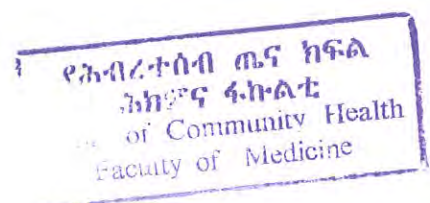


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OF JIMMA ZONE, SOUTHWEST ETHIOPIA.**

BY: TADELE BOGALE, MD.

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**A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS
ABABA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIRMENT FOR
THE DEGREE OF THE MASTERS OF PUBLIC HEALTH (MPH).**

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**Assessment of Household Strategies to Cope with Costs of Illness in Rural
Communities, Jimma Zone**

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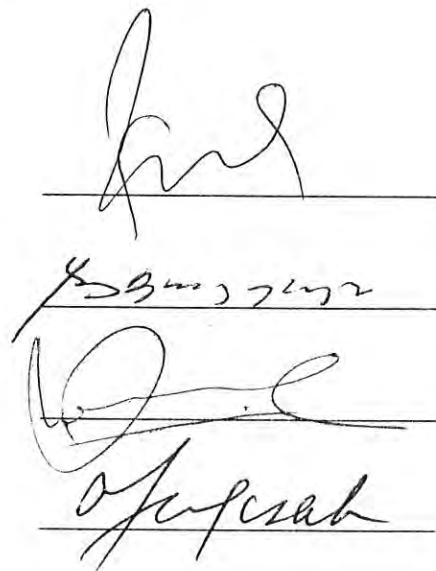
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ABSTRACT

Health calamities are one of the common causes of impoverishment at the household level; and different households find different mechanisms for adapting to the same calamitous circumstance. Nowadays, in many developing countries, affordability of health care is a growing concern both for policy makers and households, as people are expected to contribute more from their own pockets in getting health care due to health sector financing reforms and privatization.

This cross-sectional study, which has used both quantitative and qualitative methods of data collection, was conducted from February to October 2000 in 630 randomly selected rural households living in a predominantly coffee growing district of southwest Ethiopia. The main objective of the study was to assess the strategies used by households to cope with the financial and time costs of illness.

The average cost of visiting a health care provider for one illness episode was found to be 32.87 Birr (about 4 US\$), of which expenditures for drugs, transport and lodging away from home while seeking health care were considerable. In an attempt to quantify the economic implications of morbidity at the household level, days lost due to illness were determined. Accordingly, adults who have reported illness in the one-month recall period have lost 9.23 working days, which corresponds to a loss of about 138.45 Birr (about 17 US\$) in one month.

About 42% of the studied households with sick family members in the recall period of six-months were found not purchase outside health care for reasons associated with out of pocket

expenditure of health care costs. Main mechanisms use to cope with the financial costs of illnesses were looking for exemption paper (16.8%), sale of household assets (13.3%), use of household saving (13.1%), and going into debt (12.7%). In addition, about 64% of the households did nothing to cope the potential time lost due to illness. Using multiple logistic regression, socio-demographic and economic factors at the household level, which have significant association with the choice of mechanisms for coping, were identified. Based on the results of the study, alternative strategies of financing the local health services incorporating indigenous social networks like “eder” were discussed and recommendations forwarded.

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LIST OF ABBREVIATIONS

CSA	Central statistical authority
FGD	Focus Group Discussion
HH	Household
ICO	Division of Intensified Cooperation with Countries in Greatest Need
IDS	Institute of Development Studies
MESD	Macroeconomics, Health and Development
OR	Odds Ratio
PHRD	Policy And Human Resource Development
PPS	Probability Proportionate to Size
SPSS	Statistical Package For Social Sciences
WHO	World Health Organization

OPERATIONAL DEFINITION OF TERMS

- COPING:** a short term strategy adopted by the household, which maybe confined to the household in which the illness occurs, or involve extended kin or non-kin related households, or the community to avert a negative effect of an illness among its members.
- DAYS LOST:** full days lost from the usual activities due to illness
- PREPAYMENT:** a scheme in the delivery of heath care where an annual fee is collected during the season of greater availability of money (coffee harvesting), so that households will not face a problem of using the existing health services during the season of shortage of money.

I. INTRODUCTION

1.1. Problem Statement

The wealth of poor people is their physical capabilities and their limited assets if they have anything at all. Of these, health is the most precious and important. It is a key to productivity, and allows them the opportunity to participate in the labor market or in the production of goods. As having a fit and strong body is an asset to anyone; a sick, weak and disabled body is a liability, both to the persons affected and to those who must support them ⁽¹⁾. Health calamities are common causes of impoverishment at the household level. Different households tend to find different mechanisms so as to adapt to the same calamitous circumstance ⁽²⁾. If people lack the means to cope with the effects of ill health, then a 'shock' could result and the people will become physically weaker, economically impoverished, socially dependent, humiliated or psychologically harmed ⁽³⁾.

Ill health is also known to reduce the body's capacity to perform its normal tasks rendering the sick unable or less able to work. The limited earnings of poorer people thus tend to reduce just at the time that expenditure for medical care may become necessary because of the costs incurred. When breadwinners of a household experience episodes of ill health, long-term disability or death, the results can be disastrous for the entire household. In such instances, the family faces not only a loss of income and care but also needs to find the money to cover medical care costs ^(1,4).

Sickness in poor households is more likely to lead to impoverishment than in a wealthy household because the poor are vulnerable to further deprivation due to the lack of 'buffers' or extra resources that they could call upon when in need ⁽³⁾. When poor people become ill, they seem to have difficulty in finding the amounts of money, which appear large enough in relation to their regular income ⁽⁵⁾. Some studies indicated that there exists a poverty/ill health ratchet in which the poor have serious difficulties in obtaining access to health care, and policies are ineffective in reaching them ^(6,7). As soon as the effects of ill health begin to threaten the family, it is assumed that a sequence of household mechanisms of coping will be set in motion to avert the disastrous situations. While illness episode usually affects individuals, its costs is rather known to be borne by other healthy household members using different mechanisms, or shared by extended family members or the community at large.

The capacity to cope or resist impoverishment is dependent on access to various resources such as labor, human capital, productive assets, social capital, etc. Coping with illness costs is specifically thought to be more serious in rural areas as compared to urban ones because of seasonal fluctuation of the household economic status, and several factors associated with the health service availability, accessibility, affordability, and utilization patterns. Patients from the rural areas often times spend several hours to days traveling to the nearest health facilities, which considerably increases opportunity costs such as loss of agricultural working time, which is particularly critical during seasons of planting and harvest ^(8,9).

1.2. Research questions of the study

Nowadays, there is a growing concern regarding household production of health and costs of illness for the household, as many developing countries are currently facing increasing pressure to improve the efficiency and financial viability of their health service delivery systems ^(2,10).

Although the government of Ethiopia has declared a policy and took the responsibility to provide comprehensive and integrated health services to where the majority lives, a significant proportion of the Ethiopian population is still threatened by various communicable diseases and malnutrition. In 1998, the per capita health expenditure was only 12.26 Birr, and the potential health service coverage was 51.0%, which is mainly accessible to some urban settings ^(11,12). Total household spending on health in 1995 amounted to about 0.70% of the total household expenditure. Among this, rural households spent a higher percentage; at 0.77% than urban households (0.68%) did. Households with a lower income also spent a higher percentage, as indicated by the per capita expenditure groups of 101-200 Birr (0.83%) and 51-100 Birr (0.79%). In rural areas, the average expenditure per treatment in government health institutions was 6.6 Birr (about 0.8 US Dollar) ⁽¹³⁾.

To date, only very few studies are available regarding the financing of health care in Ethiopia, and these studies are done at institutions level, which have emphasized on the cost of using services at different levels of the health care system. It is therefore essential to know the mechanisms used by the rural people in managing to get health care while being sick, and the potentials that are available at the household and community level so that alternative health care financing schemes that are currently underway could be implemented effectively.

There is also paucity of information regarding the prevailing patterns of household strategies to cope with the costs of illness in rural Ethiopia. The main concern of this study is, therefore, assessing the strategies used by rural households of Goma District, southwest Ethiopia to cope with the financial and time costs of illness, and identifying the most important cost-related determinant factors for the utilization of locally available and referral levels of health care.

II. REVIEW OF LITERATURES

2.1. *Health system financing in developing countries*

Health system financing is the process by which revenues collected from different sources are accumulated in fund pools and allocated to various components of provider activities. So far, three distinguishable and principal means for financing local health services are identified. (1) **Government financing** refers to the provision of resources from the health budget, with no additional costs to users for services. (2) **User charges** refers to systems in which there is a fee of some type levied when services are utilized, and the resources generated are used for at least partial financing of the services. (3) **Community cost sharing** refers to systems in which users pay part of the cost of the services, and retain control over the use of those revenues at the local level^(14,15).

Many developing countries are nowadays facing a serious and growing problem in financing their governmental health care services as new initiatives are outstripping their meager resources. For such reasons, people are expected to contribute to the cost of health care by spending from their own pockets. As a result, people's ability to afford health care has become a critical policy issue in these countries and a particularly urgent issue where households face combined user fee burdens from various essential service sectors such as health, education and water. In the constrained economic contexts facing many developing countries today, household strategies for coping with the parallel demands of reduced household income and increased prices for basic household needs are already over-stretched. Increased payment of health care fees might, therefore, become an unacceptable burden on households, leading to delayed or adapted

treatment-seeking, use of informal and less effective sources of health care, and further impoverishment of marginalized families^(16,17,18).

Based on its own circumstances and by analyzing experiences elsewhere in the light of its own political, social, economic and technological contexts, each country evolves its own pattern of financing health services. In this regard, increasing number of developing countries, which were not able to maintain the levels of funding they had reached earlier have introduced user charges since the 1970s to provide additional resources to their health sector, through which beneficiaries pay directly for the use of services, for example, through a consultation fee, charges for drugs or registration fees⁽¹⁹⁾.

User fees for health services are not recent phenomena in Africa. A few countries, such as Ethiopia, Namibia, and South Africa have had national user fee systems for years. Since the 1980s, user fees have also come to be seen as a critically important alternative to tax-based financing for health services provided by the public sector even in countries, which had previously provided government health care free at the point of use. Recent surveys done in the African continent with this regard have shown the extent of introduction of user fee schemes in health care. Fourteen out of fifteen African countries surveyed by Russell and Gilson (1995), and 28 out of the 37 African countries surveyed by Nolan and Turbat (1995) have shown to introduce fee system for government health facilities^(20,21).

2.2. *User fees and the poor*

Recently, there are debates about the efficiency and equity of charging user fees for health care and the impact of the fees on the poor. There is evidence to suggest that fees reduce utilization, and have an impact on the household budget 'pushing' the poor households further out of the health service system ⁽²²⁾. Gertler and van der Gaag (1990) also have tried to show that the price elasticity for fees and transport is twice as high for the poor, suggesting that these factors have impact on utilization of health care by the poor considerably more than the wealthy ⁽²³⁾.

Within the context of user fees debate, Gilson et al (1997) mentioned the need to examine the ability of poor households to pay for health care and their strategies to cope with the resource consequence of ill health ⁽²⁴⁾. Standing (1997) also argued that it is important to look at how the impact of health care expenditures at the household level differ according to the type of payment and the group responsible for payment ⁽²⁵⁾.

The pricing and exemption schedule in the delivery of health care links cost recovery objectives with the population's willingness and ability to pay for services. In the absence of reliable information on the purchasing power of the community and how it is distributed among households and over time, it is difficult to establish prices, which will maximize revenues, but deter few people from seeking care when needed ⁽²⁶⁾. Poor households in Rio de Janeiro, Brazil could not purchase health care because they could not afford it by paying from out-of-pocket expenditure ⁽²⁷⁾. A sizable number of people in Zambia, who require medical attention and have previously obtained it, were also found to be staying at home, and in some cases dying, because they could not afford to pay ⁽²⁸⁾. Studies done in Ghana, Mozambique, Swaziland and Uganda

have also demonstrated that user charges, particularly if they are not accompanied by improvements in the availability and quality of health care, lead to declines in the utilization of health services by the community⁽¹⁵⁾.

In fee-for-service health care delivery system, if many people lack the means to pay for the health care expenditure of their family during a particular time of the year, it is in the general interest to lower prices or to offer more exemption, perhaps making up the difference during other times when more cash is available. It is suggested that consideration should be given to a prepayment system, where an annual fee is collected during the period of greater availability of money. If the barriers to access are other than financial (lack of time or poor travel conditions, for example), different strategies for improving access would be required⁽²⁷⁾. Where there is also a policy of providing free health care, there is evidence to show that there are substantial costs which still remain (such as travel and food expenses, loss of income of patient and caretaker, etc.) that deter the poor from seeking care^(29,30).

Policies that encourage the establishment of user charges for health care cost recovery scheme claim to address issues of equity and affordability of fees through protection of the poor and other vulnerable groups. There is also an agreement about what an affordable fee is, and who the vulnerable groups are which should be protected. While proponents of user charges for health services often cite evidence that the poor show high willingness to pay for good quality of services, it is also acknowledged that fees may deter the poor from obtaining necessary treatment and preventive care. Longitudinal studies where utilization of services is measured before and after the introduction of user charges, and econometric models, which use static utilization data

to derive price and income elasticities of demand for health services, have helped in showing the overall picture of this deterrence ⁽³¹⁾.

2.3. *Components of costs of illness*

There are three main categories of expenditures incurred by households to obtain health services: *direct expenditures*, *indirect expenditures*, and *contributions in kind*. Information on these expenditures can be obtained, basically, in two ways: from the households themselves, or from the providers of the service. Different approaches to the households are possible. These include *the use of the census*, *general household surveys*, and *specific household surveys and samples*. With the first two methods, it may be difficult to fit all the necessary research questions into the surveys, which in any case are limited in frequency. In spite of its high cost, the third method (specific household surveys and samples) yields more comprehensive data as compared to the first two methods. It could also provide information on common health problems, practices, preferred providers, and financial data on the health activities of households ⁽¹⁹⁾.

Sauerborn (1996) has identified three major cost components incurred by households in coping with the costs of illness: *the time cost of illness*, *the time cost of caretaker(s)*, and *the financial cost of treatment* ⁽³²⁾. Spending for health by families or individuals is considered as difficult to quantify because it encompasses different components. This is true even if only direct expenditure is counted, without considering the cost of a patient's travel or the value of the time lost from work while seeking health care ⁽¹⁹⁾. The *direct costs* include costs for consultation, laboratory, drugs supplied at facility, total facility cost, cost of drugs purchased from store, transportation costs to and from the facility. The *travel and waiting time* to seek treatment also

include total time spent at the facility (registration, consultation, laboratory, injection, dispensary, and others), and total time spent on treatment (travel to facility and travel to purchase drugs) ⁽²⁷⁾.

Comprehensive estimates of the *direct economic costs* of illness should include not only the costs of care at established health facilities, but also other expenditures, such as travel and out-of-pocket costs of drugs. They should also include all episodes of illness, whether or not the patient attended a health facility. The *indirect economic costs* are based on the value of time lost due to illness ⁽³³⁾.

2.4. Household demand for health and costs of illness

Household demand for health care is driven by a number of determinants such as competing conditions requiring the attention of the household, and the availability of resources on the one hand; and factors such as knowledge about availability of solutions to the problems faced, knowledge about the availability of services, the capacity in terms of purchasing the services, etc. on the part of the households. With this regard, many authors have reported that along with other factors, time and financial costs involved in seeking health care are critical determinants of health care utilization ^(23,34,35,36).

The health service utilization conceptual framework proposed by Andersen (1968) focused on the characteristics of the population at risk and the resources of the health care system. According to this proposition, the characteristics of the population at risk include predisposing, enabling and need variables. Predisposing variables include social and demographic

characteristics as well as health care beliefs and attitudes. Enabling variables typically encompass various measures of access to services and are selected to identify potential barriers to seeking care when care is needed. Need variables describe the extent to which the individual needs a given service and is frequently measured by actual or perceived morbidity. Resources include the distribution, volume and organization of the health care system ⁽³⁷⁾.

Increased attention has recently been paid to the impact of illness on the health and well being of households in developing countries. A household health survey which analyzed the level of utilization of different kinds of health care providers and its correlates by people reporting an illness in the city of Ouagadougou, Burkina-Faso revealed that the principal determinants of the utilization of modern care givers were age, socio-economic level, illness characteristics (type, length, severity), and cost of care and transportation ⁽³⁸⁾.

A study done in two districts of Nepal provided information on how households react to malaria and its impact on expenditure and time allocation patterns. According to the findings from this study, out-of-pocket expenditure on treatment of malaria differed greatly between the two study districts, for reasons associated with the choice of sources of treatment and the number of visits made per episode. The majority of households were found to cope the various costs of illness without great difficulty with the reduction in labor supply caused by a malaria episode, by drawing largely on the time of adult family members ⁽³⁹⁾.

In another study done in Malawi, expenditure on malaria prevention varied considerably with household income level. Only 4% of the low-income households spent resources on malaria

preventive measures compared to 16% of middle to high-income households. In contrast, over 40% of all households, independent of income level, reported expenditures on malaria treatment. Almost half of the reported malaria cases sought treatment at a health facility at a cost of 0.21 US Dollar per child case and 0.63 US Dollar per adult case. The overall direct expenditure on treatment of malaria illness in household members was 19.13 US Dollar per year (28% of annual income) among low-income households and 19.84 US Dollar per year (2% of annual income) among middle to high-income households. The indirect cost of malaria, calculated on the basis of days of work lost, was 2.13 US Dollar per year (3.1% of annual income) among low-income households and 20.61 US Dollar per year (2.2% of annual income) among middle to high-income households. This study in Malawi concluded that low income households carried a disproportionate share of the economic burden of malaria, with total direct and indirect cost of malaria among these households consuming 32% of annual household income compared to 4.2% among households in the middle to high income categories ⁽⁴⁰⁾.

Some studies show the extent of loss of income due to illness. An earlier study done in Ivory Coast has shown that 10% of the household's income is spent on medical expenditure ⁽⁴¹⁾. Another study in Tanzania has also indicated that 60% of 'involuntary' land sales are due to high medical bill ⁽²⁹⁾. In Bangladesh, it was also shown how the incapacitation of adults and the resulting loss of income could lead to the accumulation of large consumption loans, and sale of assets in order to pay medical cost ⁽⁴²⁾. There is evidence to suggest that the poor may attempt to ignore their illness, not seek care, and try to continue working. Berman et al (1987) provide an evidence that although reporting illness is fairly even across different income groups in rural Indonesia, 45% of the poor do not seek care for a mild illness (in comparison to 20% of the

wealthy), and 31% of the poor do not care for a severe illness (in comparison to 13% of the wealthy) ⁽⁴³⁾. Coping by not seeking treatment, even when it is fairly accessible indicates a survival strategy, which avoids indebtedness or destitution at the risk of greater risk to health or even survival of some household members ⁽⁴⁴⁾.

Cost per malaria case in a rural district of Burkina Faso was found to be on the average 5.96 US Dollar and cost per capita 1.15 US Dollar. In this case, the indirect cost due to mortality from malaria was the largest cost component (0.79 US Dollar per capita), followed by direct costs incurred by the user (e.g. transportation costs and drug purchases, 0.22 US Dollar per capita). Direct costs paid by providers were found to be small, only 0.04 US Dollar per capita ⁽³³⁾.

In a rural community in Sri Lanka, the annual economic loss per household amounted to 15.56 US Dollar for malaria and 47.46 US Dollar for all other illnesses. This corresponded to a loss of 6% and 18% of annual household net income, respectively. In an important agricultural season in Sri Lanka, 5.6% of the working days were lost due to malaria. In addition, children, who were not part of the economically active population, lost 10% of school days due to malaria during the high transmission season ⁽⁴⁵⁾.

A cross-sectional survey done at 16 randomly selected government health care facilities in Thailand has also shown that illness-related costs particularly affected patients with incomes below the poverty line. The average out-of-pocket expenditures for tuberculosis amounted to more than 15% of annual household income, while incomes were reduced by 5 % due to illness-related effects. Expenditures for the diagnosis and treatment of tuberculosis, according to this

study were most frequently financed from household savings or transfer payments from community members and relatives. 11.8% of patient households were seen to take out their bank loans, and 15.9% sold part of their property. The observed low case detection and treatment completion rates for tuberculosis patients in this Thai study was also found to be partly attributed to the inability of poor patients to cope with the economic consequences of diagnosis and treatment ⁽⁴⁶⁾.

Economic variables are seasonal in much of the developing world because of climate and the rhythm of agricultural production. Evidence have shown that, in many regions farmers may have significant amounts of cash only after harvests are sold, and may also be short of cash and food just before the harvest as subsistent stocks of staple foods become depleted. Thus, the ability of people to pay even the relatively small costs of primary health care may be seriously reduced at lean and difficult times, and travel to health facilities is difficult because of the need to work on farms. Since relative utilization of medical treatment decreased in the rainy season more than the relative decrease in morbidity, this drop must be due to the factors related to lower availability of cash, the increased physical difficulty of travel, the high labor demands of cultivation in farms which make it difficult to take time to travel, and the increased attractiveness of nearby traditional practitioners and peddlers ^(26,47). Furthermore, it was realized that rural households are more likely to have access to cash after harvest than during planting season, and are also likely to be more able to pay for services with income in-kind, such as a bag of grain or poultry than with cash ⁽³¹⁾.

A survey of 626 households in Solenzo medical district of Burkina Faso provided household data on health service utilization, expenditures, and agricultural production. In this study, the marginal product of labor was valued according to typical activities in each of three agricultural seasons: brewing millet beer during the maintenance period, growing cotton during the cash crop season, and growing millet and sorghum during the food crop season. The resulting values from this study were 0.28 US\$, 1.09 US\$, and 0.55 US\$ per day, respectively ⁽³³⁾.

A study done in Burkina Faso to show the age and gender difference in intra-household allocation for health care costs has indicated that households allocated significantly fewer resources to the health care of sick children compared to that of sick adults. In contrast, there were no such differences with regard to gender. The underlying household rationale is to concentrate its resources spent for health care on productive members rather than to spread them equitably among all its sick members. While children are not productive, women were shown to contribute, as much to household production as men, hence their health is valued equally with that of men ⁽⁴⁸⁾.

2.5. *Household responses to the costs of illness*

Common household responses to payment difficulties for health care could range from borrowing to more serious 'distress sales' of productive assets (e.g. land), delays to treatment and, ultimately, abandonment of treatment ⁽¹⁶⁾. A study done in Chittagong, Bangladesh has shown that poor households used sale of their household assets as an initial response of coping mechanism to the sudden necessity of large medical expenditure. Next, intra-household labor substitution was undertaken to preserve the household income, followed by consumption loans

with extraordinarily high interest rates and short repayment period ⁽⁴⁹⁾. Another study done in Sierra Leone has shown that for the relatively small amounts of money required to cover health care expenditures, borrowing from friends or relatives was found to be the preferred mod of raising cash. This was done by borrowing rice and selling it in the village ⁽²⁶⁾. There is also anecdotal evidence that the poor will go into debt or otherwise sacrifice their fragile economic security by paying substantial fees for health ⁽³¹⁾.

An observation in Kenya by Mwabu (1989) has shown that the opportunity cost of time for travel to health facilities and waiting for medical treatment in the wet season increases far above its level in the dry season, and thus patients are less likely to seek treatment for their illnesses, especially those not perceived as severe ⁽⁵⁰⁾. Studies in India and Honduras have also identified seasonality as a variable affecting ability to pay for health care ⁽⁵¹⁾. In Haiti, it was also found that, cyclical variations in the availability of cash were greater than wealth differences within peasant communities for financial and physical access to health care ⁽⁵²⁾. Since relative utilization of medical treatment decreases in the rainy season more than the relative decrease in morbidity, this drop is thought to be due to factors related to lower availability of cash in the households, the increased physical difficulty of travel to health facilities, the high labor demands of cultivation in the farms which make it difficult to take time to travel, and the increased attractiveness of nearby traditional practitioners and peddlers ⁽²⁶⁾.

The consequences of illness can force changes in access to resources and production strategies, thus shaping household health and economy in the future. Among poor households in Southern Peru, the effects of illness on farming production were found to be exacerbated by their inability

to adequately supplement family labor with non-household workers ⁽⁵³⁾. Households may also persist in paying for health care, but to mobilize resources, they may also sacrifice other basic needs such as food and education, with serious consequences for the household or individuals within it. The opportunity costs of payment for health care thus make the payment 'unaffordable' because other basic needs are sacrificed ⁽¹⁶⁾.

Few studies have highlighted that a substantial part of the cost of ill health at household level is the lost income from production due to time spent while sick, seeking health care or caring for the sick. In Ghana, it was estimated that 79% of the costs of health care were due to time spent seeking for health care and caring for the sick ⁽⁵⁴⁾. In Bangladesh, it was estimated that in afflicted households, the poorest income quintile lost 74% of monthly income ⁽⁴²⁾. In other studies, much of the burden of ill health was shown to fall on the households, primarily women in caring for the sick, often with insufficient resources at their disposal to do so ^(55,56,57,58). Given that the lost income due to sickness is a substantial part of the cost of ill health (approximately 70%), the dependency of the poor on their physical ability to cope with the costs of ill health becomes even more crucial ⁽³⁾.

Tropical conditions in Africa combine with the time lost due to illness to create additional seasonal difficulties. During the rains, there is a high exposure to infection, hard work is required for cultivation, and there are often food shortages because it is some time since the last harvest. Combined with low access to health facilities, these factors interact to make mostly the poor at risk. Despite the greater importance of lost income, the poor are also less likely to have access to either sickness benefit or health insurance than wealthier groups in the formal sector ⁽⁵⁹⁾. The

poor may also delay seeking treatment due to limited funds until the condition is serious when treatment may be more expensive, and result in a greater loss of income ⁽⁶⁰⁾.

2.6. *The Ethiopian context*

About 85% of the Ethiopian population is engaged in agriculture, which relies on traditional labor-intensive inputs. Thus, the importance of a physically able, healthy work force is magnified for rural households. The health care system in Ethiopia is financed from several sources including government financing, financing from private expenditures, external assistance and loan, private health insurance, and non-governmental donor organizations, the major ones being private expenditures, government expenditures, and external assistance. More than half of all health care expenditures for recurrent costs come from household spending ⁽¹³⁾.

As is true elsewhere, seeking treatment in Ethiopia is not without costs; indeed cost considerations were reportedly the most important reasons for not seeking treatment, especially for the poor. As an example, 40% of all patients in a small rural town in Northern Ethiopia did not receive any type of medical treatment, mainly due to high cost ⁽⁶¹⁾. Ethiopian households spend a substantial amount on health care. Treatment fees at health care facilities are in principle relatively low. In the government facilities, charges exist also for registration, tests and medicines, while transport and living expenses during treatment may be substantial. The pooled average expenditure for health care in rural areas of Ethiopia per illness episode was about 4.77 Birr in 1995. In addition, the average monthly per capita health expenditure in rural areas was found to be 0.58 Birr. The pooled average household health expenditure as a percent of total household expenditure was 0.68% ⁽¹³⁾.

A study done in central region of Ethiopia indicated that 40% of the sick visited government facilities, 15% visited private clinics, 5% mission facilities and 41% self-treatment and traditional care. From this cross-sectional study, the average total cost of a visit to a health provider was 62.23 Birr. Regarding handling of medical costs, 14.2% were free patients, 70.9% paid the expense themselves, and in 14.9% of the cases, relatives paid the expenses. ⁽⁶²⁾.

A survey done in 15 selected sites in Ethiopia, which has asked for any type of morbidity in the households found that for adults of full working age (15 to 40 years), the average duration of illness during the recall period of four weeks was about 14.5 days. In terms of average workdays lost, the average for those ill during the last four weeks was 9.7 days. An average of 8.1% of adults reported losing days due to illness in the last 4 weeks. This can be translated to adults losing 9 to 10 working days per year due to illness. According to this survey, only about 9.5% of those reporting illness among rural residents and 13.6% of urban residents obtained treatment. The distribution of treated persons by type of provider was 43.0% in the government, 27.0% in individuals, 21.8% in private institutions, 4.5% in religious institutions, and 3.6% in 'other' providers. The two most important reasons given for selecting the various health care providers were proximity (44.7%), and perceived quality of care (32.7%) ⁽¹³⁾.

Study findings have also shown that the average annual time costs of caring for the sick to be considerably greater than the financial costs of care, which on their own represent about 6.2% of the overall household expenditures ⁽³²⁾. As in other parts of the developing world, majority of the people in the rural Ethiopia have very few options other than to walk for a long distance or be carried by accompanying household members to the nearest health service-giving units incurring

considerable opportunity costs of time. Beyond these units, there may be rudimentary system of transportation with animals and/or vehicles ⁽⁶³⁾. A community demand study in southern Ethiopia has shown that transportation costs were often significant, reaching 70 to 80 Birr (about 10.4 to 12 US Dollar) in some case ⁽⁶⁴⁾. The return trip is usually double (excluding cost of drugs), rendering transportation far more costly than treatment. Daily cost of food and lodging away, which are added to the overall cost to patients, increase with the distance-traveled ⁽⁸⁾.

It is also important to know the situations and local contexts, which enable rural households to utilize the health services available in the face of an increasing concern of user fees and cost recovery schedules in delivery of health services. The most important reasons for the poor in Ethiopia for not consulting anyone for their illness were cost of treatment (reported by more than half of the individuals); absence or the quality of facilities (accounting for 13.2% of the quoted reasons); and lack of time to escort patients to a health facility (quoted by 8.4% of the cases) ⁽¹³⁾.

Risk-sharing mechanisms, in the form of health insurance, among consumers of health care are less developed in developing countries. However, traditional arrangements, which are often meant to help victims of calamitous events in dealing with the financial burdens, are prevailing in most of these countries. Popular among such undertakings are the various forms of "funeral associations", which organize burial and other ceremonial arrangements whenever a member or a member's relative dies. The main form of traditional social insurance mechanism in Ethiopia is the burial or funeral association, which is called "eder" or "shengo", which is common in both rural and urban settings. Whenever death occurs among the members or their families, the association members will raise certain amount of money, and handle the burial & other related

ceremonies. Some of the "eders" were also mentioned to help members when sick to cope with the costs of illness ^(65,66). In Central Ethiopia, 21% of "eders" were found to give assistance when a member or one's family gets sick ^(62,67). Households were also seen to spend considerable proportion of their expenditures on "eder". In fact, for the poor this is more than 40% of what they spend on medical costs. As share of total expenditure, "eder" expenditure is about 0.7%, while medical expenditure is close to 1.7% ⁽¹³⁾.

Social support could also be a primary resource of coping or may interact with the individual's coping response to differentially affect one's level of distress due to illness ⁽⁶⁸⁾. Members of the extended family, usually in rural settings, tend to rely on one another for financial support whenever they are faced with health problems of major financial consequence; and help each other when health care costs, which are beyond the capacity of the household, have to be paid ⁽⁶⁹⁾. Observation by Slikkerveer (1990), has shown the 'Gossa', an extended kinship group among the Oromo of Eastern Ethiopia, as playing an important social function by collectively providing the necessary funds for health care when serious illness affects one of its members. According to this observation, such traditional community spirit and group responsibility seem to take over when the head of the household becomes ill resulting in a major threat to the economic future of the complete household ⁽⁷⁰⁾. A study done in the previous Shoa Administrative Region of Central Ethiopia has also shown support by extended families, rather than household income to be the most important factor affecting people's decision to seek outside medical care as well as their choice of higher-level providers. From this study, it was shown that 54% of the reported relatives were willing and able to assist in financing health care consumption ^(62,67).

To date, the cost of providing health care to the majority has been escalating as more and more sophisticated health technologies are needed and become available to deal with the ever-changing pattern of diseases ⁽¹³⁾. Therefore, to be fair, financing of health system should address two key challenges. First, beneficiary households should not become impoverished or pay an excessive share of their income in obtaining needed health care. In other words, fairness in financial contribution requires an important degree of financial risk pooling. Second, poor households should pay less towards the health system than rich households should. Not only do poor households have lower incomes, but also a larger share of their income goes to basic needs such as food, water or shelter. Contribution to the health system should reflect this difference in disposable income between rich and poor. These considerations translate into the normative proposition that every household should pay a *fair share* towards the costs of the health systems (in case of the very poor households, "fair share" might mean no payment at all). Payment should be based on income and for the most part should not reflect use of services or risk ⁽¹⁴⁾.

III. OBJECTIVES

3.1. *General objective*

- To assess the strategies households in the rural communities of Goma District, Jimma Zone use to cope with the costs of illness.

3.2. *Specific objectives:*

1. To determine the types of strategies rural households use to cope with the financial costs of illness.
2. To determine the types of strategies rural households use to cope with the time costs of illness.
3. To identify the sequences of different coping strategies in rural areas with respect to the costs of illness.
4. To identify factors which deter utilization of health services in rural areas.

IV. METHODOLOGY

4.1. *Study area and period*

The study was conducted from February to October 2000, in ten randomly selected rural kebeles [peasant associations] of Goma District. The district is one of the thirteen districts in Jimma Zone of Oromiya Regional State. Quantitative and qualitative data for the study were collected in March 2000. Before the actual data collection, pretesting was done in February of the same year, in Kersa District of Jimma Zone.

According to the results of the 1994 census, there are 6 urban towns and 93 rural kebeles in the district. The capital of the district, Agaro Town, is located 45 km. northwest of Jimma Town, the zonal capital. In July 2000, the total population of the district as projected from the 1994 census was 243,376 of which 203,713 (83.7%) live in the 93 rural kebeles of the district ⁽⁷¹⁾.

Regarding health services, information obtained from the District Health Office indicated that the district has one health center located in Agaro Town, which also serves as a training center for health professionals of the Jimma University. There are also 11 government and 3 state farm clinics found in different kebeles of the district.

The main reason of selecting Goma District for this study is that, it is one of the highest coffee-producing areas in the country, with several governmental and private coffee-processing plants. Therefore, there is an anticipated seasonal fluctuation of the household economic status with the corresponding season of coffee harvesting, which we thought would have a direct implication in

the financial and time costs of seeking health care, both of which are critical determinants of health service utilization.

4.2. Study design

This study is a cross sectional, community-based survey, the principal component of which comprises of questionnaires administered by trained interviewers to randomly selected rural household heads. In addition, FGDs with selected participants were held using semi-structured topic guide.

4.3. Study Population and Sampling

4.3.1. Population

The source population was all rural residents living in Goma District at the time of the study. From these, a random sample of 630 household heads were selected as study population.

4.3.2. Sample Size Calculation

The considerations taken in determining the sample size required for the study were:

- 95% confidence level for precision to an acceptable approximation of the population proportion ($Z_{1-\alpha/2} = 1.96$),
- 4% degree of margin of error ($d = 0.04$), and
- A conservative estimate of the population proportion of 50% to get the largest possible minimum sample size ($p = q = 0.5$).

Based on these assumptions, the sample size obtained was 600. Furthermore, additional 5% allowance (30 households) was considered for possible missed, closed or relocated households, and refusal to participate in the study. Finally, the sample size requirement for the study was calculated to be 630.

$$n = \frac{(Z_{1-\alpha/2})^2 \cdot (p \cdot q)}{d^2} = 600, \quad \text{and, } n_f = n + (0.05 \cdot n) \Rightarrow n_f = 630$$

4.3.3. Sampling procedure

Simple random sampling method was used to select the households, which are the ultimate sampling units for the study (fig 1). First, the list of all the 93 rural kebeles in the district was prepared using the results of the population and housing census for Oromiya Regional State ⁽⁷¹⁾. This list was used as a sampling frame to randomly select 10 kebeles included in the study using the Epi Info 6 package.

The list of all household heads in the selected rural kebeles (6,862) was obtained from Goma District Finance Office (which is used for revenue collection by the office), and this was used as a sampling frame. A random number list of 630 was generated using the Epi Info 6 package. Then, allocation of the desired households in each selected rural kebeles was done using probability proportional to size sampling technique, size being the total number of households in each rural kebele according to the 1994 census (table 1). Finally, names of the heads of households that correspond to the selected numbers were identified from the prepared list and included in the study.

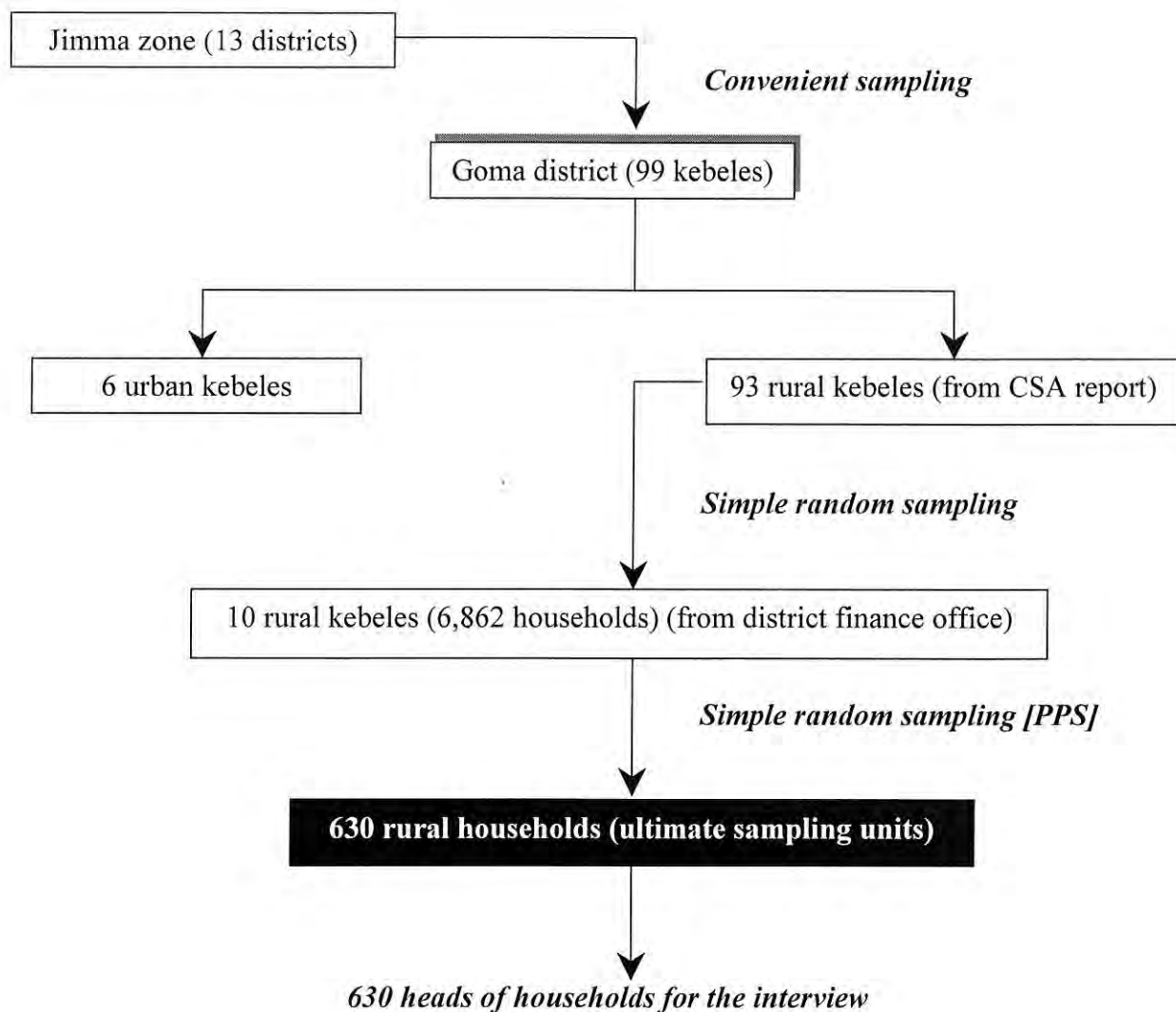


Figure 1: The sampling procedure of selecting study subjects, Goma District, Ethiopia, 2000.

Table 1. Population and households of the ten selected kebele, Goma District, Ethiopia, 2000.

Name of kebele	Total pop.	Total No. H.H.	H.Hs selected (n)	(%)
Bulado Choche	2,432	555	51	(8.1)
Bulbulo	3,603	802	74	(11.7)
Enkuli	3,270	756	69	(11.0)
Goma No. 2	2,189	615	57	(9.0)
Gurage Ourtubo	1,699	566	52	(8.3)
Koye Tupa	2,335	516	47	(7.5)
Omo Guride	5,159	1,063	98	(15.6)
Qota	3,218	714	65	(10.3)
Seja Seya	3,981	877	80	(12.7)
Wabi Qore	1,654	398	37	(5.9)
Total	29,540	6,862	630	(100.0)

4.4. Questionnaire development

The principal investigator, with the help of research advisors, developed a structured questionnaire for quantitative study and a semi-structured topic guide for focus group discussion in English. Two general medical practitioners with good language ability of English and Amharic translated the English version of the structured questionnaire to Amharic. The translated Amharic version of the questionnaire was then translated back to English by two other general medical practitioners looking for a possible gap in the contents of the original and the second translated versions. Based on this exercise, wording and way of questioning of the developed questionnaire were corrected.

4.5. *Pretesting*

Pretesting of the developed structured questionnaire was carried out in February 2000, in Merewa and Welege kebeles of Kersa District, which are located 13 and 18 kilometers respectively to the east of Jimma town. These rural kebeles shared somehow similar economic, geophysical, cultural and socio-demographic characteristics with the kebeles found in Goma District. During the pre-testing, the questionnaire was assessed for its clarity, understandability, length, completeness, validity and reliability. At the same time, the performance of the data collectors was assessed.

A total of 40 accessible households (20 in each kebele) were selected for pretesting. During pretesting, it took 42 minutes on average to administer the questionnaire. Upon analysis of the pretest data, some previously unidentified but necessary skip patterns were identified. Questions with higher proportion of non-responses and missing values were removed from the questionnaire. The flow of questioning was then rearranged so that questions, which focus on the same issue, were asked together. The identified skip patterns were also corrected. The final questionnaire was then prepared to have eight parts, all the variables being pre-coded (annex 1).

4.6 *Measures in the final questionnaire (study variables)*

Besides identification, general socio-demographic characteristics, and other particulars of the households involved in the study, the variables included in the questionnaire for household survey included:

- *General household economic status:* Average annual household income, main source of household income, food and cash crops produced by the household, possession of cattle, private house and land.
- *Perceived morbidity and health service utilization:* Type and distance of the nearby health facilities, perceived morbidity in the one-month recall period, choice of health care providers, days lost due to illness, amount of money paid for getting health services, determinants of utilization of nearby health facilities.
- *Household and group saving strategies:* Types of household saving strategies, presence and purpose of social networks like "eders".
- *Attitude towards prepayment scheme in health care delivery.*
- *Cost of illness:* Coping mechanisms for the financial and time costs of illness.

In addition, the topic guide of the focus group discussion addressed issues of household economic status, general opinions about common illnesses and health service utilization, household and community saving schemes in terms of health care, attitude towards prepayment scheme in health care delivery, and costs of health care and coping mechanisms (annex 2).

4.7. Data collection

4.7.1. Quantitative data

Ten interviewers for the household survey were recruited from Jimma Zone. The criteria used for selecting interviewers for this study were fluency in speaking the local language, educational status of secondary school and above, previous work experience of data collection with special preference to those who have participated in collecting health-related data within Jimma Zone,

willingness to work with the survey team in the rural areas of Goma District, and finally finishing the one week training course with good assessment results.

The data collectors were trained for seven days (three days before the two days of pretesting and for an additional two days after the pre-test), which took place at the Conference Hall of Community Health Program, Jimma University. The training focused at discussing the overall purpose of the study and securing informed verbal consent from the study participants, disclosing the issue of confidentiality, and administering the study questionnaires to the selected households using the local language.

Data was collected from March 6 to 25, 2000. To facilitate the data collection process, the interviewers were divided into two sub-groups, each sub-group being responsible to handle data collection in five kebeles. The overall activity of data collection was supervised and coordinated by the principal investigator and two other supervisors, one sanitarian and one nurse, both recruited from Agaro Health Center. The two supervisors were responsible for managing the logistics, coordinating the overall field activities in each sub-group, and onsite checking of the quality of the data collected before leaving each study kebele. Any missing or inconsistent data detected were sent back for immediate correction while still in the kebeles. Before aborting a sampled household from a study, two callbacks were also attempted within one-week time.

4.7.2. Qualitative data

In addition to the questionnaire-based household survey, five focus group discussions in five selected kebeles (Qota, Wabi Qore, Gurage Ourtubo, Omo Guride and Enkuli) located in

different directions from Agaro town were held in April 2000. The main purpose of these focus group discussions was to complement the data generated by the quantitative household survey. The principal investigator assisted by the two supervisors who speak the local language fluently, and were note-takers of the sessions moderated the focus group sessions. The focus group was made to consist six to eight participants according to the optimal recommendation by Debus (1995) ⁽⁷²⁾, including village elders, religious leaders, community health workers, leaders of "eders", representatives of kebele administration and women's affairs.

The group settings for the focus group discussions in all the kebeles were in a courtyard of a house of an elderly. On average, the focus group discussions lasted for about an hour and half (55-115 minutes). As soon as the sessions ended, the principal investigator sat together with the note-takers and compiled the findings on description of the setting and participants, and observations. The main results of the discussion were written in narrative form by the note-takers in Amharic. Finally, the results were translated into English for further description and interpretation by the principal investigator.

4.8. Data management, analysis and interpretation.

After pre-coding of all the study variables and giving appropriate variable names, the raw data was entered into computers using SPSS/PC+ data entry package. For this purpose, two data encoders with at least 5 years of experience in data entry using SPSS software package were recruited from the Community Based Education Program of Jimma University.

Range and skip checks were done automatically during the data entry process. A master sheet of the entered raw data was prepared for comparing errors committed during data entry. Logical and consistency errors were also checked after completing data entry. Any error identified at this stage was corrected after revision of the original questionnaire, retrieved using the corresponding record number. For analysis, SPSS for windows 10 package was used. Univariate analysis was done using summary statistics. Chi-squared test with Yate's continuity correction and multiple logistic regression were used to assess the significance of association. Finally, the results of the analysis are presented in tables for further description and interpretation.

4.9. *Ethical considerations*

Verbal consent to participate in the study was secured before conducting the interview. For this purpose, a one-page consent letter was attached to the cover page of the questionnaire, which mentioned about the general purpose of the study, the need and benefits of conducting the study, and issues of confidentiality (annex 3). The interviewers briefly discussed the content of this letter before proceeding to the interview. Participants were also informed that they have full right to refuse or discontinue to participate in the study.

A formal letter was also written to the Goma District Administration Office and the Jimma Zonal Health Department regarding the intention to undertake the study in the district, and the procedures used to select the ten kebeles randomly. After the willingness of these offices to let the study take place in the selected kebeles, a formal letter was written by the District Administration Office to the ten kebeles, the District Health Office, and the District Finance Office to cooperate with the study team.

The study proposal had secured the necessary ethical clearance from the ethical committees of the Department of Community Health- Faculty of Medicine, and School of Graduate Studies, Addis Ababa University before the commencement of data collection.

V. RESULTS

All the 630 heads of households selected for the quantitative study have responded to the questionnaire, with an overall response rate of 100%. In addition, notes taken during the focus group sessions were compiled, summarized, analyzed and finally incorporated into this report.

5.1. *Socio-demographic features*

From the 630 heads of households interviewed, 537(85.2%) were males, and 93(14.8%) were females. Age of the study participants ranged from 18 to 88, the mean ($\pm$ SD) and median age being 40.2 ($\pm$ 14.9) and 39 years respectively. The major socio-demographic characteristics of the study population indicated that 70.0% of the respondents were farmers by occupation. Muslim was the predominant religion (69.7%), and 29.7% of the respondents were followers of Orthodox Christian religion. Oromo was the predominant ethnic group (68.6%), followed by Amharas (18.4%). About 86% of the respondents were currently married, and 62.2% could not read and write, whereas only 2.7% had at least secondary education (table 2).

A cumulative total of 3,121 individuals were living in the 630 study households. The mean and modal family size was 5 and 4 persons living in the same household respectively, including extended family members. About 88% of the households were nuclear, whereas 12% have extended family members. The maximum family size was reported to be 13 individuals.

Table 2. Socio-demographic characteristics of the study population (n=630), Goma District, Ethiopia, 2000.

Socio-demographic characteristics	Frequency	Percent
Gender of the respondent		
Male household head	537	85.2
Female household head	93	14.8
Age of the respondent (in years)		
18-34	233	37.0
35-44	148	23.5
45-54	107	17.0
55 and above	142	22.5
Family size of households		
1-4 individuals	395	62.7
5 or more individuals	235	37.3
Occupation		
Farmer	441	70.0
Housewife	84	13.3
Merchant	53	8.4
Daily laborer	28	4.4
Government employee	11	1.7
Other occupations	13	2.1
Religion		
Muslim	439	69.7
Orthodox	187	29.7
Other Christians	4	0.7
Ethnicity		
Oromo	432	68.6
Amhara	116	18.4
Gurage	36	5.7
Dawro	25	4.0
Keffa	13	2.1
Other ethnic groups	8	1.3
Marital status		
Married	542	86.0
Widowed	48	7.6
Divorced	40	6.4
Educational status		
Illiterate	392	62.2
Read and write*	79	12.5
Grades 1-6	114	18.1
Grades 7-8	28	4.4
Grades 9-12	13	2.1
Above grade 12	4	0.6

* Includes education at "Quran" and "Priest" schools.

5.2. *Household economy*

Average monthly income was taken to estimate the average annual income of the households. Eliciting reliable information regarding the household's income was found to be the most difficult part of the household survey. To overcome this, information regarding economic status of the household was asked after completing other parts of the questionnaire. Nevertheless, 234(37.1%) of the households found it very difficult to estimate their average monthly or annual income, or were not comfortable to disclose information regarding their income for various reasons. Weighting the 396 analyzable responses found, the mean annual household income was found to be 1414.47 Birr (about 176 US Dollar), with a range of 240 to 11,760 Birr for a household. Of the total 630 households, 257(40.8%) have reported their average annual income to be 500-1,500 Birr, which is the middle 50 percentile whereas 74(11.7%) earned <500 Birr (the lowest quartile), and 65(10.3%) earned >1500 Birr (the highest quartile) (table 3).

Other proxy assets were also used as additional estimates of the household economic status like information on food and cash crops produced, possession of cattle, owning house and land. Accordingly, the main source of income for the majority of the households (79.4%) was farming; and maize was the main type of food crop produced by 70.5% of the households. The average amount of maize produced by a household during the past harvest season was 5.32 quintals. From the FGDs, the average price of one quintal of maize was found to be around 60 to 80 Birr in the local markets. This means peasant household who produce maize earned 372 Birr on average. Table 3 also shows that 77.0% and 42.1% of the studied households have coffee and chat plantations respectively either in their farm or in their backyard. Findings from the FGDs indicated that coffee and chat were considered as important and valuable assets, which are useful in combating shortage of money for unexpected expenditures, including health care.

Table 3. Economic status of the study population (n=630), Goma District, Ethiopia, 2000.

Index of economic status	Frequency	Percent
Annual household income level [in Birr]		
Do not know their income	234	37.1
<500	74	11.7
500-1500	257	40.8
>1500	65	10.3
Major source of income to the household		
Farming	500	79.4
Trade	75	11.9
Daily labor	32	5.1
Monthly salary from government employment	16	2.5
Others	7	1.1
Food crop usually produced by the household		
Maize	444	70.5
Teff	64	10.2
Other crops	44	7.0
Not involved in food crop production	78	12.4
Coffee plantation in the backyard		
Yes	485	77.0
No	145	23.0
Chat plantation in the backyard		
Yes	265	42.1
No	365	57.9
Possession of one or more cattle		
Yes	309	49.0
No	321	51.0
Possession of own house		
Yes	582	92.4
No	48	7.6
Possession of own land		
Yes	602	95.6
No	28	4.4

In the study area the number of cattle the household owns is used for ranking the wealth. During the FGD in one of the kebeles, the participants have mentioned, *"a better-off family in our village owns a larger number of cattle and coffee trees"*. Accordingly, 309(49.0%) of the studied households were found to have 2.4 cattle on average (range 1-11). The average price of well-fed cattle locally was mentioned to be about 750-1000 Birr. In addition, 582(92.4%) of the respondents live in their own house, and 602(95.6%) have their own land.

5.3. *Perceived morbidity and health service utilization*

The nearest conventional health institutions reported were health center located in the district capital staffed by at least one doctor, 397(63.0%), clinics run by the government which are staffed by health assistants 42(6.7%), private clinics 76(12.1%), and community health posts staffed by community health agents 115(18.2%). Regarding accessibility, 593(94.1%) of the modern health units were reported to be located within an average distance of 10 kilometers or approximately one hour walking distance from the study households.

The household heads were inquired if there was anyone sick among the family members during the past one-month from any cause of illness. Accordingly, 452 individuals from 313 households were reported to have been ill from different illnesses giving the overall one-month morbidity prevalence rate of 144.8/1000 population. The age distribution of morbidity showed that population in the youngest (<5 years) and oldest (>50 years) age groups had higher rates of illness than the rest of the population, 170(37.6%) and 136(30.1%) respectively, describing a "U-shaped" distribution with age groups on the 6-14 years category forming the base 35(7.7%).

5.3.1. *Choice of health care provider and amount of money paid for the service*

Information collected in this regard includes the preferred choice of health care provider, the reasons for plural visit, and amount of money paid for the different components of health services. In addition, information was also collected regarding the mechanisms adopted by the households to handle the health care expenses, and the main reasons for the choice of provider (indirectly asked what were the main reasons, which deter use of the locally available modern health facilities).

Table 4 shows that 228(50.4%) of the sick individuals were taken to government health facilities (health center, clinic, health station and health posts). For 88(19.5%) of the cases, help was rendered at the household level. About 7.0% of the sick individuals were taken to more than one provider of health care. The two main reasons ascribed for taking sick individuals to more than one provider were worsening of the illness while on follow-up at the first visited facility 15(48.4%), and referral made from the first visited facility 11(35.5%).

Table 4. Preferred choice of health care provider by age group of sick individuals (n=452), Goma District, Ethiopia, 2000.

Provider visited	Children		Adults 15-		Elderly >50		Total	
	<15 years		50 years		years			
	N	(%)	N	(%)	N	(%)	N	(%)
Government health facilities	124	(60.5)	41	(36.9)	63	(46.3)	228	(50.4)
Helped at household level	25	(12.2)	16	(14.4)	47	(34.5)	88	(19.5)
Private health facilities	28	(13.7)	34	(30.6)	15	(11.1)	77	(17.0)
Traditional and religious healers	14	(6.8)	12	(10.8)	2	(1.5)	28	(6.2)
Multiple providers	14	(6.8)	8	(7.2)	9	(6.6)	31	(6.9)

5.3.2. Days lost due to illness

In the one-month recall period, the 452 sick individuals and their caretakers have lost a weighted total of 3,737 and 2,806 days respectively from their usual activities. The average number of days lost in one month by the sick individuals due to their illness were 9.23 days and by the caretakers 7.38 days (table 5). During the focus group discussions in all the five kebeles, it was found that a one-day wage labor spent on larger scale coffee plantations to collect coffee beans during the harvest season could generate an average of 10-20 Birr.

Table 5. Days lost by the sick individuals and caretakers from the usual activity due to illness (n=452), Goma District, Ethiopia, 2000.

Days lost	Sick individual		Caretakers	
	Frequency	Percent	Frequency	Percent
No lost day	37	8.2	57	12.6
1 to 5 days	200	44.2	222	49.1
6 to 10 days	86	19.0	106	23.5
11 to 15 days	71	15.7	49	10.8
16 to 20 days	35	7.7	10	2.2
21 to 25 days	6	1.3	3	0.7
26 to 30 days	17	3.8	5	1.1

5.3.3. Costs of health care

Regarding the cost of health care due to illness episode in the one-month recall period, the mean amount of money paid for getting health care to the sick individual irrespective of the provider

visited was 32.87 Birr (US\$=4.10)(table 6). The average amount of expenditure for health care weighted for the 364 sick individuals who have visited different providers were: 1.75 Birr for card or consultation; 17.82 Birr for drugs and medication, 4.25 Birr for laboratory and other investigations; 8.34 Birr for transport, 13.03 Birr for lodging away from home, and 6.50 Birr for other expenses including money paid for inpatient care. It can be seen that the overall expenditure for health care of the sick person within one-month time constituted about 2.3% of the reported household annual income. The households used different mechanisms to handle the costs needed for getting health care in the one-month recall period. In the majority of the cases 209(66.8%), money was available at household level to cover the required expenditures. Monetary support was rendered from relatives, friends and neighbors for 72(23.3%) households, and the rest 31(9.9%) were offered free health care from the government health institutions.

Table 6. Cost of health care for the perceived illness. Goma District, Ethiopia 2000.

Amount of money paid [in Birr]	N	Mean (±SD)	Minimum	Maximum
For card/consultation	336	1.75(±1.67)	0.00	5.00
For drugs	364	17.82(±14.99)	1.00	66.00
For laboratory and other investigations	188	4.25(±2.3)	2.00	15.00
For transport	358	8.34(±7.12)	0.00	30.00
For lodging away from home	44	13.03(±10.4)	2.00	50.00
For inpatient and other expenses	42	6.50(±5.80)	1.50	24.00
Total amount of money paid for health care	364	32.87(±27.16)	0.00	159.00

5.3.4. Cost and use of distant health facilities

Within the recall period of six months, there were 99 cases reported to have been referred to higher-level health facilities for getting better health care. The majority (70.7%) of the referrals were made to Agaro Health Center and 25.3% to Jimma Hospital. Fifteen (15.2%) of the referred individuals (all were referred to Jimma Hospital) did not go to the referral facility, mainly because of lack of money needed to cover costs incurred (especially transport and lodging cost for the attendant). Among cases who went to the referral facility, it was reported that 56.0% have stayed in the compound of the referral health institution because of lack of money. Others have stayed at the home of their friends or relatives (21.4%), and at a hotel (22.6%), paying an average of 4.50 Birr per day per individual. In a focus group discussion, one participant from Qota kebele said, *"I will never visit Jimma Hospital again. You see, I was there 2 months back attending my sick child who was admitted there because of malaria. I myself have suffered from severe cold while sleeping on the floor of the hospital corridor because I have got no money to go anywhere to lodge"*.

Table 7. Reasons for not using local and referral health facilities (n=630), Goma District, Ethiopia, 2000.

Variables	Reasons		Crude OR (95% CI)	Adjusted OR (95% CI)
	Cost alone (n=301)	Other reasons (n=329)		
Gender				
Female	45	48	1.00	
Male	256	281	0.97(0.61,1.54)	0.95(0.55,1.85)
Age				
35 and above	181	216	1.00	
Below 35 yr.	120	113	1.27(0.90,1.78)	1.20(0.80,2.75)
Family size				
5 and above	109	126	1.00	
Less than 5	192	203	1.09(0.78,1.53)	1.28(0.69,1.63)
Occupation				
Non farmers	81	114	1.00	
Farmers	220	221	1.33(0.93,1.90)	1.08(0.91,3.92)
Religion				
Christian	96	95	1.00	
Muslim	205	234	0.87(0.61,1.24)	0.80(0.65,1.20)
Ethnicity				
Non-Oromo	93	105	1.00	
Oromo	208	224	1.05(0.74,1.49)	1.38(0.69,3.89)
Marital status				
Widowed & divorced	74	14	1.00	
Married	227	315	0.14(0.07,0.26)	0.25(0.09,0.46) **
Educational status				
Literate	121	117	1.00	
Illiterate	180	212	0.82(0.59,1.15)	0.98(0.71,4.20)
Annual income (in Birr)*				
500 or more	141	181	1.00	
Less than 500	48	26	2.37(1.36,4.15)	2.18(1.09,7.32) **
Coffee plantation				
No	89	56	1.00	
Yes	212	273	0.49(0.33,0.73)	0.32(0.18,0.86) **
Chat plantation				
No	200	165	1.00	
Yes	101	164	0.51(0.36,0.71)	0.68(0.19,0.94) **
Possess own house				
No	39	9	1.00	
Yes	262	320	0.19(0.08,0.41)	0.76(0.28,0.87) **
Possess own land				
No	22	16	1.00	
Yes	279	323	0.63(0.31,1.28)	0.68(0.28,5.81)

* Those who could not estimate their income are not included in the analysis ** p<0.05

5.3.5. Factors deterring health service utilization

Some reasons were mentioned for not utilizing the locally available health facilities. Of these, 47.8% of the respondents pointed cost-related factors alone as reason for not using the locally available health facilities (table 7).

It can be seen from table 7 that a significant association exist between households which mentioned cost as a deterring factor of utilization of health facilities and the head of the household being widowed or divorced, low annual income of the household, not having coffee or chat plantation in the farm or backyard garden, and not having own house ($p < 0.01$).

5.4. Household savings for health care

The respondents were asked if they had experience of keeping money for the purpose of emergency in health care. Accordingly, 152(24.1%) of the households were found to have such an experience of keeping money in different forms. From these, 109(71.7%) households kept money in cash form either in their own house, or by being members of traditional group saving scheme called "equb".

Regarding participation in the social networks, 522(82.9%) of the studied households were members of the "eder" found in their villages. Average expenditure on "eder" in one year was 18.96 Birr (about 1.3% of the average annual household income). Households also spend on "eder" in one year about 57% of what they spend on medical costs during one-month period. About 80% of the respondents who were members to any of the "eders" reported that their "eders" helped their members by raising money and sharing of risks, mainly during burial

ceremony. In addition, 12.7% have reported that their "eders" have purposes of insurance like local safety nets for houses on fire, besides an envisaged purpose of risk sharing. During the focus group discussion in Wābi Qore kebele, the participants mentioned that fire is a common incident in their village and someone who is not a member of the "eder" in locality will face a lot of problems in reconstructing the burnt house.

Only 38(7.3%) of the household heads claimed that the "eder" in which their household belonged to helped members to support or share costs of health care. During the focus group discussion in Wabi Qore kebele, the "eder" leader mentioned, *"our "eder" has envisaged to help members who face problem of covering illness costs since the past three years. The decision to grant financial support to those in need is jointly made by the chairman and other executive members. For this purpose, we increased the regular monthly payment to 1.50 Birr from the previous 1 Birr"*. Lack of money to pay the regular and membership fee was mentioned by 53(49.1%) of the households who were not members to any of the "eders".

5.5. Attitude towards prepayment scheme in health care.

In this study, 557(88.4%) of the respondents agreed (either totally or partially) to the concept of prepayment scheme in the delivery of health care, where an annual fee is collected during the period of greater availability of money (season of coffee harvest). From these, 231(41.5%) indicated getting a year-round confidential health service to their families as the main presumed advantage of prepayment scheme. About 20% mentioned prevention of sale of household assets, and 18.9% mentioned prevention of unnecessary loan as the potential benefits of prepayment. The mean amount of money proposed to be prepaid for getting health care for one-year, was 24.45 Birr. The findings from the FGDs in general corroborate with these findings.

Of the study participants, only 17(2.7%) didn't know that the government provides free health care to those who are not able to pay. Individuals who participated in the five focus group discussions indicated that they knew about free health care delivery to poor people, but it is often limited to exempting only consultation and laboratory fees. Usually drugs are not available in adequate quantity and quality at the government health facilities and they usually are told to buy drugs outside, mainly from private pharmacies, drug shops or rural drug vendors.

5.6. *Seasonal variation to cover for the costs of health care*

About eighty percent (505 households) have reported that there was a seasonal variation in the ability to cope with the costs of illness. All have reported the rainy season to be the most difficult and lean time to cope with illness and other costs that are incurred by the households.

5.7. *Coping strategies with the costs of health care*

Strategies to cope with illness costs were asked for the most recent illness episode which had occurred among the members of the studied households during the *past six-months* recall period. Eight possible options of coping with the financial costs of illness and three possible options of coping with the time costs of illness were given. Besides, "no attempt was made", and "other strategies used" were added. In situations where there could be more than one strategy used, ordered sequence of the usage of the first three coping mechanisms was also asked.

5.7.1. *Financial costs of illness*

In 534(84.8) of the households studied, there was at least one household member who was ill during the past six-month recall period. In 226(42.3%) of these households, the sick individual

stayed at home, no help being rendered with regard to health care. The remaining 57.7% of the households who had sick members have visited various types of health care providers. These households have employed various mechanisms either alone or sequentially to cope with the costs which were brought about by the illness. In the case of 132(24.7%) households, only one strategy was used to cope with the costs needed in getting necessary health care. The three strategies mentioned most commonly which were used to cope financial costs at the initial step were looking for exemption paper from the kebele office 90(16.8%), sale of household assets 71(13.3%), and use of household savings 70(13.1%) (table 8).

In 176(33.0%) households, the first strategy alone was not enough to combat the shortage of money in seeking health care for the sick individual. Therefore, an additional second strategy was further used to cope with the financial costs of the illness. Accordingly, the three most commonly used mechanisms in the second stage by the studied households were sale of household assets 51(29.0%), borrowing from others 50(28.4%), and use of household savings 31(17.6%) (table 8). There were also 37(6.9%) households, which have used three strategies, the most common strategy used being sale of household assets 22(59.5%) (table 8).

Table 8. Strategies used by households to cope with the financial costs of health care (n=534),
Goma District, Ethiopia, 2000.

Strategy used	Frequency	Percent
<i>First strategy (n=534)</i>		
Nothing done	226	42.3
Looking for exemption paper	90	16.8
Sale of assets	71	13.3
Use of household savings	70	13.1
Borrowing from others	68	12.7
Other strategy	9	1.8
<i>Second strategy (n=176)</i>		
Sale of assets	51	29.0
Borrowing from others	50	28.4
Use of household savings	31	17.6
Support rendered by relatives and friends	24	13.6
Other strategy	20	11.4
<i>Third strategy (n=37)</i>		
Sale of assets	22	59.5
Support rendered by relatives and friends	9	24.3
Other strategy	6	16.2

Bivariate analysis of first coping mechanisms used with some of the socio-demographic and economic variables showed that households with estimated annual income ≥ 500 Birr were found

more likely to make no attempt to cope financial costs of illness as compared to those with estimated annual income level of <500 Birr ($\chi^2 = 16.58$, $p < 0.001$). Regarding other mechanisms used, significant association was found between sale of household assets and the head of the HH being male ($\chi^2 = 43.9$, $p < 0.001$), literate ($\chi^2 = 3.87$, $p < 0.05$), and with estimated annual household income of ≥ 500 Birr ($\chi^2 = 83.41$, $p < 0.001$). Use of household savings was also significantly associated with estimated annual income of the household below 500 Birr ($\chi^2 = 6.36$, $p < 0.001$) and with membership to “eder” ($\chi^2 = 6.38$, $p < 0.05$). In addition, borrowing from others to handle illness costs was significantly associated with the head of the HH being male ($\chi^2 = 7.29$, $p < 0.01$), annual income of more than 500 Birr ($\chi^2 = 8.72$, $p < 0.01$) and those who do not have with coffee production in their backyard or in their farm ($\chi^2 = 11.81$, $p < 0.01$)(table 9). From the FGDs, it was found that when health care costs beyond the money readily available at the household was needed, properties which were purchased during the coffee harvesting season, live cattle, and stored grain will be sold in the villages, usually at much lower prices, in order to cover the health care costs. In addition, it was mentioned that relatives who live in the towns and are in a better economical position render help by transferring some amount of money to cover the costs of health care.

Table 9. First mechanism used to cope with the financial costs of illness with selected socio-demographic and economic variables (n=534). Goma District, Ethiopia, 2000.

Variables	No attempt (n=226)	Exemption paper (n=90)	Sale of assets (n=71)	Use of savings (n=70)	Borrow- ing (n=68)	Other strategies (n=9)
Age						
18-55	177	65	57	54	54	7
55 and above	49	25	14	16	14	2
Sex						
Male	197	80	42*	65	66 [§]	7
Female	29	10	29	5	2	2
Religion						
Muslim	162	66	46	47	42	8
Non-Muslims	64	24	25	23	26	1
Ethnicity						
Oromo	156	68	50	45	42	8
Non-Oromo	70	22	21	25	26	1
Marital status						
Married	192	77	58	62	62	7
Widowed/divorced	34	13	13	8	6	2
Occupation						
Farmer	165	57	43	48	42	7
Non-farmers	61	33	28	22	26	2
Educational status						
Illiterate	135	51	52	50	36	7
Literate	91	39	19*	20	32	2
Family size						
Less than 5	139	59	40	43	49	5
5 or more	87	31	31	27	19	4
Annual income**						
<500 Birr	8	17	35	3*	2	1
≥500 Birr	108*	42	36*	49	51 [§]	5
Production of coffee						
Yes	178	73	54	57	42	7
No	48	17	17	13	26 [§]	2
Production of chat						
Yes	96	42	31	26	24	4
No	130	48	40	44	44	5
Member to “eder”						
Yes	190	77	58	50*	62	5
No	36	13	13	20	6	4

* Significant at p<0.05

§ significant at p<0.01

♣ significant at p<0.001

** Households who didn't know their estimated annual income are not included in the analysis

5.7.2. Time costs of illness

From the total 534 households who reported the presence of sick member in the recall period of six-months, 342(64.0%) claimed to have made no attempt to compensate for the time lost by the sick individual due to illness. The remaining 192 households have used different mechanisms to compensate for the time lost due to sickness of economically active adult or for care taking if the sick individual was a child or an elderly. Among households which have used only one strategy, division of labor among the existing household members was the most frequently utilized strategy to cope with the situation 146(27.3%), followed by help rendered by neighbors, friends or relatives 30(5.6%). For households that have utilized 2nd coping mechanism on top of the first, help rendered by neighbors, friends or relatives was the most frequently reported sequence of coping mechanism 26(83.9%) (table 10).

Table 10. Strategies used by households to cope with the time costs of health care (n=534), Goma District, Ethiopia, 2000.

Strategy used	Frequency	Percent
<i>First strategy (n=534)</i>		
Nothing done	342	64.1
Division of labor within the household	146	27.3
Helped by neighbors/friends/relatives	30	5.6
Other strategy	16	3.0
<i>Second strategy (n=31)</i>		
Helped by neighbors/friends/relatives	26	83.9
Other strategy	5	16.1

Bivariate analysis between first mechanisms used to cope with the time lost due to illness and socio-demographic and economic variables showed a statistically significant association between no attempt of coping and being illiterate ($\chi^2 = 4.14$, $p < 0.05$). Besides, a significant association was found between division of labor among household members and family size of more than 5 individuals ($\chi^2 = 4.96$, $p < 0.05$ (table 11).

5.8. Results of multiple regression

Variables that have shown statistically significant association on the bivariate analysis were tested using multinomial logistic regression. Table 12 shows that only income level of the household has significant association with sale of household assets to cope with the financial costs of illness in that, households with estimated annual income of less than 500 Birr were 15 times more likely to sell their household assets as an initial response to cope the sudden necessity of medical costs ($p < 0.000$). Households with income of less than 500 Birr were also less likely to use saving, whereas those who belong to “eders” are more likely to use saving for coping with the costs of illness ($p < 0.05$). Furthermore, households with income level of < 500 Birr were more likely to borrow while those with coffee plantation were less likely to borrow ($p < 0.05$).

Table 11. Mechanisms used to cope with the time costs of illness with selected socio-demographic and economic variables. Goma District, Ethiopia, 2000.

Variables	No attempt (n=342)	Division of labor (n=146)	Rendered help by others (n=30)	Other strategy (n=16)
Age of the respondent				
18-55	262	112	25	14
55 and above	80	34	5	2
Sex of the respondent				
Male	294	122	24	15
Female	48	24	6	1
Religion				
Muslim	241	93	23	14
Non-Muslims	101	53	7	2
Ethnicity				
Oromo	230	102	21	13
Non-Oromo	112	44	9	3
Marital status				
Currently married	292	127	25	15
Widowed/divorced	50	19	5	1
Occupation				
Farmer	238	103	21	12
Non-farmers	104	43	9	4
Educational status				
Illiterate	180*	76	21	11
Literate	162	70	9	5
Family size				
Less than 5	219	80	23	11
5 or more	123	66*	7	5
Average annual income**				
<500 Birr	28	12	2	2
≥500 Birr	179	83	16	14
Production of coffee				
Yes	260	114	24	13
No	82	32	6	3
Production of chat				
Yes	118	68	14	7
No	224	78	16	9
Membership to “eder”				
Yes	286	115	26	15
No	56	31	4	1

* Significant at $p < 0.05$

** Households who didn't know their estimated annual income are not included in the analysis

Table 12. Multiple logistic regression of first strategy of coping with financial costs of illness and socio-demographic and economic variables. Goma District, Ethiopia, 2000.

Coping mechanism	Variables	Estimate	Bivariate OR (95%CI)	Multivariate OR (95%CI)
Sale of household assets	Female	-0.237*	0.17(0.09,0.30)	0.79(0.33,1.86)
	Literates	0.627*	1.80(1.01,3.25)	1.87(0.90,3.89)
	Income ≥500	2.719****	8.00(4.23,15.19)	15.16(6.83,33.67)
Use of household saving	Income ≥500	-1.411**	0.24(0.06,0.82)	0.24(0.07,0.81)
	Member to "Eder"	1.256***	2.18(1.17,4.01)	3.51(1.59,7.78)
Borrowing	Male	1.423*	6.33(1.62,54.39)	4.15(0.47,36.41)
	Having coffee plantation	-1.046***	0.42(0.24,0.75)	0.35(0.16,0.75)
	Income ≥500	1.259**	6.80(1.70,59.00)	3.52(1.31,9.48)
* p>0.05 ** p<0.05 *** p<0.01 **** p<0.001				

VI. DISCUSSION

Nowadays, in many developing countries affordability of health care is a growing concern both for policy makers and households as people are expected to contribute more from their own pockets in getting health care due to health sector financing reforms and privatization more generally. Even in countries where health services are claimed to be delivered 'free', informal charges and time and transport costs incurred by households is considerable.

In Ethiopia, health services are provided primarily by publicly owned institutions; and nowadays supplemented by private health institutions, which are flourishing in urban and sub-urban centers of the country, and which are also fairly utilized by the population residing in rural areas. But, information regarding the mechanisms to cope with the costs of illness adopted at household level, especially by the largest proportion of the population (i.e., the rural people) is scarce. This study therefore tries to evoke the main mechanisms used by the rural households to cope with the costs of illness mainly in obtaining conventional health services.

In the first place, as is true elsewhere in Ethiopia, estimation of annual household economic status (which we thought would have a direct implication in determining the strategies adopted by households in choosing mechanisms of coping) showed gross underestimation both by direct inquiry and indirectly asked proxy indicators possibly for fear of taxation and other associated reasons. Information obtained from the focus group discussions in general indicated that though seasonal, the households in the study area could earn more than what they have reported in the quantitative household survey.

From this study, government health care providers in general were found to be the most important sources of health services, in which 50.4% of the sick individuals in the recall period of one-month visited these facilities (in this case health center, clinics/health stations and health posts). About seventeen percent have visited private providers (private clinics, pharmacies and drug shops), 6.2% went to traditional and religious healers, 6.9% went to more than one provider, and 19.5% were helped at the household level. The findings from the focus group discussions in general agreed with the findings of the quantitative study, where the participants mentioned government health facilities to be the preferable sources of health care providers.

When the pattern of choice of health care providers in the study area is compared with other studies, similar results were obtained. A survey in a rural community of southwest Ethiopia showed that 55.4% of the sick did nothing, 30.3% applied to various health institutions, 9.2% used self-care at household level, and 5.2% went to traditional healers ⁽⁷³⁾.

A study in central Ethiopia has also found that 27% of the sick stayed at home or were assisted by relatives, 14% went to traditional or transitional healers, 40% applied to government facilities, 15% went to private clinics, and 5% visited mission facilities ⁽⁶²⁾. Only looking for rural parts from a PHRD study done all over Ethiopia, it was found that 43% of the sick individuals visited government facilities, 27% visited individual providers, 21.8% went to private institutions, and 4.5% went to religious healers ⁽¹³⁾. In Kenya, it was also found that for a given illness episode, there was a very high likelihood of patient's consulting more than one provider for advice or treatment, despite that there is an established health unit nearby ⁽⁵⁰⁾.

From the present study, it was found that the average total cost of a visit to a health care provider was 32.87 Birr (about US\$ 4.10). Among this, the largest share was spent on drugs, 17.82 Birr (range 1 to 66 Birr), and the lowest was for consultation, 1.75 Birr (range 0 to 5 Birr). Considering 3.6 annual episodes of illness for a household, it can be seen that households in the study area spent 118.33 Birr (about US\$ 14.80) on average for health care in one year. This finding in general is lower when compared to the findings from the study done in central Ethiopia, where the average cost of a visit to a provider was 63.33 Birr (about US\$ 10) ⁽⁶²⁾. In the contrary, the pooled average expenditure for health care in rural Ethiopia as reported in the PHRD study was much lower than the present study (4.77 Birr) ⁽¹³⁾. In a rural district of Burkina Faso, the cost of visiting a provider for malaria case was reported to be US\$ 5.96 on average ⁽³³⁾. A study from Thailand has also found that more than 15% of the annual household income was spent for diagnosis and treatment of tuberculosis ⁽⁴⁶⁾.

In an attempt to quantify some of the economic implications of morbidity in the study area, days lost due to illness either by the sick or the caretakers were determined and compared with other studies. When compared with the findings from a nationwide PHRD study (1996), which has found an average of 9.7 working days being lost by adults who have reported illnesses ⁽¹³⁾, the present study has shown that adults who have reported illness in the one-month recall period have lost about 9.23 working days, and the caretakers who were looking after mainly sick children and elderly have lost about 7.38 working days.

Taking into account the possibility to engage in collecting coffee beans during harvesting season which was mentioned in the focus group discussions as one of the potential daily wage generating jobs, and coincided with the time the study was conducted, it can be translated that

about 138.45 Birr (about US\$ 17) and 110.70 Birr (about US\$ 14 US) could have been earned per month by the sick adults and by the caretakers respectively (9.8% and 7.8% of the average annual household income). This shows that combined with the main coping mechanisms employed (sale of assets and going into debt), illness contributes considerably to the impoverishment of households by resulting in the loss of significant amount of the household income.

Another finding from a study done in a rural community in Sri Lanka, the annual economic loss per household was about 47.46 US Dollar for all illnesses, excluding malaria, which corresponded to a loss of 18% of annual household net income. Besides, in an important agricultural season in Sri Lanka, 5.6% of the working days were lost by adults and 10% of the school days lost by children were attributed to malaria ⁽⁴²⁾. In Bangladesh, as high as 74% of the monthly income of households was reported to have been lost during illness ⁽⁴²⁾. In Ghana, an estimated 79% of the costs of illness due to the time lost from working in seeking health care ⁽⁴⁵⁾.

Regarding the mechanisms adopted in handling the medical costs for illnesses among the members of a household, 23.3% of the studied households claimed that they get money transferred from their relatives, friends or neighbors, 9.9% were offered free health care from the government, and the majority (66.8%) paid the needed expenses by themselves. Similar findings have been reported from the central Ethiopian study, where 14.9% of the medical expenses were paid by relatives, 14.2% were free patients, and 70.9% paid the expenses by out of pocket expenditure ⁽⁶²⁾.

One of the main findings from this study is that the cost of health care is an important determinant of health service utilization. About 48% of the respondents have indicated cost-related factors deter their utilization of the locally available and distantly located health facilities. This was found to be more common among widowed or divorced heads of households, families with low annual income (<500 Birr per year), those who did not have their own house, and those who did not possess coffee or chat plantations in their farm or backyard.

Similar results have been reported in a small town of northern Ethiopia, where about 40% of the patients did not receive any kind of medical care for reasons related with high cost of services⁽⁶¹⁾. From a study in rural Indonesia, 45% and 31% of the poor households were seen not to seek health care for mild and severe illnesses respectively, mainly because of cost related reason⁽⁴³⁾.

The majority of the studied households (about 83%) were found to participate in “eder”, which had varying number of members. The average annual expenditure spent by a member household on “eder” was about 18.96 Birr (about 1.58 Birr per month), which was about 1.3% of the reported annual household income. The one-month expenditure on “eder” was found to constitute about 4.8% of the expenditure on medical costs spent for illnesses (about 16% of the annual expenditure considering 3.6 annual episodes of illness for a household).

The findings from this study on expenditure on “eder” are in general higher than that of the PHRD study, which has shown that expenditure on “eder” in one year was about 0.7% of the expenditure of the overall annual expenditure, and it was about 40% of the medical expenditures⁽¹³⁾.

According to the current study, 7.3% of the households who were members to any of the “eders” reported that the “eder” in which they are member helped them covering medical costs. It is widely known that the majority of “eders” or similar social networks in Ethiopia intend to help members mainly to share risks during the time of burial and other calamitous events.

The finding from this study thus shows some of the “eders” in the study area have started to support their members by sharing medical costs. This was even stressed in the focus group discussion in one of the kebeles where the “eder” has envisaged sharing costs of illness of its members and has increased the monthly fee for supporting the intended purpose. In central Ethiopia, a better result was reported with this regard, where 20.7% of the “eders” gave some kind of assistance when a household member gets sick ⁽⁶²⁾.

Pre-payment in the delivery of health care is considered as one of the means to promote the most equitable distribution of financial burden among the population. Although pre-payment is likely to have difficulty in implementing a progressive payment system, it is the only alternative for financing local health care which can share the costs of health care provision between the sick and the healthy ⁽²⁷⁾. The danger of poorly designed prepayment scheme, discussed elsewhere is that it may encourage overuse of health services by those insured people because they are free of charge at the point of use (moral hazard), or those with higher risks are more likely to pre-pay and the opting out of the system by those with the lowest health risks (adverse selection).

The concept of prepayment scheme in the delivery of health care was fairly highly accepted in the study area, where 88.4% of the respondents have agreed to the proposed idea either totally or

partially. Together with the reasons cited as presumed advantages of the prepayment scheme, and where as high as 80% of the studied households have reported to have faced a marked financial problem during the rainy season in covering health care and other expenditures, the reported level of agreement towards prepayment seems instrumental to policy makers.

The major finding of this cross-sectional study done in a predominantly coffee-growing district and peasant community of southwest Ethiopia indicated that a sizeable proportion (42.3%) of the studied households with the presence of morbid members were found to be staying at their home and did not purchase outside health care for reasons associated out of pocket expenditures of the costs of illness. The finding of interest in this regard was that poorer households were more likely to make no attempt as compared to other households with relatively higher income levels.

In addition, about 64% of the households included in the present study were found to have done nothing with regard to coping with the time lost by the economically active member of the household either due to sickness which has occurred in him- or herself, or during care taking of other household members. Possible explanation for such “no attempt” could be due to perceiving the illness as mild and self-limiting so that the sick didn’t visit health care providers and also didn’t consider the illness to interfere with his/her usual activities. On the other hand, other household members might have been unable to replace the role of the sick individual if he/she was the breadwinner of the family.

The present study has also found that about 58% of the studied households used one or more strategies to cope with the financial costs of illnesses that had occurred among the household

members. Among households which have reported to avert the stressful situation of financial costs of illness by using only one coping mechanism, looking for free treatment paper from the kebele office because the household do not have adequate money, sale of household assets which are often purchased during the time of availability of more money (coffee harvesting season), and use of household saving were mentioned commonly.

Household income was seen as one of the factors affecting the household's decision to seek outside medical care. Hence, sale of household assets to pay the money needed to cover medical costs was significantly associated with male headship of the household, literacy, and higher annual household income (the highest quartile). Annual household income of below 500 Birr and membership to any of the "eders" was also significantly associated with use of stored saving at the household level. It can be recalled that 109(17.3%) households have an experience of keeping money either in their house or being a member of "equb".

Households headed by males, above the highest income quartile and with no coffee plantation were seen to resort to borrowing during the time of difficulty in paying medical bills than households headed by females, in the lower income status and with coffee plantations respectively. One of the interesting findings found from this study is that, when the household head was widowed or divorced at the time of the study, non-farmer, or when the family was relatively small (less than five members), it was more likely that such households would get assistance by their extended kin, villagers or close friends to cope with illness costs at a later stage after some options have been exhausted initially.

In general, the findings from the present study showed that the studied rural households mainly looked for free treatment paper, sale their household assets, use their savings go into debt, or are supported by their extended family members or relatives, close friends or neighbors to cope with the financial costs of illness. These findings are comparable with the observations of other studies. A study done in Bangladesh showed that an initial response of families, especially the poor to cope with the costs of illness was sale of household assets followed by substitution of labor inside the house to preserve the household income, and borrow money from others to cope with the sudden necessity of medical expenditure ⁽⁴⁹⁾. A study in Sierra Leone has also shown that borrowing rice and selling it in the village to raise money so as to cover health care expenditures was the preferred method used by peasant households ⁽²⁶⁾.

In rural districts of Nepal, the majority of households were also found to cope with the reduction in labor supply caused by malaria episode, by drawing largely on the time of adult family members ⁽³⁹⁾. Another study done in central Ethiopia showed that support rendered by extended families and assistance by traditional burial associations of the community to have been important factors in households decision of seeking health care and also choice of health care providers ⁽⁶²⁾. A survey in four African countries by McPake et al in 1993 found borrowing from friends and relatives as the most common non-routine source of cash (transitory income) for seeking health care ⁽⁵⁾.

VII: CONCLUSION

Publicly owned health care providers whose charge is usually nominal were found to be the most preferred sources visited by about half of the sick individuals. The health center located in the district capital was found out to be the most preferable choice of health care even by residents of distant kebeles where there were clinics and community health posts nearby as exemptions in the government health institutions were often seen as the solution to the affordability problem for the poorest section of the population.

Utilization of private health care providers, which are mainly located in the six towns of the district, was also significant (17%). Findings from the FGDs showed that majority of the sick who went to government health facilities with free treatment paper ended their visit at private health institutions because they valued “drugs” as the most important components of the medical care.

The average cost of visiting a health care provider (irrespective of the type of illness) was 32.87 Birr (about US\$ 4.10). This expenditure on health care for a single episode of illness was much higher as compared to a report in the PHRD study (4.77 Birr). The indirect cost of illness was also found to be considerable where adults who have reported illness in the one-month recall period have lost about 9.23 working days, and the caretakers who were looking after mainly sick children and elderly have lost about 7.38 working days. This was equitable to a loss of about 138.45 Birr (about US\$ 17) and 110.70 Birr (about US\$ 14 US) in one month during coffee harvesting season in the study area.

Even though the majority (66.8%) of the households have paid the needed medical care expenses by themselves, transitory sources of household income (transferred money from relatives, close friends or neighbors) were decisive to some families in getting medical care for the sick.

The cost of health care was an important determinant of utilization of health services in the study area. Widowed or divorced heads of households, families with low annual income, those who did not have their own house, and those who did not possess coffee or chat plantations in their farm or backyard were found to be more affected by the costs of care.

Expenditure on “eder” in the study area was found to constitute a sizeable proportion of the household expenditure. About 7% of the “eders” have also envisaged purposes of sharing of medical costs among members. The study participants have fairly high level of agreement with the concept of prepayment scheme in the delivery of health care.

About 42% of the studied households, especially poorer ones with the presence of sick members were found not purchase outside health care for reasons associated out of pocket expenditures of the costs of illness. In addition, about 64% of the households did nothing with regard to coping with the time lost due to illness. About 58% used one or more strategies to cope with the financial costs of illnesses that had occurred among the household members. Included among the main mechanisms were looking for free treatment paper from the kebele office, sale of household assets, use of household saving, going into debt, and supported by extended family members or relatives, close friends or neighbors.

VIII. STRENGTHS AND LIMITATIONS OF THE STUDY

8.1. *Strengths of the study*

- Simple random sampling method was used to select the study participants.
- The study has employed both quantitative and qualitative methods of data collection to validate the information generated.
- The study was conducted in a rural setting in which information regarding ways of coping illness costs and ultimately utilization of health service is scarce.
- A 100% response rate for the quantitative study was obtained, because of two callbacks made within a week time before aborting the selected household from the study.

8.2. *Limitations of the study*

- The sampling frame used to select the studied HHs was a list of household heads that were paying their regular taxes to the District Finance Office. There are very few households (about 2.4%, as compared to the CSA census report), who were not registered and paying taxes. So there could be missing of these possibly poorest sections of the community from being involved in the study.
- The data on expenditure to the costs of illness was based on information generated using questionnaire at the household level. Therefore, there could be a considerable recall bias, as no facility exit interview was made which could enable to obtain the actual information regarding expenditure on different components of health care.

- Issues related to coping mechanisms used by the household for illness episodes that have occurred in the recall period of six months could easily be forgotten so that the results obtained possibly are biased.
- This study has not addressed the social cost of illness, which could be one of the important issues in coping with the cost of illness in the Ethiopian setting.
- The study was a cross-sectional study, which has used a one-season (post-coffee harvesting) analysis.

IX. RECOMMENDATIONS

After analyzing the major findings from this cross-sectional study, the following recommendations are forwarded:

- ◆ More research is needed to identify which groups remain ‘economically inaccessible’ to health services (though they are geographically accessible) and how this problem can best be addressed. With this regard, ways of operating exemption policies and sliding scales need to consider viable options so that these ‘inaccessible’ segments of the population are targeted effectively, and interventions are focused on strengthening traditional support mechanism. In addition, the ability and willingness of rural households, especially the poor to pay for health care and their strategies to cope with the resource consequence of ill health has to be well explored, including how the impact of health care expenditures at the household level differ according to the type of payment, and also incorporating the social cost of illness.
- ◆ Follow-up studies need to be undertaken to see the difference in the potential capability of coping costs of illness in different agricultural seasons.
- ◆ It was found that drugs constitute the larger share of costs of health care. Besides, cost was considered as one of the main deterring factors for health service utilization. Therefore, proper targeting should be instituted and drugs provided freely, especially for those who are unable to pay. In the mean time, alternative sources of financing the local health units such as community financing (perhaps incorporating indigenous social networks like “eders” as

established potentials of social networks by reorienting them to risk-sharing of illness costs), and prepayment scheme have to be explored by the local policy-makers in such coffee growing areas, where there is a marked fluctuation of the household economic status.

- ◆ Though it tended to be underreported, income level of the households was found as one of the important predictors patterns of health service utilization and coping with both the financial and time costs of illness. Therefore, in this relatively ‘better-off’ district as compared to other parts of Ethiopia, possible means of introducing rural saving scheme has to be considered so that people will deposit certain amount of their income during the season of repletion (coffee harvesting), so that they will not face problem in utilizing health services at the time of shortage of money (i.e., the rainy season).
- ◆ Continued emphasis has to be paid to the provision of health care at the reach of the rural population as the costs of transport and lodging away from home in using distant health facilities were found to take a considerable share of the overall costs.

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ANNEX I: QUESTIONNAIRE FOR HOUSEHOLD SURVEY

**ADDIS ABABA UNIVERSITY,
MEDICAL FACULTY,
COMMUNITY HEALTH DEPARTMENT**

HOUSEHOLD SURVEY ON COPING STRATEGIES WITH THE COSTS OF ILLNESS
AMONG RURAL HOUSEHOLDS IN GOMA DISTRICT OF JIMMA ZONE,
SOUTHWEST ETHIOPIA.

Identification number of the questionnaire / /

Date of the interview:

Date _____

Month _____

Year

Name of interviewer _____

Code of interviewer /

PART I. ADDRESS

S. No.	Address	Code
1.1.	Kebele [Peasant Association]	__/__/__
	1 Bulado Choche	
	2 Bulbulo	
	3 Enkuli	
	4 Goma Number 2	
	5 Gurage Ourtubo	
	6 Koye Tupa	
	7 Omo Guride	
	8 Qota	
	9 Seja Seya	
	10 Wabi Qore	
1.2.	Name of the village _____	__/__/__
1.3.	House number of the household _____	__/__/__
1.4.	Name of the head of the household _____	__/__/__

PART II. FAMILY SIZE AND COMPOSITION

S. No.	Name	Sex	Age (in yr.)	Relationship to the head of the household
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

Male = 1
Female = 2

Head = 1
Spouse = 2
Son = 3

Daughter = 4
Other relative = 5
Non-relative = 6

S. No.	Question	Code
2.1.	Total family size of the household _____	___ / ___ / ___
2.2.	No. of male household members _____	___ / ___ / ___
2.3.	No. of female household members _____	___ / ___ / ___
2.4.	Type of family 1 Nuclear 2 Extended	___ / ___ / ___

PART III. GENERAL SOCIODEMOGRAPHIC INFORMATION

S. No.	Question	Code
3.1.	Age of the individual selected for the interview [in years] _____	/ _
3.2.	Sex of the individual selected for the interview 1 Male 2 Female	/ _
3.3.	Occupation of the individual selected for the interview 1 Farmer 5 Student 2 Housewife 6 Daily laborer 3 Government employee 7 Unemployed 4 Merchant 8 Other (specify) _____	/ _
3.4.	Religion of the individual selected for the interview 1 Muslim 4 Catholic 2 Orthodox 5 Other (specify) _____ 3 Protestant	/ _
3.5.	Ethnicity of the individual selected for the interview 1 Oromo 5 Yem 2 Amhara 6 Gurage 3 Dawro 7 Tigre 4 Keffa 8 Other (specify) _____	/ _
3.6.	Marital status of the individual selected for the interview 1 Single 3 Widowed 2 Married 4 Divorced	/ _
3.7.	Educational status of the individual selected for the interview 1 Illiterate 5 Grades 9-12 2 Read and write only 6 Above grade 12 3 Grades 1-6 7 Other (specify) _____ 4 Grades 7-8	/ _

PART IV. PERCEIVED MORBIDITY AND HEALTH SERVICE UTILIZATION

S. No.	Question	Code
4.1.	What is the type of the nearest modern health facility, which your family uses for routine care?	/
	1 Health post	
	4 Clinic	
	2 Health center	
	5 Hospital	
	3 Drug vendor/drug shop/pharmacy	
	6 Other (specify) _____	
4.2.	How far is the nearest health facility from your house?	/
	1 Less than 5 km.	
	3 Greater than 10 km.	
	2 5 to 10 km.	
	4 I don't know	
	4.2.1. In walking _____ min.	/
	4.2.2. Using animals _____ min.	/
4.3.	Was there anyone sick among the household members within the past one month?	/
	1 Yes	
	2 No	
	(If no to Q. 4.3, please go to Q. 4.11)	
	(If yes, use the code sheet at the end of Q. 4.10 for coding)	
4.4.	Who was the sick (age and sex of the sick individual)?	

- 4.4.1. Age in years _____

4.4.2. Sex

1 Male
2 Female

4.5. What help was rendered or where was the sick individual taken for medical care (choice of health care provider)?

1 Stayed at home without any help

2 Household help

3 Relatives, friends, or neighbors help

4 Religious places including holy water

5 Traditional healers

6 Community health agent

7 TBA or TTBA

14 More than one provider (mention) __, __, __

15 Other providers (specify) _____

8 Private clinic

9 Missionary clinic

10 Government clinic

11 Government HC

12 Hospital

13 Pharmacy/drug vendor

4.6. If more than one health care provider was utilized, what was/were the reasons?

1 Referred from the first visited provider/facility

2 Worsening of the illness

3 Advised by others to visit another provider

4 Looking for affordable cost of services

5 Seeking better health care services

6 More than one reason (mention) __, __, __

7 Other reason (specify) _____

4.7. How many days were lost by the sick individual from the usual activity due to the illness? _____

4.8. How many days were lost by the caretaker from the usual activity while taking care of the sick household member? (in case of more than one caretaker, take only the number of days by the first and most concerned caretaker). _____

4.9. Amount of money paid [in Birr] for getting health care while visiting providers mentioned in Q. 4.5.

Provider visited

<i>First</i>	<i>Second</i>	<i>Third</i>
4.9.1. For consultation/card	_____	_____
4.9.2. For drugs/medication	_____	_____
4.9.3. For lab/investigations	_____	_____
4.9.4. For inpatient	_____	_____
4.9.5. For transportation	_____	_____
4.9.6. For food and lodging	_____	_____
4.9.7. Other costs	_____	_____
4.9.8. Total cost	_____	_____

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4.10. Who handled the health care costs?

- | | | | |
|---|--------------------------------------|---|------------------------------------|
| 1 | The family members alone | 4 | Free government health care alone |
| 2 | Support by friends/relatives alone | 5 | Combination of the above (mention) |
| 3 | Support by neighbors/villagers alone | 6 | Other (specify) |

CODE SHEET FOR Q.4.4-Q.4.8 AND Q.4.10[illegible]**CODE SHEET FOR Q.4.9.1-Q.4.9.9**[illegible]

4.11. Was there anyone from the household members who was referred to other places for better health care within the past six months?

- 1 Yes 2 No

(If no to Q. 4.11, please go to Q. 4.17)

4.12. Where was the place of referral? (mention the name)

- 1 Hospital _____
2 Health center _____
3 Other health institutions _____

4.13. Did the referred individual go to the referred health facility?

- 1 Yes 2 No

(If no to Q. 4.13, please go to Q. 4.16)

4.14. For how many days did the individual stayed at the referral facility?

4.15. Where did the attendant stayed at the time of referral?

- 1 Relative/friend's house
2 Rented house (rate/day) = _____ Birr
3 Hotel (rate/day) = _____ Birr
4 In the compound of the health institution
5 Combination of the above (mention) ____, ____, ____
6 Other place (specify)

4.16. What was/were the reasons for not going to referred health facility?

- 1 No reason

- 2 Lack of money to cover health care costs
 - 3 Lack of money to cover transport costs
 - 4 Lack of money to cover food and lodging costs
 - 5 No place for the attendant to stay
 - 6 Absence of exemption paper
 - 7 Presence of other alternative providers locally
[please indicate one]
 - 1 Religious healers including holy water
 - 2 Traditional healers/native medicine
 - 3 Other alternative (specify) _____
 - 8 More than one reason (mention) __, __, __
- 4.17. What do you think is the main reason for not using the locally available health facilities by your household? /
- 1 No reason
 - 2 Cost related to provision of health care
 - 3 Cost related to transport/distance of facility
 - 4 Poor quality of the services rendered
 - 5 The degree of illness
 - 6 Influence of culture and tradition
 - 7 Combination of reasons (mention) __, __, __
 - 8 Other reasons (specify) _____
- 4.18. What do you think is the main reason for not using referral level health facilities by your household? /
- 1 No reason
 - 2 Cost related to provision of health care
 - 3 Cost related to transport/distance of facility
 - 4 Poor quality of the services rendered
 - 5 The degree of illness
 - 6 Influence of culture and tradition
 - 7 Combination of reasons (mention) __, __, __
 - 8 Other reasons (specify) _____

PART V. HOUSEHOLD AND COMMUNITY SAVING STRATEGIES

S. No.	Question	Code
5.1.	Do your household has an experience of keeping money in any form to cover the costs of health care? 1 Yes 2 No	/
	(If no to Q. 5.1, please go to Q. 5.3)	
5.2.	What is the strategy used for saving? 1 Saving in cash (including group saving such as "equb") 2 Saving as stored food crop or cash crop 3 Saving as live animals 4 Saving as cleared land 5 Being member of "Eder" or "Shengo" 6 Combination of strategies (mention) __, __, __ 7 Other reason (specify) _____	/

S. No.	Question
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7.8.1. If the household has used more than one strategy to cope with the time lost due to the presence of sick member, specify the order using the key of 7.8:

7.8.1.1. First strategy _____
 7.8.1.2. Second strategy _____
 7.8.1.3. Third strategy _____

7.9.1. Did the first strategy help to solve the problem?

1 Yes 2 No

7.9.2. Did the second strategy help to solve the problem?

1 Yes 2 No

7.9.3. Did the third strategy help to solve the problem?

1 Yes 2 No

PART VIII. GENERAL HOUSEHOLD ECONOMIC STATUS

S. No.	Question	Code
8.1.	What is the average annual income of your household [in Birr]? _____	/
8.2.	What is the food crop usually produced by the household (select only one)?	/
	1 Teff 5 Millet	
	2 Sorghum 6 Barley	
	3 Wheat 7 The household do not produce food crop	
	4 Maize 8 Other (specify) _____	
8.2.1.	What was the amount produced in Quintals during the last harvesting season? _____	/
8.3.	What is the main source of income to the family?	/
	1 Farming 4 Daily labor	
	2 Trade 5 Monthly income from gov't employment	
	3 Production of handicrafts 6 Other (specify) _____	
8.4.	Do you have the following cultivation/plantation in your farm or backyard garden?	
8.4.1.	Coffee 1 Yes 2 No	/
8.4.2.	Chat 1 Yes 2 No	/
8.5.	Do your have cattle?	/
	1 Yes 2 No	
8.5.	If yes, how many? _____	/
8.6.	Do your household own the following privately?	
8.6.1.	House 1 Yes 2 No	/
8.6.2.	Land 1 Yes 2 No	/

ANNEX II: FOCUS GROUP DISCUSSION TOPIC GUIDE

I. Setting and participants:

Name of the moderator	_____	Date of the discussion	___/___/___
Name of the note-taker	_____	Time the discussion started	_____
Place of the discussion	_____	Time the discussion ended	_____
Number of participants	_____		

II. The session:

A. Warm-up session

1. Greetings and welcoming address by the moderator.
2. Introduction of the overall purpose of the study by the moderator.
3. Explanation of the process and guidelines to be followed in the discussion:
 - The moderator's role in this session is to facilitate the discussion.
 - Participants' honest opinion, suggestions, comments and ideas on the topic of discussion are encouraged. Besides, there are no right or wrong answers, and no judgments by the moderator.
 - All participants are kindly requested to address their comments and suggestions to the group as a whole, and not to the moderator or anyone else in the group in particular.
 - As much as possible, everyone is encouraged to share his/her ideas to the group.
4. Self-introduction of the participants starting from the moderator regarding their name, from which village do they come, and so on.

B. Rating of household's economic status

1. How is the wealth of a household ranked in this area?

Probe: Does the number of cattle and other domestic animals possessed by the family have a role in the ranking of wealth and income)?
How about the amount of coffee and other crops produced by the household?

2. What is the average price of selling, a quintal of coffee, maize and other crops in the local market currently?
3. What are the most common job people do here to generate a daily wage? How much could one get in a day?
4. Which months are the best months to this area in terms of financial capability? Which are the worst?

C. *General opinion about common illnesses and health service utilization.*

1. What are the most common illnesses, which affect people living in this kebele? Which one kills more people last time? (Is there a seasonal variation in the occurrence of the diseases you have mentioned now)?
2. How do people living in this kebele manage to cure themselves from the diseases you have mentioned now?
3. For what type of illness do people prefer native medicines? (Do you think cost has anything to do with this preference)?
4. Now, tell us the modern and traditional health facilities that you think people in this area preferred to go while someone gets sick in their households?
 - a. Which one is the nearest?
 - b. How do sick people usually reach there?
 - c. How much people have to pay for the service they get from these facilities to cure themselves (for example malaria)?
5. What are the reasons for people living in this kebele to choose the mentioned health care provider when compared to the others?

D. *Household and community saving schemes in terms of health care*

1. Do people save their money in any form for the purpose of having health care for unanticipated illness in their household? (What if there is one let's say)?
2. How do they save their money?
3. Are there "eders" or "shengos" in your villages?
 - a. What is the main purpose of these networks?
 - b. Do they render help to cover illness costs (tell us more with examples)?

4. What if someone, who is not a member of the "Eder" gets sick?
5. What if there is no relative of the person in the locality?

E. *Attitude towards prepayment scheme in health care delivery*

1. What is your view regarding getting of health services by depositing or prepaying some amount of money during the season where you will have more money, like coffee harvesting season?
2. What do you feel is/are the advantages and disadvantages of such scheme?

F. *Health service utilization, costs of health care and coping mechanisms*

1. Do you know anything about provision of free health care delivery by the government to those who could not afford to pay for the service? (Do you think all people know this)?
2. What do people usually do to cope with the problems of shortage of money to cover for health care when someone gets sick?
3. Do people sell their food crops to pay for health care? Do you know anyone in your villages, who have sold any of their properties in order to cover health care costs? (What are the properties that were sold)?
4. Who would cover the works of a sick person? What if there is an illness, which affected the whole family? (How is the time lost by the sick person and the caretaker compensated)?
5. Is the cost of transporting sick individuals the problem or is it the treatment costs?
6. Is there a difference in the cost of transporting a sick person from home to health facilities and vice versa? (Justify your opinion)
7. Do you know anyone who has been sent to higher health institutions like Jimma Hospital for better health care? Were there problems faced, which were related to the costs of the service?
8. How much is it possible for a poor people to pay health care costs?
9. Has anyone whom you know ever died because of lack of money for having health care?

10. If someone is really sick, will the village elders, religious leaders, or "Eder" leaders help him/her so he/she will not die?

G. *Closing*

Before we end this discussion, is there's anything else anyone of you would like to say about the coping mechanisms to the costs of illness and other issues we have raised. Anything else we haven't raised in our discussion, but you feel important that should have been discussed?

Thank you very much for giving me your precious time and all these helpful ideas! Your time is very much appreciated and your insights have been greatly helpful!

ANNEX III: INFORMED VERBAL CONSENT FORM

COMMUNITY HEALTH DEPARTMENT, MEDICAL FACULTY ADDIS ABABA UNIVERSITY

Dear participant:

This study is designed to assess strategies households in the rural communities of Goma District, Jimma Zone use to cope with the costs of illness. The major purpose of this study is to know the different coping mechanisms used by rural households, which are important determinants of using the locally available and referral level health facilities.

Your household is randomly selected to participate in this study. It is your own decision whether to participate or not in this study. If you are willing to participate, I want to ensure you that the results of this study will not be used for any other purpose except the one I have mentioned above.

Are you willing to participate in this study?

- ☐ Yes (continue with the interview)
- ☐ No

Thank you very much!

Tadele Bogale (M.D)

DECLARATION

I, the undersigned, declared that this thesis is my original work, has not been presented for a degree in this or any other university, and that all sources of materials used for the thesis have been fully acknowledged.

Name: Tadele Bogale, MD

Signature: 

Place: Addis Ababa, Ethiopia

Date of submission: December, 2000

This thesis has been submitted for examination with my approval as University advisor

Name Dimen Haile Märsan

Signature 