decline or similar, do not know)	Increase	decline	Similar	Do not know
24.1	Quality of overall healthcare services				
24.2	Improvements in availability of drug				
24.3	Availability of diagnostic/laboratory services				
24.4	Improvements in waiting time to get services				
24.5	Improvements in referral system				
24.6	Improvements motivation of staff				
24.7	Improvements in cleanse of the health care institution				
Part V: Health Care Seeking Behavior and Health Services Utilization					
25	Have you or any members of the household been ill in the past three months? Yes = 1, (No = 2 skip to Q. No. 29)				
26	What was your or your family member's immediate treatment response for the occurrences of illness or injuries? (Visit Traditional Healers = 1, Visit modern healthcare facilities =2 (skip to Q.No.29), Use home healing =3, Go to holy water=4, others specify_____)				
27	Did you or your family members seek medical treatment? Yes = 1, (No =2 skip to Q.No.29)				
28	If your response for question 27 is NO , what was the main reason that you or your family member forgone medical treatment (Use Home Healing =2, Visit traditional healers=3, Go to holy water=4, forgone minor illness or injury = 5, others specify_____)				
29	Which type of treatment had you or your family member employed before you become member of CBHI scheme (Visit traditional healers =1, Visit modern healthcare facilities=2, Use home healing=3, Go to holy water=4, others specify_____) multiple responses possible				
30	Which type of treatment you or your family use after you become member of CBHI? (Visit traditional healers=1, Visit modern healthcare facilities=2, Use home healing=3, Go to holy water=4, others specify_____) multiple responses possible				
31	Which medical institution mainly do you/ your family members prefer to visit in the period of illness (Village Health Post=1, Public Clinics or Health Centers=2, Private Clinics=3, Public Hospitals=4, Private Hospital =5, Others Specify_____)				

32	How many times you/your family members visited modern healthcare facilities for the last three months (count number of visits of modern healthcare facilities)	
33	When did you / your family members seek modern healthcare services after symptom experienced for the last three months (average number of delayed days from symptom to seeking modern healthcare services)? (within one day=1 skip to Q. No. 35 , within 2-4 days=2, within 5-7 days = 3, within 8-10 days =4, within 11 -14 days = 5, after 15 days =6)	
34	Why did you or your family member main reason (frequent) to delay to visit modern health facilities in the last three months for most visits (considering all illness cases of the last three months). (Home treatment = 1, want to traditional healers =2, Want to holy water =3, forgone minor illness or injury = 4, others specify_____)	
35	Who visit modern healthcare institutions most in your household for the last three months (considering sex)? (Male =1, Female=2)	
36	Who visit modern healthcare institutions most in your household for the last three months (considering sex and age)?(Child/children aged under 5 years =1, Male Aged 6-14 years = 2, Female Aged 6- 14 years =3, Male aged 15-64 years= 4, Female Aged 15-64 years =5, Male aged above 65years =6, Female aged above 65 years =7)	
37	Do CBHI scheme motivate you or your family members to seek modern healthcare services frequently in the time of illness or injuries Yes= 1, (No =2 skip to Q. No.39)	
38	If Yes for Q .No. 37 , what is the reason/s (Exemptions of payments at the time of services =1, Quality of Health care services improved = 2, Other specify_____) multiple responses possible	
39	If No for Q .No. 37 , what is the reason/s (Limited health services availability and drug supply =1, long Waiting time to get services = 2, low availability of laboratory services=3 Mistreatment by health providers for members =4, poor referral system=5 Others specify_____) multiple responses possible	
40	Do you believe that prescribe medication by health professionals should finish even though the patient become recover (Yes =1 , No=2)	
41	How do you level the satisfaction about the health care services you receive from modern health care facilities before the introduction of CBHI (Highly satisfied =5, Satisfied =4, Neutral =3, (Dissatisfied= 2, Highly dissatisfied)	

42	How do you level the satisfaction about the health care services you receive from mode health care facilities after the introduction of CBHI (Highly satisfied =5, Satisfied =4, Neutral =3, (Dissatisfied= 2, Highly dissatisfied skip to Q. No 45))	
43	What is the reason for your highly satisfaction or satisfaction from the services you receive from modern health care facilities after you become member of CBHI (absences of payment at the time of services =1, adequate drug supply =2, low waiting time to get services = 3, Good treatment by health care providers =4, improved laboratory services = 5, improved referral system=6, Others specify_____) multiple responses possible; (then skip to part six)	
44	If you are dissatisfied or highly dissatisfied for Q. No. 43 , what is the main reason (Extra out of pocket cost for health care services =1, Limited drug supply =2, long Waiting time to get services = 3, Mistreatment by health care providers =4, poor management of CBHI scheme=5, low laboratory services availability =6, poor referral system=7 Others specify_____) Multiple responses possible	

Part VI: Attitude about Community based health insurance scheme

45. Attitude of insured household towards Community Based Health Insurance Scheme in promoting health condition of the community

No.	Items	Level of agreement				
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Community based health insurance has the potential on promoting health care seeking behavior from modern health care institutions.	5	4	3	2	1
2	CBHI protects households from unaffordable healthcare expenditures.	5	4	3	2	1
3	Premium payment for CBHI scheme is expensive.	1	2	3	4	5
4	CBHI is means of collecting revenue (profit) to the government.	1	2	3	4	5
5	CBHI scheme members receive low quality of services than non members.	1	2	3	4	5
6	Mistreatment of patients by the professionals is common for members than non members.	1	2	3	4	5
7	I did not have trust in management and administration of CBHI scheme.	1	2	3	4	5
8	CBHI is relevant only to promote health condition of the poor.	1	2	3	4	5
9	Health insurance is good to pool the risk of health expenditures within the sick and the healthy.	5	4	3	2	1
10	Health insurance should be advocated and scale up to improve health condition of rural community	5	4	3	2	1
		Total _____				

Thank You!!

Addis Ababa University
College of Social Sciences
Department of Sociology

Interview Guide

Preamble

Dear informant/s! The aim of this interview is to collect data for the study entitled “*Role of Community Based Health Insurance on Health Service provision and Healthcare Seeking Behavior of Households in Rural Ethiopia: the Case of Tehuledere District, South Wollo Zone.*” Generally, this interview is formulated to examine and understand health care seeking behavior in response to the introduction of community based health insurances scheme in rural Ethiopia; to draw lesson on the design, implementation and benefit of community based health insurances scheme for rural households. Trust that the information you will honorably provide is strictly confidential and serve for academic purpose. This study is indispensable in providing information about CBHI and health seeking behavior of rural households in Ethiopia especially, in the study area. To this end, your participation and genuine response to the questions is invaluable to the success of the study. No need of writing your name or any personal identification. Thus, I kindly ask your cooperation in responding the responses truthfully.

Thank you for your cooperation!!

1. In-depth Interview Guide Developed to Collect Data from Patients (for member of community based health insurance)

Starting time (hh-mm) _____ / _____

Termination time (hh-mm)) _____ / _____

1. How do you view the services provided in this health facility?
2. For what type of illness do you visit health facility today?
3. When did the symptom started?

4. What measure did you take when you recognize the symptom?
5. Did you visit other health care institution before, if so why did you come to this health institution?
6. Is there anyone motivated you to come to modern health care facility?
7. How do you view CBHI scheme program in promoting health condition of the community?
8. Did you encounter a problem in paying annual premium for CBHI?
9. Is being member of community based health insurances motivated you to come to modern healthcare facility frequently? How?
10. Do you think CBHI is good for everybody to enhance health care seeking behavior?
11. For what kind of illness did you visit modern health care facilitates?
12. Do you think the health services given for members and non member of CBHI is similar? If not why?
13. Did you get the services you need/expect in this health facility?
14. How do you view the quality of services in terms of (drug availability, laboratory , waiting time, staff motivation, referral system, institution cleanness)
15. Are you satisfied with the services provided for you? If not why?
16. What motivated people to visit modern health center in your community?
17. What measures should take to promote the health situation of the community in general?

2. FGD interview guide for Members of community based health insurance

Starting time (hh-mm) _____/_____

Termination time (hh-mm) _____/_____

Theme1: Design and implementation of CBHI in the study areas

- Design and implementation of CBHI in the study area
- Membership, premiums, benefit package (services provided, inclusion and exclusion of services), management and administration of the scheme

Theme2: health care seeking behavior and health services utilization

- Health care seeking behavior
- CBHI in promoting Health care seeking behaviors

- Relevancies and risk pooling, moral hazards
- differences in health care seeking behavior from modern health facilities before and after being member of CBHI scheme
- CBHI scheme contribution in delay and forgone from modern health care services?
- Frequently ill in age and gender, preferences between medical institutions?

Theme 3: quality of health care services

- Services and drug availability, waiting time
- Referral system, cleanness of the facility
- Staff availability and motivation
- quality vs. health care seeking behavior

Theme 4: Perception about health care providers and CBHI scheme

- Health care providers (treatment of patients, services delivery)
- Similarity of services for members and non members are similar in healthcare facilities?
- Quality of health care services provide in the health facilities for members and non members
- Waiting time
- Satisfaction from services in modern

3.1. key- informant Interview questions for community based health insurances office worker

Starting time (hh-mm) _____ / _____

Termination time (hh-mm) _____ / _____

1. Why community based health insurances scheme launched?
2. How CBHI designed and organized from federal to Kebele level?
3. How CBHI implemented from federal to Kebele level?
4. How membership for Community based health insurances is structured?
5. Are their contextual variation in designing and implementation of CBHI scheme from federal to *Kebele* level?
6. Who managed and control CBHI scheme?

7. What are main challenges in implementing CBHI scheme?
8. What Type of services provided by the scheme and excluded from the scheme in your community? And why?
9. How do you view CBHI scheme in promoting Health care seeking behaviors of the community?
10. Do you think the services given for members and non members are similar in healthcare facilities?
11. How do you see fee waivers coverage in the District?
12. How do you view the quality of health care services provide in the health facilities for members of CBHI?
13. How do you view the sustainability of CBHI scheme?
14. Which household is more advantaged from CBHI scheme (income, education level, family size , illness condition)
15. How do you view the work load on health care providers due to the introduction of CBHI scheme?
16. Are their extra payments/incentives for workers loads? If not why?

3.2. key- informant Interview questions for health care professionals

Starting time (hh-mm)_____ / _____

Termination time (hh-mm)) _____ / _____

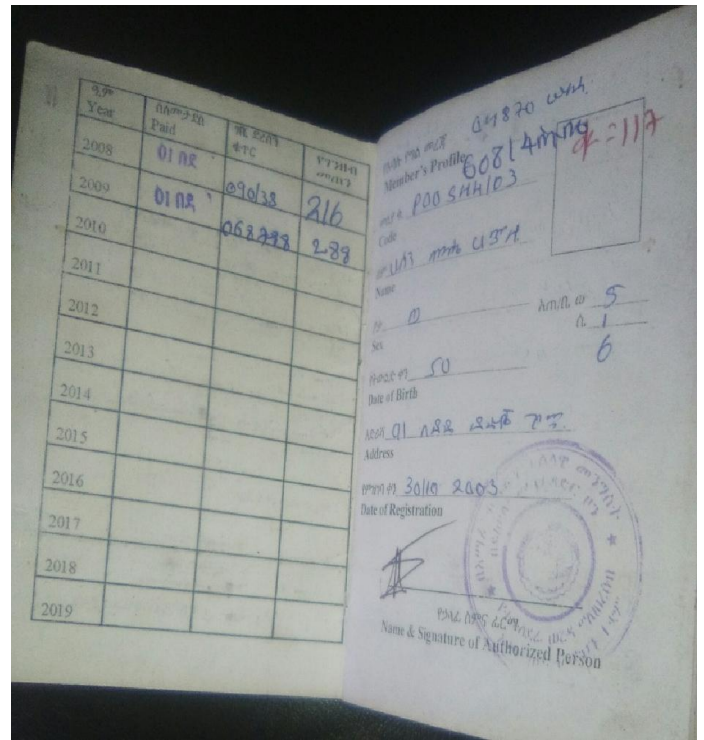
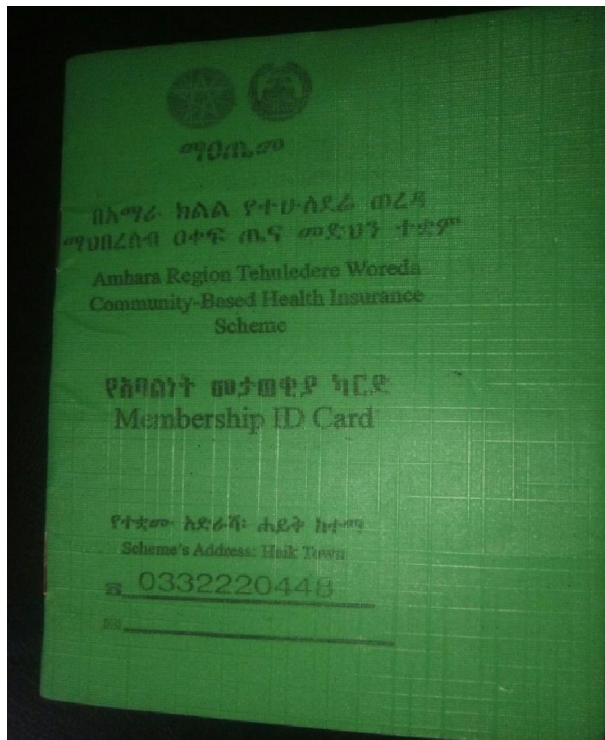
1. What are the challenges in seeking health care services from modern health facilities for rural dwellers in your community?
2. How do you view CBHI scheme in promoting health condition of the community?
3. How do you see the services given for members of CBHI?
4. What Type of services provided by the scheme and excluded from the scheme in your community?
5. Do you think CBHI is important for everybody to improve health condition?
6. Are there any differences in heath care seeking behavior from modern health facilities before and after being member of CBHI scheme? Why?
7. Does CBHI scheme contribute in minimizing delay to get services from health care services?
8. How do you see the change in health services utilization due to the introduction of CBHI?

9. Are there any differences between insured and non insured household in health care seeking behavior?
10. Who is frequently ill? In terms of gender, age
11. Do you think the services given for members and non members are similar in healthcare facilities?
12. How do you view the quality of health care services provide before and after the introduction of CBHI in the health facilities?
13. Would you explain the differences in work load before and after the introduction of CBHI?
14. Did you receive extra payments (incentives) for the work load created due to the introduction of CBHI? If not why?
15. What are the possibilities to improve health situations for rural dwellers in your community?
16. Do you think community based health insurances should Sustained? Why?

3.3. key- informant Interview questions for *kebele/ tabia* leaders

1. How do you view health condition of your community?
2. How CBHI scheme organized and how do you view the role of members in this organizations?
3. Do you think CBHI scheme have the potential to improve health situation of the Community?
4. Do you think CBHI is important for everybody to improve health condition?
5. What are the challenges to administer CBHI scheme at *kebele/tabia* level?
6. Why people exempt seeking health care services when they are ill in your community?
7. How do you view the Preferences between modern and traditional health care services in your community?
8. How do you view the quality of health care services provide in the modern health facilities?
9. How do you view the sustainability of CBHI scheme in your community?
10. What are the opportunities to improve health situations for rural dwellers in your community?

Annex II: photograph and figure



Picture: Community based health insurances Membership card outside and inside view

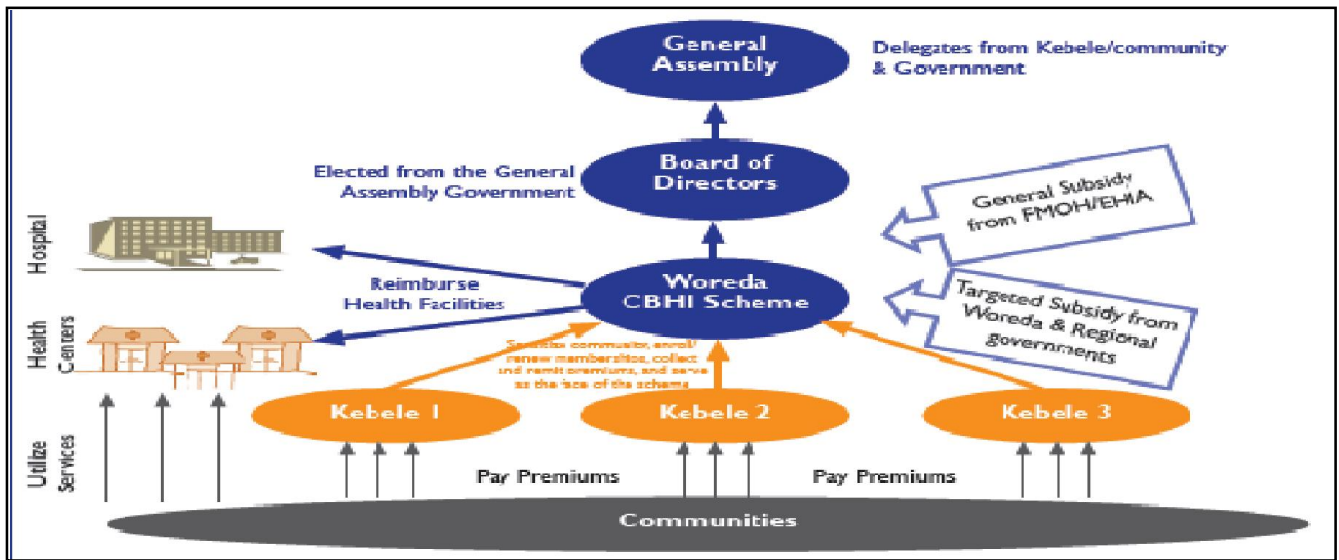


Figure: Flow of Finance, Governance, and Organizational Structure of CBHI Schemes

Source: EHIA (2015)

Table Annex I: reasons for motivation or demotivation to seek health service and distances from healthcare facilities

Reason/s why Community based health insurances motivate/ discourage/ member of the household to seek modern healthcare services frequently							
Reasons for motivation (Multiple responses possible)				Reasons for discouragements (Multiple responses possible)			
Responses	Frequency	Percent of responses	Percent of cases	Responses	Frequency	Percent of responses	Percent of cases
Free of Payments at the time of Services	319	61.9%	96.7%	Limited Availability of Drug Supply	10	24.4%	76.9%
Quality of Health care services improved	196	38.1%	59.4%	Long Waiting Time to Get Services	7	17.1%	53.8%
Total	515	100.0%	156.1%	Low Availability of Laboratory Services	9	22.0%	69.2%
				Mistreatment by Health Providers for Members	11	26.8%	84.6%
				Poor Referral System	4	9.8%	30.8%
				Total	41	100.0%	315.4%

The time it takes to visit closest health center from home in hour/s for an adult person?			The time it takes to visit closest hospital from home in hour/s for an adult person??	
Responses	Frequencies	Percentage (%)	Frequencies	Percentage (%)
30-59 minutes	74	21.5	1	.3
1-1 Hours and 59 minutes	160	46.5	18	5.1
2-2 Hours and 59 minutes	101	29.4	68	19.8
3-3 Hours and 59 minutes	9	2.6	25	7.3
4-4 Hours and 59 minutes			2	.6
5- 5 Hours and 59 Minutes			2	.6
More than 6 Hours			228	66.3
Total	344	100.0	344	100.0

Source: Sample Survey, 2017

Table Annex II: Level of awareness, membership condition, benefit package and community role in managements and administration of the scheme to CBHI scheme

		Frequency	Percentage (%)
Level of Awareness about community based health insurance	Low	44	12.8
	Moderate	139	40.4
	High	161	46.8
	Total	344	100.0
Membership Condition to CBHI scheme	Voluntary	299	86.9
	Mandatory	45	13.1
	Total	344	100.0
Appropriate benefit package received	Yes	274	79.7
	No	70	20.3
	Total	344	100.0
Community Role in Management and Administration of CBHI Scheme	Strongly Disagree	16	4.5
	Disagree	35	10.2
	Neutral	59	17.2
	Agree	177	51.5
	Strongly Agree	57	16.6
	Total	344	100.0

Source: Sample Survey, 2017

Table Annex III: Year of membership and premium to Community based health insurance

		Frequency	Percentage (%)
Year of Membership to the Scheme	Since 2003 E.C.	205	59.6
	In 2004 E.C.	70	20.3
	In 2005 E.C.	35	10.2
	In 2006-2009 E.C.	34	9.9
	Total	344	100.0
Amount of Money Paid for 2009/10 E.C.	240	263	76.5
	288	37	10.8
	336 and above	44	12.7
	Total	344	100.0
Premium and membership Payment Level of CBHI Scheme	Very Cheap	75	21.8
	Cheap	68	19.8
	Moderate	153	44.5
	Expensive	40	11.6
	Very Expensive	8	2.3
	Total	344	100.0
Amount of Extra Payment for Healthcare for the Last Three Months	No Extra Payment	246	71.5
	100 and Less Birr	22	6.4
	100-200 Birr	29	8.4
	201-400 Birr	14	4.1
	Above 400 Birr	33	9.6
	Total	344	100.0

Source: Sample Survey, 2017

Table Annex IV: the role of CBH scheme on seeking modern health care services frequently

Do you think that being member of CBHI scheme enables you and your family members/s to seek modern health care services frequently	Frequency	Percentage (%)
Yes	329	95.6
No	15	4.4
Total	344	100.0

Source: Sample Survey, 2017

Table Annex V: Institutional preferences to get treatment

Which medical institution do you prefer mainly to visit in the time of illness?	Frequency	Percentage (%)
Village Health Post	5	1.5
Public Health Center	225	65.3
Private Clinic	44	12.8
Public Hospital	57	16.6
Private Hospital	13	3.8
Total	344	100.0

Source: Sample Survey, 2017