

**FACTORS AFFECTING UTILIZATION OF INTEGRATED COMMUNITY
CASE MANAGEMENT OF COMMON CHILDHOOD ILLNESSES IN
AGARFA WOREDA, OROMIYA REGIONAL STATE, ETHIOPIA**

By

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DEDICATION

This work is dedicated to all Public Health Professionals who are striving to promote and implement Child Survival Interventions to reduce child morbidity and mortality.

Student number: 43287905

DECLARATION

I declare that the research on **FACTORS AFFECTING UTILIZATION OF INTEGRATED COMMUNITY-CASE MANAGEMENT OF COMMON CHILDHOOD ILLNESSES IN AGARFA WOREDA, OROMIYA REGIONAL STATE** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

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Date

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ABSTRACT

BACKGROUND: Ethiopia adopted a new strategy called integrated community case management to address common childhood illness (ICCM). This strategy has been introduced in some rural districts of Bale zone. It has multiple functions, involving assessment of sick children at community health post levels. Despite this, the efficacy of this strategy has not been investigated.

Aim: This study aimed to assess the level of ICCM service utilisation and factors influencing this at health posts in Agarfa district.

METHODS: Cross sectional and phenomenological methodologies were employed in this study. Data were collected from 401 mothers using questionnaires and 29 participants using in-depth interviews. Quantitative data were analysed using both descriptive and inferential statistical approaches. Thematic analysis was used for the qualitative data.

RESULT: The utilisation of ICCM services is limited among caregivers in rural communities. There is a range of factors responsible for the limited utilisation. Examples of these include absence of health extension workers at health posts, caregivers' negative perception of ICCM service, socio-cultural factors, level of education and household finance. The most common childhood illnesses noted were diarrhoea, followed by fever and cough. Caregivers seek help from HEWs at health posts two or more days after identifying signs and symptoms of these illnesses.

CONCLUSION: Behavioural messages to address prevailing negative attitudes and socio-economic barriers to accessing health care would help improve uptake of ICCM services.

KEYWORDS: Common-childhood illness, health extension workers, integrated community-case management.

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ARI	Acute Respiratory Infection
CHWs	Community Health Promoters
CI	Confidence Interval
CSA	Central Statistics Agency
EDHS	Ethiopian Demographic Health Survey
EMC	Epidemic Monitoring Chart
ESHE	Essential Service of Health in Ethiopia
FMOH	Federal Ministry of Health
FP/RH	Family Planning/Reproductive Health
GHI	Global Health Initiatives
HEP	Health Extension Programme
HEWs	Health Extension Workers
HIV	Human Immune Deficiency Virus
HMIS	Health Management Information System
ICCM	Integrated Community Case Management
IEC	Information Education communication
IFHP	Integrated Family Health Program
IMCI	Integrated Management of Common Childhood Illness
IMNCI	Integrated Management of New Born and Childhood Illness

IMR	Infant Mortality Rate
LB	Live Birth
MDG	Millennium Development Goal
MNCH	Maternal New Born and Child Health
OR	Odds Ratio
ORHB	Oromia Regional Health Bureau
ORS	Oral Rehydration therapy
PHCU	Primary Health Care Unit
PI	Principal Investigator
PRM	Performance Review Meeting and Mentoring:
RHB	Regional Health Bureau
RTUF	Ready to use Therapeutic Foods
SNNPR	Southern Nation and Nationality Population Region
SSA	Sub-Saharan Africa
UNICEF	United Nation International Children Fund
UNISA	University of South Africa
USAID	United State Aid for International Development
VCHWs	Volunteer Community Health Workers
WHO	World Health Organization
WorHO	Woreda Health Office

CHAPTER ONE

1.1 INTRODUCTION

World Health Organization (WHO 2009:35) states that children under five years old account for 30% of the global burden of diseases in developing countries. Up to 99% of child deaths occur in developing countries (Save the Children 2011:12). This assertion is acknowledged by the Essential service of Health in Ethiopia (ESHE) (2008:40) by reiterating that almost the entire world's child deaths occur in developing countries. This is a concern for governments and health services of developing countries, as they tend to experience an infant mortality rate of approximately 10.9 million per year (Sahalu 2006:4). However, it is critical to state that all most half of these deaths occur in the Sub-Saharan region of Africa (Sahalu 2006:3). This high infant mortality rate is mainly attributable to pneumonia, diarrhoea, measles and malnutrition (Save the Children UK 2011:23).

Focusing specifically on Ethiopia, it is reported by both Save the Children (2011:22) and Global Health Initiatives (GHI) (2011:15) that about 321,000 children under the age of five die each year, and one in ten of these deaths occur before their fifth birthday. Save the Children (2011:14) claims that newborn deaths account for a third of under-five deaths in Ethiopia. Two-thirds of these newborn deaths occur within the first month of life and some of the deaths are believed to occur in the first week and first 24 hours following birth (Save the Children 2011; GHI 2011:15). The major contributing factors to such high infant mortality rate are low birth weight (15% of babies born), asphyxia, infection and prematurity (Save the Children 2011:22). According to the Federal Ministry of Health (FMOH) (2005a:20), these contributory factors are attributable to children's lack of access to essential health services. A study by Hildegalda (2009:12) indicates that most of these deaths are due to communicable diseases and malnutrition. These causes of infant mortality are similar to those revealed by Save the Children UK (2011:23) for the entire Sub-Saharan region of Africa.

Taking this into account, a programme referred to as Integrated Management of Common Childhood Illness (IMCI) was introduced in the 1970s and developed in the 1980s by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) to improve survival rates of children. Ethiopia also adopted the IMCCI and Integrated Management of Newborn and Childhood Illness (IMNCI) programmes in 1998 and 2006 respectively. These programmes were noted to be ineffective in the context of not providing adequate healthcare services to rural populations (ESHE 2008:45).

Federal Ministry of Health (FMOH) (2005b:5) response to the difficulties of accessing and providing the majority of the rural population with adequate health services involves the introduction of the Health Extension programme (HEP) and establishment of Primary Health Care Units in 2004. Each Primary Health Care Unit is made up of one health centre and five satellite health posts. Each health post is run by two Health Extension Worker (HEWs) and serves one *kebele* (*the lowest level of administration*), with a population of approximately 5000 people. At community level, HEWs are assisted by Volunteer Community Health workers (VCHWs). Such a response indicates that the Ethiopian government has adopted a global strategy entitled 'Integrated Community Case Management (ICCM) of Common Childhood Illness, particularly for the management of pneumonia. This ICCM programme is delivered at health post and community level. The programme has multiple functions, involving assessment of sick children at community health post levels. In addition, it offers essential drugs, such as antibiotics, anti-malarial, as well as making early detection and referrals of severely ill cases to appropriate services. To date, no study has examined the efficacy of the use of this integrated programme. It is therefore important to assess the level or degree of ICCM service utilisation and factors that may influence the same.

1.2 BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM

1.2.1 The Source of the Research Problem

In the mid-1990s, WHO introduced the Integrated Management of Childhood Illnesses (IMCI) globally as a holistic approach to improve the quality of care for sick children, as well as to improve immunization, nutrition counselling, and referral to appropriate services using locally trained health workers (John 2007:30). This programme was introduced in over 100 countries with the goal of reducing child deaths, particularly those due to pneumonia, diarrhoea, measles, malaria and malnutrition (WHO 2004:4). In Ethiopia, the government adopted the Integrated Community Case Management (ICCM) of Common Childhood Illness for the assessment, treatment and referral of severely ill cases to appropriate services.

Prior to the introduction of the ICCM, the Federal Ministry of Health (FMOH) of Ethiopia and other health organisations (WHO, UNICEF and ESHE) adopted an integrated management of newborn and childhood illness (IMNCI) service at national and local health levels that attempts to address the under-five high mortality rate. Despite this effort, the number of children dying remains high (ESHE 2008:4). Many of these children cannot access health facilities because of inadequate or lack of treatment and health facilities (John 2007:30; Hildegalda 2009:12). The same authors claim that the lack of or limited access to health facilities was a function of families and other caregivers not recognising the warning signs of life-threatening illnesses (John 2007:30). This issue of limited or no access to services by children in Ethiopia has urged the ICCM programme designers to develop a management strategy for pneumonia in community settings (Maternal and Child Health Integrated Programme (MCHIP) 2003:22). The strategic focus of managing pneumonia at the community level has highlighted the need to improve health care providers' skill and a better health support system. Most importantly, the programme has due responsibility to family and community practices (CORE Group, Save the Children, BASICS and MCHIP 2010:15). These factors are consistent with the goals of Integrated Community Case Management (ICCM), whose practices are recommended by WHO and UNICEF to be implemented in

developing countries, like Ethiopia (Save the Children 2011:14). It is believed that this programme, which has a strong community based component, will reduce infant mortality rate.

The Millennium Development Goals (ESHE 2008:4) report states that Ethiopia is among the 27 countries in the sub-Saharan region that has shown very little progress in reducing childhood deaths. However, Ethiopia as a Federal State, including other countries within the sub-Saharan region, is working hard to reduce under-five mortality rate by two-thirds by 2015. So far, only 1.0% reduction in under-five child mortality rate was observed between 1990 and 2006 in sub-Saharan Africa (CORE Group, Save the Children, BASICS and MCHIP 2010:12).

This reduction in mortality rate was attributed to the implemented community based programmes (CORE Group, Save the Children, BASICS and MCHIP 2010:12). Now, more than ever before, there is a strong call for countries to bring the treatment of childhood illnesses closer to their communities that need it. It is believed that this can be achieved by training community health workers in identifying and managing these problems. Many countries, including Tanzania, Kenya, Pakistan to name but a few, have followed this advice with excellent results (Hildegalda 2009:12; Mullei, Wafula and Goodman 2008:5; Core Group et al 2010:12). Although ICCM services started in some rural districts of Bale zone, the status and factors affecting its utilization at health posts is not yet well known. This study was therefore carried out to assess the status and factors affecting ICCM service utilisation at specific health posts in Ethiopia.

1.2.3 Statement of Research Problem

Ethiopia launched the health extension programme (HEP) in 2003 to reach the poor and deliver preventive and basic curative high-impact interventions to all of the Ethiopian population (FMOH 2005a:20). The HEP is an ambitious government led community health service delivery programme designed to improve access to and utilisation of preventive, wellness, and basic curative services (Mullei et al 2009:4). The FMOH

(2005a:21) and Save the children (2011:22) reports indicate that HEWs in Ethiopia are working in health posts to correctly assess, classify, and manage common childhood illnesses through the ICCM programme. Based on this information, strategic ICCM trainings were offered to HEWs in rural districts of the country. Trained HEWs are expected to manage and treat common causes of childhood illness cases at the community level in addition to promoting ongoing preventive services they provide in their respective community of deployment.

The routine Health Management Information System (HMIS) data and performance review meeting and mentoring data analysis of the study area revealed that the ICCM service utilization status at health post level is very low (FMOH 2005a:20). This could be a function of the view that the HEWS generally provide most (over 75%) of their community based preventive and promotion services in people`s homes. As such, only a small number of sick children visit health posts. However, factors affecting ICCM service utilisation at the health posts are generally not known because no studies have been done to elucidate such information. Hence, this study was undertaken to elucidate information on the utilisation of the ICCM programme and the factors affecting ICCM service utilisation at health posts in Agarfa district, Bale zone.

1.3 PURPOSE OF THE STUDY

The purpose of this study was to assess the level or degree of ICCM service utilisation and and factors affecting the utilisation of this service both at health posts and at community level.

1.4 OBJECTIVES OF THE STUDY

- To assess the level of ICCM service utilisation of under-five sick children in HPs, agerfa woreda
- To identify the socio-demographic characteristics of those that utilise ICCM services.

- To explore factors affecting ICCM service utilisation at health posts levels in Agarfa Woreda
- To offer recommendations for improving ICCM service utilisation at health posts levels in Agarfa Woreda

1.5 SIGNIFICANCE OF THE STUDY

Even though reports covering the period of 2006 and 2010 indicate a decrease in the under-five mortality rate in Ethiopia, it is a country that is still perceived at its current pace, in the sub-Saharan Africa region, unlikely to achieve the Millinium Deveelopment Goal 4 before 2015 (Ethiopia Demographic Health Survey (EDHS) 2011:10). The National Infant and under-five mortality is 59 per 1000 and 88 per 1000 respectively (EDHS 2011:5). Nine out of ten childhood deaths in Ethiopia are primarily due to five health conditions: pneumonia, malaria, diarrhoea, neonatal problems and measles (FMOH 2005a:12). To tackle these problems, the Ethiopian government has adopted the global action plan that recommends ICCM implementation at community and health post levels using HEWs. ICCM is an internationally recommended evidence based strategy for communities lacking access to facility based services or treatment. This new initiative (ICCM) is implemented by HEWs at health posts level. In view of the goal of this study, it is anticipated that its findings or results will be used:-

- By policy makers and programme managers at various organisational levels to strengthen community based programmes, and also close or minimise gaps on status and factors affecting ICCM service utilisation.
- To assess efficacy of the level of service and factors affecting the utilisation of ICCM service at community level of the study area. It is hoped that the findings of such an assessment will contribute toward reducing child morbidity and mortality in an organised and integrated fashion at community level.
- To generate information for further research on ICCM programme implementation with the view of optimising performance.

1.6 OPERATIONAL DEFINITION OF KEY TERMS AS APPLIED IN THIS STUDY

ICCM: in this context, it is defined as integrated management of all major childhood illness including pneumonia (Cough), Malaria (Fever), diarrhoea and severe acute malnutrition, carried out by HEWs at community health post level (FMOH 2005a:20).

CCM: is defined for this study as a management approach that includes assessment, classification and treatment of childhood illness carried out by health workers in the community or at health post level (FMOH 2005a:20).

Availability of Commodities: for this study this relates to availability or supply of key ICCM drugs and supplies in the last 3 months (items reported individually) (MCHIP 2003:10).

ICCM Utilisation: Number of sick child consultations at health post in the last two weeks for cough, fever, and diarrhoeal. ICCM service utilization less than 20% is Low and very low less if less than 15% (MCHIP 2013:39-45).

CHWs: workers who provide health education, basic preventive care, referral and follow-up case management and home-visit services to communities (International Standard Classification of Occupations (Haines, Sanders, Lehmann, Rowe, Lawn, Jan, Walker and Bhutta 2007:2121; MCHIP 2013:30).

Volunteer Community Health Workers (VCHWs): for this study this is the umbrella term for “community health workers” (CHWs) that embraces trained Community Health Aide Workers working on promoting prevention and treatment of malaria and other major causes of morbidity and mortality in their respective communities (MCHIP 2003:41).

Supportive Supervision: in this context, it is defined as the number of HEWs supervised in the last 3 months of this study with reinforcement of clinical practice

(observation of case management, practicing case scenarios, mentoring at a health facility) either from WHO or PHCU staff (MCHIP 2003:50).

Performance Review Meeting and Mentoring (PRMM): is a process of reviewing ICCM performance by HEWs along with HEW supervisors with the aim of skill reinforcement, identifying gaps and collection of information for decision making every 4 to 6 months at woreda level (Laura, David, Tanya, Kate, Lawrence, Diaa, Emmanuel, Stefan, Davidson and Asha 2012:69).

Demand Generation: is defined as community education or mobilization activities carried out by HEWs in the last 3 months or community volunteers working in the communities (UNICEF and WHO 2010:27; Tsion et al 2008:7).

Acute Respiratory Infection: all cases that had cough accompanied by short or rapid breathing in the two weeks preceding the survey as perceived by mothers or care takers (WHO 2011:10; MCHIP 2013:57).

Health Seeking Behaviour: for this study, this refers to mothers` or care takers` report on visiting Health Post or a community health worker after recognising her child`s illness. Mothers that did not report visiting any health institution for a perceived common childhood ailment were considered as healthcare non-seekers (MCHIP 2013:16).

Illness: in this context is childhood symptom of cough, diarrhoeal and fever of any under-five child in the last two weeks as perceived by the mother or caretaker (WHO 2011:10).

Diarrhoea: under-five child having loose, watery or bloody stool three or more times within 24 hours with at least one episode in the last two weeks as perceived by the mothers or care takers (Gupta, Jain, Ratnesh, Shah and Venkatesh 2007:471-476; Tsion et al 2008:8; WHO 2011:10;).

Cough: In this study this refers to a child less than five years of age who had had episode(s) of cough in the last two weeks, as perceived by the mother or care giver (WHO 2011:10).

Difficult Breathing: In this study this refers to a child less than five years of age who had had episode(s) of difficulty breathing in the last two weeks, as perceived by the mother or care giver (WHO 2011:10).

Fever: A child less than five years of age with very high body temperature and was febrile to touch in the last two weeks as perceived by mothers or care takers (WHO 2011:10; Tsion et al 2008:8).

Kebele: The smallest administrative unit in urban or rural areas (EDHS 2012:5).

Rural: Area where less than 4000 people live or majority of the people are farmers (EDHS 2012:5).

Household: This relates to a person or a group of related and unrelated persons who live together in the same dwelling unit(s) or in connected premises that acknowledge one adult member as head of the household with a common arrangement for cooking and eating their food.

1.7 FOUNDATIONS OF THE STUDY

1.7.1 Research Paradigm

Polit and Beck (2008:13) state that, a paradigm is a world view, a general perspective on the complexities of the real world. This study utilised quantitative and qualitative research methodologies that draws on objectivity, measurability, predictability, and controllability, and constructs laws and rules of human behaviour with emphasis on

understanding and interpretation of phenomena, and drawing appropriate inferences from findings.

Polit and Beck (2008:14) mention that positivism is a reflection of a broader cultural phenomenon that emphasizes the rational and the scientific aspect of a phenomenon. Positivist approach is a systematic and scientific approach that is rooted in the physical sciences. Positivists argue that a methodology of physical science can be applied to social phenomena (Polit and Beck 2008:14). According to Polit and Beck (2008:14-15) a fundamental assumption of positivist is that there is a reality out there that can be studied and known. Within the Positivist paradigm holds that the goal of knowledge is simply to describe the phenomena that we experience. Positivism predominates in science and assumes that science quantitatively measures independent facts about a single reality (Polit and Beck 2008:12). The positivists believe in empiricism, the idea that observation and measurement are at the core of the scientific endeavour (Polit and Beck 2008:12). Positivists are essentially objectivists, or, there is the belief that it is possible for an observer to externalise the reality studied, and remains detached from, and uninvolved with it (Polit and Beck 2008:14). The positivists' scientific approach involves the use of orderly, disciplined procedures with tight controls over the research situation to test researchers' haunches about the nature of a phenomena being studied and relationships among them (Polit and Beck 2008:14-15). On the other hand, the constructivist or naturalistic paradigm contends that epistemologically, the inquirer and the inquired are interlocked in such a way that the findings of the investigation are the literal creation of the inquiry process (Polit and Beck 2008:15). They believe that the best way to understand any phenomenon is to view it in its context, which stresses on a subjective approach to studying social phenomena. In general, qualitative research is based on a relativistic, constructivist ontology that posits that there is no objective reality. Both paradigms are adopted for this study due to the following reasons:

- ✓ The researcher adopted both subjective and objective positions throughout the study

- ✓ The adoption of these positions enabled the researcher to effectively explore the level of ICCM service utilization and factors that can influence the same.
- ✓ Most of the data collected required statistical models to ensure effective analysis. Some of the data required a qualitative mode of analysis.

1.7.2 Conceptual Framework of this Study

A framework of Andersen and Newman (2005:96) considers both the societal and individual determinants of health service utilisation. Within this framework, an individual's utilisation of health services is a function of three characteristics: predisposing, enabling and needs-based.

Predisposing characteristics are the social and cultural characteristics that exist prior to a patient's illness. These characteristics consist of demographic variables (such as age and gender), social structural variables (such as education, occupation, social networks, ethnicity and culture), and health beliefs variables (such as attitudes or beliefs about medical care, physicians, and disease). These characteristics can influence patients' healthcare utilisation.

The second characteristic is classified as enabling. These include family resources such as income level, health insurance status, and whether or not a patient has regular source of care, accessibility to that source of care and community factors within which the patient lives, such as availability of HEWs and health posts and waiting time for service delivery. These characteristics do not only indicate the opportunities available for patients' to obtain ICCM services, but they also indicate how they influence patients' confidence or willingness to receive health services.

Third and finally, the Needs-based category of this model ("illness level") is both the perceived and evaluated illness level of the patient (Andersen and Newman 2005:97) which relates to patients' perceptions of their own general health and functional status, as well as how they experience symptoms of illness. In Ethiopia, an evaluated need is HEWs' judgment about a patient's health status and his or her need for ICCM service.

In addition to the Andersen`s and Newman`s (2005:97) framework for health service utilisation, the selection of potential predictors of service usage is also influenced by availability of data and reporting formats. These factors were considered in this study as potential predictors of the propensity (individual's inclination or probability to use a certain service) and intensity (the amount of an ICCM service a patient uses).

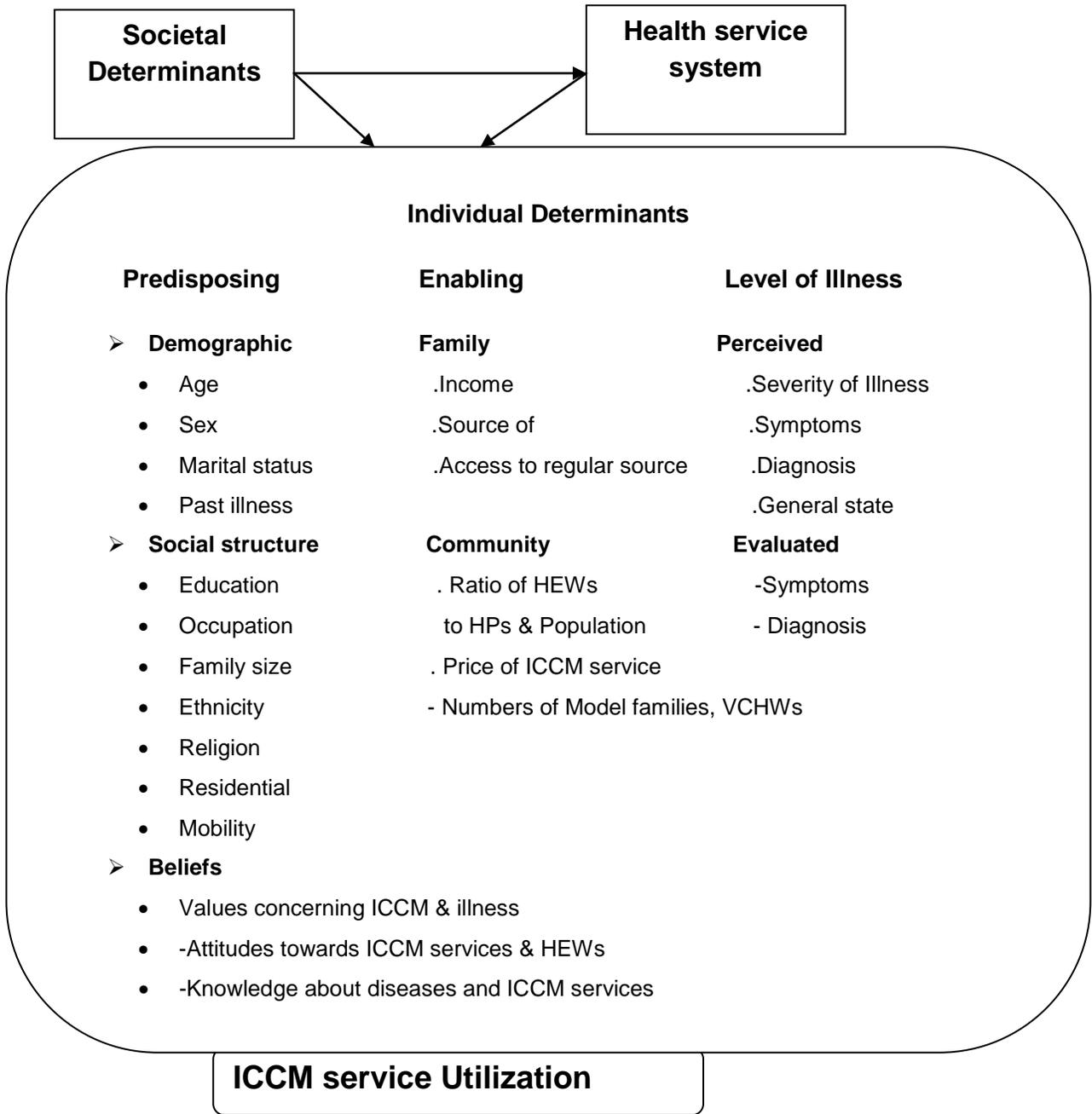


Figure 1.1 Andersen and Newman (2005:97) Model of Health Care Utilization.

1.8 RESEARCH DESIGN AND METHODS

Community based cross sectional and interpretive phenomenology in depth designs were used in this study. Quantitative data were analysed using descriptive, bivariate and multivariate logistic regression analyses that projected frequency distributions and associations. The qualitative data were analysed thematically.

1.9 SCOPE OF STUDY

Participants of this study were mothers of sick under-five children, care takers, HEWs, health centres staff and volunteer community health workers or community leaders in Agarfa Woreda of Bale zone. Although there are 18 districts in the Bale Zone in Ethiopia, the sample of this study was taken from one district. Hence, it will not be appropriate to extrapolate or generalise results obtained from the study to other zones, or assume the study findings to be representative of other Woredas or zones in Ethiopia. However, the findings of the study generated some insights into this subject and thus can be of utility in other districts outside the study area.

1.10 CONCLUSION

Although infant mortality rates in Ethiopia according to reports have now significantly reduced, mortality of under-fives in this country still remains among the highest in Africa and in the world. These high death rates can be attributed to the lack of or limited access to healthcare services. Taking into account the high infant or under-five mortality in Ethiopia, its government resulted in adopting the new global integrated community case management (ICCM) strategy to combat common childhood illness and health problems. The ICCM, which is a community-based health care service is administered by trained Health Extension Workers through the Ethiopia Federal Ministry of Health. But how efficient and effective is the ICCM system is really unknown and the services

provided is very low and leaves much to be desired. Hence, this study was conducted to elicit information on the efficacy of the ICCM system in the Agarfa districts of Bale zone. This chapter described the background to the problem, purpose and objectives of the study, research design, paradigms employed and operational definitions. Chapter 2 offers discussions of the literature reviewed for the study.

CHAPTER TWO - LITERATURE REVIEW

2.1 INTRODUCTION

The ensuing chapter is aimed at providing relevant literature review relating to the aforementioned research problem. Related ICCM publications, research studies, recent journal articles, statistics and related reports were reviewed.

2.2 SCALE OF THE PROBLEM: GLOBAL BURDEN OF CHILDHOOD ILLNESSES

A wide range of studies on childhood illnesses has been conducted in a number of countries in world. An example of such studies is the Global Burden of Diseases (GBD) carried out in 2010 (GBD 2010:2053). It revealed that a good proportion of children in the world are affected by diseases, such as measles, polio and diarrhoea (GBD 2010:2053). Taking for example measles, it is reported as one of the common illnesses in developing countries that is claimed to affect over 20 million children (WHO 2012:14). It is also claimed to be the leading cause of mortality among children in the past 40 years (WHO 2012:2). In 2006, for instance, measles mortality was 242,000 deaths globally (GBD 2010:2053). Polio infects mainly children under five years of age, and about 95% of these infections generally do not lead to ill health effect (WHO 2012:20). It is estimated in 2010 that there were 1.7 billion episodes of diarrhoea and 120 million episodes of pneumonia in children younger than 5 years (Walker, Rudan, Liu, Nair, Theodoratou, Bhutta, O'Brien, Campbell and Black 2013:1406). It was reported in 2011 that 700,000 episodes of diarrhoea and 1.3 million of pneumonia led to death, and a significant proportion of these deaths occurs in the first 2 years of life in both diseases (Walker et al 2013:1406).

It is critical to mention that both morbidity and mortality from childhood illnesses are failing (GBD 2010:2054). A study by WHO (2012:14) agrees with this, as its findings indicate that childhood illness, and malnutrition causes fewer deaths relative to findings

revealed twenty years ago. This suggests that fewer children are now dying every year while more young and middle-aged adults are dying from injury and non-communicable diseases, such as cancer and heart disease (WHO 2012:15). Taking this into account, a concerted effort is still needed globally and at country level to further accelerate the reduction in childhood mortality and morbidity (GBD 2010:4). While the knowledge of factors influencing childhood mortality and morbidity may assist in achieving this goal, the ensuing discussion focuses on developing countries.

2.3 CAUSES OF CHILDHOOD MORTALITY: SOCIO-ECONOMIC AND DEMOGRAPHIC CONTRIBUTORY FACTORS

According to UNICEF most child deaths in developing countries are attributable to pneumonia (21%); diarrhoea (14%); neonatal conditions such as prematurity (15%) and birth asphyxia (10%); measles (4%); malaria (2%) and HIV (2%) (UNICEF 2010:13). While this is the case, it has been consistently reported in the literature that several socioeconomic and demographic factors are associated with these deaths, childhood mortality (WHO 2012:12). In other words, socioeconomic and demographic factors do contribute to childhood mortality. Examples of these factors include maternal education, occupation, income, maternal age, marital status, access to health care, good sanitation, and access to clean water (WHO 2012:22). Education is considered the most influential factor, as mothers' education are consistently reported to be directly related to or associated with the health of children (Mondal, Hossain and Ali 2009:31). Education makes a mother socially advanced, free from traditional values and changes her pattern of behaving and attitude towards maintaining good health. Thus, an educated mother can provide better care to her children than the mother with no or limited education (Mondal et al., 2009:31). Taking this into account, children of educated mothers may experience lower mortality than the children of mothers with limited or no education. Parental occupation is also consistently noted in the literature to contribute to childhood mortality.

The incidence of childhood mortality is higher in households with unemployed parents. In developing countries, like Ethiopia, fathers are usually the breadwinners of families. When this is the case, fathers' occupations are important predictors of infant and child mortality (Mondal et al., 2009:31). This is because fathers' occupations determine the economic status, nutrition and housing condition, access to health care and place of residence. Added to this, household income can influence help seeking behaviour, which in turn may reduce child mortality rates (Kumar and Gemechis 2010:54). It is critical to state that community health workers do help or contribute to promote health-seeking behaviours in both urban and rural regions of developing countries. Acknowledging this, community health workers do have several roles to play in primary healthcare. One of these roles involves the provision of healthcare with the view of reducing child mortality rates.

2.4 COMMUNITY HEALTH WORKERS AND PRIMARY HEALTHCARE

Although community health workers (CHWs) have been active for the past 60 years, in the past 10 years they have emerged as a focal point of international discussions of primary health care systems (Liu, Sullivan, Khan, Sachs and Singh 2011:420). The Millennium Development Goals (MDGs) in 2000 prompted new discussions of how these workers can help to extend primary health care from facilities to communities. CHWs have since been part of an international attempt to revise primary health-care delivery in low-income settings. As such, CHW programmes have changed tremendously. In general, CHW workers are now paid employees and trained members of communities. CHWs focus on health education, including the provision of basic treatments in their communities and advice. These functions are also performed by CHWs of many countries, including Brazil, Pakistan, Ethiopia and India (Liu et al., 2011:424).

Bhutta, Lassi, Pariyo and Huicho (2010:25) stated that the key differences between the old and the new CHW programmes are that CHWs are now viewed as an integral and

formal part of health systems, as well perceived to have substantial and distinct roles in primary health care. An example of such roles relates to the administration of rapid diagnostic tests using mobile technology in some instances (Bhutta et al., 2010:25). A study conducted by Balabanova, Mackee, Pomerleau, Roseand and Haerpfel (2004:25) indicated that most of the illness episodes, which in essence relate to signs and symptoms, were noticed within the first day of contact with a CHW. It is worth noting that caregivers reported 55% of the illness episodes, and 20% by other relatives. Caregivers (usually the mother) make most of the decisions about the child's healthcare treatment as whether to seek care outside the home, seek advice from relatives, or get permission and money from their spouse for any necessary treatment (Balabanova et al 2004:25). This crucial role of caregivers is illustrated in a study conducted on help-seeking behaviour by Zelee, Carl, Paul, Betty and Eunice (2003:668) in Ghana.

It is reported in Zelee et al's (2003:669) study that 69% of under-five children identified to be ill by caregivers were in need of medical attention. While 57% of these children were considered severely ill by caregivers, only 40% of them were taken to a health facility for treatment. The failure to take ill children to health care facility for treatment was not only a function of lack of financial resources to pay for transportation, but it was also a function of caregivers' prior negative experiences with CHWs, particularly those with limited or no training on Integrated Management of Common Childhood Illness (IMCI) and how to support children (Zelee et al 2003:672). The negative experience could be due to limited adherence and inconsistency of CHWs in the application of IMCI protocols as well as occasional lack of confidence of these workers (IMCI 2009:21). These are some of the many reasons why the WHO recommends for CHWs involved in the care provision of sick children in health facilities be trained in IMCI to improve their skills and confidence.

A qualitative study conducted by Horwood, Voce, Vermaak, Rollins and Qazi (2009:1) in South Africa reported that health care providers had consistently expressed that their confidence in managing children, particularly young infants had increased, and that they

felt empowered and knowledgeable in their practice after attending the IMCI course. Even though respondents consistently described implementation of IMCI as time consuming, it was also seen as beneficial in improving relationships with mothers and respondents' confidence (Horwood et al 2009:2). Using the IMCI approach led mothers to reaffirm respect for CHWs, and this in turn may help these healthcare workers to work in partnerships with mothers in addressing child morbidity and mortality. However, conducting sustainable follow-ups after IMCI training has been reported to be a problem (Horwood et al 2009:1). A 2011 EDHS survey showed that the most important barriers to women's taking their children to health facilities were poor transportation service (71%), lack of money (68%), distance to a health facility (66%), concerns about workload inside and outside the home (61%), absence of a specific health provider at the health facility (56%), and absence of permission from spouses or relatives to go for treatment (EDHS 2011:2).

2.5 ICCM SERVICES UTILISATION AND DISEASE PATTERN

The Health Extension Programme (HEWs), which employed and trained women health extension workers at rural health posts, is one of the most innovative community based health programmes launched by the Ethiopian Federal Ministry of Health to make health services accessible to rural communities. The programme was officially rolled out in 2003 and became operational in 2004. Its approach was based on the assumption that access to and quality of primary health care in rural communities can be improved through transfer of health knowledge and skills to households. Deployed as pairs, the HEWs are required to provide basic but largely preventive primary healthcare services to rural villages to empower families to take charge of their own health. Primarily, the programme gives special attention to children and mothers. Ethiopia is among six countries that accounts for 50% of under-five mortality (WHO 2012:20). Hence, an Integrated Community Case Management (CCM) approach was adopted to address this concern.

Integrated Community Case Management is a strategy used to complement health facility based management and is intended to offer timely, low-cost interventions at the community level, especially in hard-to-reach areas in low to middle income countries. ICCM is usually delivered by community health workers selected by their community and trained in health education for diagnosing, treating and referral of one or more childhood illnesses (Marsh et al 2008:381). Even though this is the case; problems are sometimes encountered in delivering this service. Examples of these are outlined in the outcome of a study conducted in India on women (FMOH 2006:12). It was noted that 58% of women indicated that family members did not use public health care facilities because there were no nearby health facilities. While 9% of the women stated that service times were not convenient, 5% mentioned that health personnel were often absent. Seventeen percentage of women said that waiting times were too long, while 32% indicated that healthcare service was of poor quality.

In a 2009 Western Pacific study of 303 women, 49.8% reported not using their nearest government primary healthcare services because of concerns about quality issues, such as when to initiate care (WHO 2009:13). A study conducted in Gilgel Gibe in 2008 reported that about 37% or one-third of caregivers indicated that healthcare treatment for malaria should start at onset of diagnosis of symptoms. Thereafter, if a child doesn't get well, additional treatment should be sought from another service post or place (Fessahaye, Ayalew, Abraham and Wondwossen 2008:49). A study in Liben showed that ICCM workers have seen on average 150 cases per worker, and in some instances up to 13 cases per worker per month. The most frequent cases included fever (38%), ARI (30%), diarrhoea (19%), and conjunctivitis (14%) (Tedbabe, David, Abebe, Worku, Garth and Karen 2009:120). Help seeking behaviour was also illustrated in Tsion et al's (2008:6) study. It was reported that of the total treated episodes of illnesses, care was required on the first day of perceived onset of illness only for 6(10.5%) of rural community and care seeking was started by 58% of caregivers on the second and subsequent days of perceived onset of illnesses. Now that some generic cases of health seeking have been explored, it is important to examine specific cases in Ethiopia.

According to the Ethiopian Demographic Health survey (EDHS2011:22), 7% of children showed symptoms of ARI two weeks before the survey. Twenty seven percent of children that had symptoms of ARI sought advice or treatment from a health facility or provider. Mothers reported that 17% of children under-five years of age had fever of which only about one-fourth sought advice or treatment two weeks preceding the survey at a health facility or from a health provider. Likewise, children of mothers with some secondary education and those from wealthy households were more likely to seek advice or treatment at a health facility or from a healthcare provider. Thirteen percent of children under the age of five were reported to have had diarrhoea, and 32 percent of them had taken treatment at a health facility or from a healthcare provider (EDHS 2011:22-25).

2.6 PERCEPTION OF CARETAKERS TOWARDS ICCM SERVICES

Generally speaking, low levels of health-related knowledge and low awareness among the poor and marginalised groups can result in low demand of health care services for sick children. About 70% of child deaths occur due to delays in seeking health care (Wagstaff, Bustreo, Bryce and Claeson 2004:727). With regard to the Western Pacific region, limited health-related knowledge and awareness are associated with low demand for health care services. In Saudi Arabia, 79.0% of respondents in a survey conducted by Mahfouz, Al-Sharif, El-Gamal and Kisha (2004:375) indicated that they were satisfied with the primary health center services, and preferred to always use the health services provided by the center. A study conducted in Ghana on non-utilisers of healthcare services revealed that 33% of caregivers did not use healthcare services because they perceived their illness to be less severe (Zelee et al 2003:672). Thirty percent of respondents of the same study did not use healthcare facilities because they believed the illness can either be cured at home or by a traditional healer (Zelee et al 2003:672).

A 2009 Health Policy and Planning publication noted that 42.2% of caregivers bypassed their nearest health facility because of negative perceptions they had about the same and service providers. In relation to the service, its use can be influenced by the degree of trust the caregivers have for the service providers. This means that the more the trust, the highly likely for the service to be used. However, some researchers believe that the use of services is not only influenced by trust, but also by a range of other factors, such as need (health status), predisposing and enabling factors (Anderson 1995:4). In Sri Lanka for example, 66% of respondents from a mixed urban-rural district reported bypassing or not using their nearest health facility for either minor or major illness because of what they refer to as the “poor state” of the facility (Akin and Hutchinson 1999:135). Added to this, geographical access or distance to healthcare facilities, socio-cultural, language and ethnicity related factors and lack of knowledge and awareness can influence people’s uptake of services (WHO 2009:10). Tsion et al (2008:6) reported that mothers’ main reasons for not seeking care from health facilities included lack of money (36%), distance from health facility (27.7%) and illness not considered to be serious (25.3%). The issue of availability of drugs was also raised in some studies as a barrier to help seeking (Tsion et al 2008:7).

A 2011 EDHS survey reported that about six in every ten (58 percent) caretakers were concerned that drugs may not be available at the health care facility or said that they did not want to go alone to a health facility (EDHS 2011:20). The FMOH (2006:12) disclosed that in some parts of Ethiopia, efforts are made to strengthen continuity of service delivery at health posts using a rotation system of HEWs in which one HEW remains at the health post while another provides support to households in communities. Furthermore, the Ethiopian government has launched a new programme called the Health Development Army (HDA) to increase uptake of community health services. In other words, this programme was developed to help address some of the barriers to help seeking.

2.7 HEALTH SYSTEMS FACTORS

The second component of IMCI is aimed at providing support for child health service delivery, including drug availability, effective supervision, referral services, and health information systems (FMOH 2005a:20). Tools have been developed for implementing specific system-strengthening interventions, including a planning guide for national and district managers, an integrated health facility assessment tool, and a tool for improving referral level of care. A study done in Kenya reported that in order to implement IMCI fully, all first-line and second-line drugs specified in the protocol should be available at the healthcare facility. Thus, IMCI specific drugs are pre-packaged to form an additional IMCI drug kit because certain drugs are not included in the standard kits. According to some health workers, the standard kits do not always contain all IMCI specified drugs for first-line or second-line of treatment which hampers health workers from adhering to recommended or required guidelines (Mullei et al., 2008:20). A similar study in Kenya indicated that respondents from all levels expressed the same view that supervision of IMCI at facility level was inadequate. Even though IMCI-specific supervision visits were expected to take place regularly, programme specific visits had never been conducted in the district and were often argued to be not feasible (Mullei et al., 2008:22).

2.7 CONCLUSION

This chapter presented an overview of literature related to the subject researched, utilisation of case management programme. The next chapter focuses on the methodology and specific design employed to conduct this research study. Ethical issues are also addressed in this chapter.

CHAPTER THREE- RESEARCH DESIGN AND METHODS

3.1 INTRODUCTION

This section describes the research design, methodology, techniques and setting used for data collection and analysis. Information on population used for the research, sample and sampling techniques, and data analysis process is also described here.

3.2 STUDY AREA AND PERIOD

The present study was conducted from 29th March till 8th April of 2013 in Agafra Woreda District, Bale Zone, South East of Ethiopia. The area is located 35 km from Robe Town (capital city of Bale Zone) and 430 km from Addis Ababa. Agarfa district has an area of 114,044 square Kilometres. Administratively, the district is divided into twenty rural two urban kebeles or administrative units. Agarfa Woreda is bordered by Arsi Zone in the North, Dinsho Woreda in the South, Sinana & Gasera Woreda in the East and Arsi Zone in the West. The population of Agarfa district is estimated to be 120,799 of which 19,811 are under-five children from the 2007 census projections (EDHS 2011:22). The majority (86.5%) of the population lives in rural areas thriving on agricultural farming. Wheat and barley are the main crops produced in this area. In terms of climatic conditions, 22%, 58.7% and 17.9% of the district constitutes high land, temperate or middle and low land respectively (Central Statistical Agency and ORC Macro 2006:123).

The Agafra Woreda or District has four health centres that provide integrated management of newborn and childhood illness (IMCI) services and as well as provide technical supports to the twenty health posts.

3.3 RESEARCH DESIGN AND METHODS

3.3.1 Study Design

This study utilised both quantitative and qualitative designs. Specifically, the former is a descriptive cross sectional design and the latter is a descriptive qualitative design.

3.3.2 Population

3.3.2.1 Source Population

All under-five children, their mothers and healthcare workers living in Agarfa Woreda form the source population. This population of the Agarfa Woreda was estimated from 2007 by the Central Statistical Agency to be approximately 19811.

3.3.2.2 Study Population

All under-five sick children and /or those with a history of childhood illness in the last two weeks prior to data collection were included in this study. All mothers or caretakers of the under-five category mentioned were also included in the study.

Inclusion Criteria

- Under-five children who are currently sick
- Under-five Children with history of illness of at least once within the last two weeks preceding the study. This is to ensure that participants of the study are knowledgeable and have experience of childhood illnesses.
- Caretakers of eligible children must be at least 15 years of age and volunteer to give consent. 15 years is the minimum age to be eligible to be a caretaker stipulated by the Ethiopian government.
- Sick children must have one of the following complaints: vomiting, not eating or drinking; fever/malaria; cough or difficulty of breathing/pneumonia; diarrhoea & vomiting; ear problem; measles,

nutrition feeding problems. These are signs and symptoms of common childhood illness.

Exclusion Criteria

- Seriously ill children because of possible difficulties with participation in the study.
- Sick under-five children whose mothers/caregivers are unable to communicate due to some impairment. Hearing/Audio impairment was excluded.
- Sick children residing in kebeles where health centres available are not included in the study because those children are expected to receive IMCI service at health centres to promote better care.

3.4 SAMPLE SIZE DETERMINATION AND SAMPLING PROCEDURE

3.4.1 Sample Size Determination of the Quantitative Aspect of the Study.

Sample size was estimated using single population formula considering childhood illness prevalence of 50.6% (Sahalu 2006:10), with 5% marginal error at 95% confidence level. Actual sample size was computed substituting the above figures in the following formula:

$$n = \frac{(Z_{\alpha/2})^2 p (1-p)}{d^2}$$

$$n = \frac{(1.96)^2 0.506(1-0.506)}{(0.05)^2}$$

Where: n = required sample size

$Z_{\alpha/2}$ = critical value for normal distribution at 95% confidence level which is equals to 1.96 (z value at $\alpha = 0.05$)

P = household illness prevalence of under five children (Daniel 2010:10)

d = an absolute precision margin of error 5%.

The calculated sample size is 384. Since the population fraction is $< 5\%$ (i.e. $n/N=1.9\%$), the finite population correction formula will not be used. Therefore, the total sample size calculated was 384 plus 10% of the calculated sample size for non-response brings the required minimum sample size for the study to 422 of under five children.

3.4.2 Sample Size for the Qualitative Aspect of the Study

Participants for the qualitative aspect of the study included four health workers at health care centers working with under-five children (each IMCI providing health centres) and ten health extension workers - one from each 9 HP, seven volunteer community health worker or Kebele leader, and eight mothers or caretakers from their respective Kebele. An interview schedule was used to guide all the in-depth individual interviews conducted.

3.4.3 Sampling Procedure

3.4.3.1 Quantitative Aspect of the Study

As mentioned before, there are 22 Kebeles (20 rural and 2 urban) in Agarfa Woreda. Giving the lists of all 22 kebeles, kebeles which had health centres (4 kebeles) in the same kebele were excluded. Hence, a total of 18 kebeles were eligible for the study. Of the total eligible kebeles, nine (50% of kebeles) were selected randomly. The total sample size allocated to each nine kebeles was proportional to the estimated size of sick under-five children. At each kebele, data collection drew on a central point and the kebeles were stratified into three zones. Data collectors were provided with the necessary tools (research questionnaire, stationary etc.) for data collection from mothers/ care givers at each selected household.

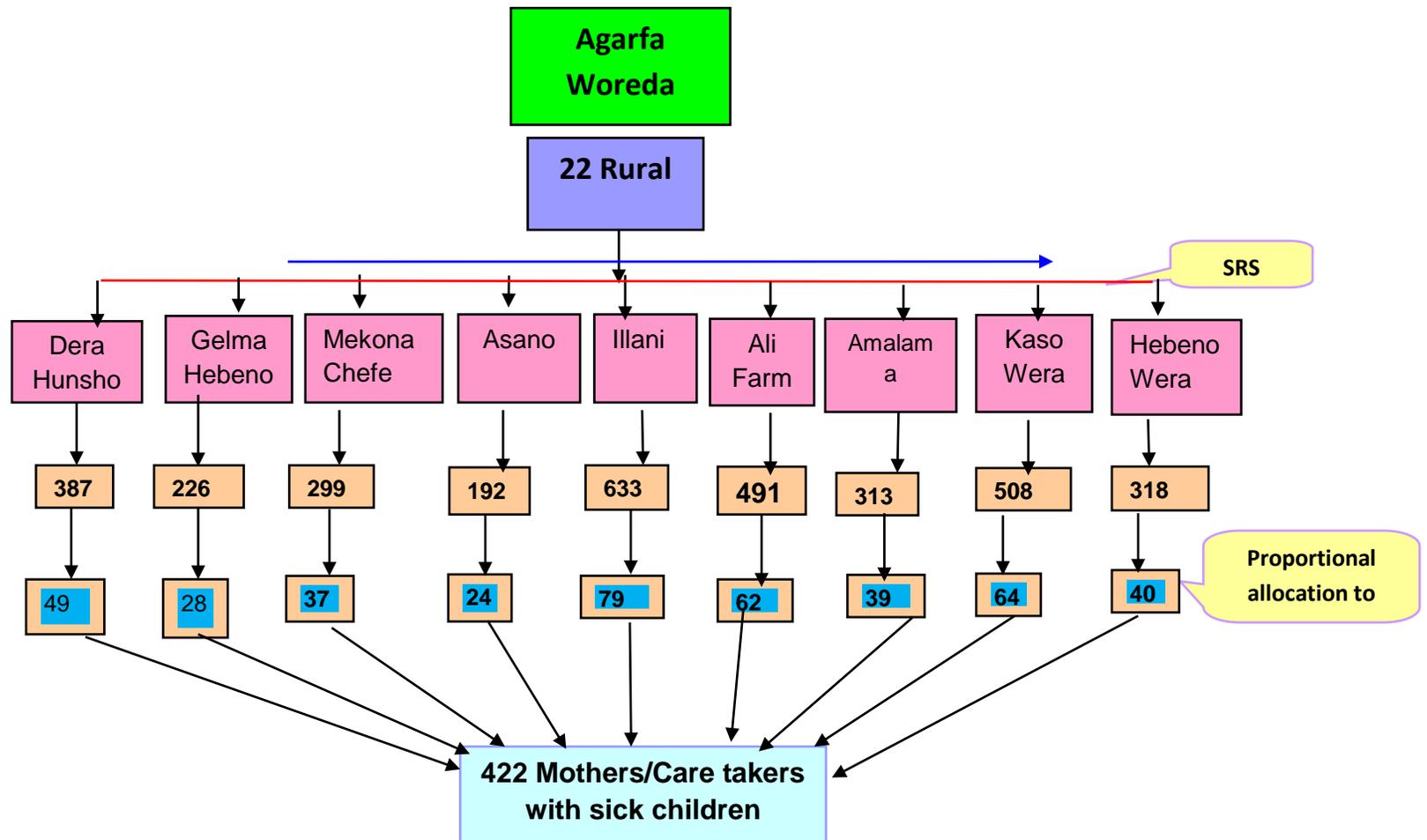


Figure 3.1: Quantitative Aspect of the Study: Sample size per Kebele in Agarfa Woreda.

3.5 DATA COLLECTION AND MEASUREMENTS

Data were collected using a structured questionnaire. The questionnaire was contextualized and localised to the research objectives. The questionnaire was first designed in English then translated into Afan Oromo to facilitate better understanding of each question, and then translated back to English to check for consistency. The translator is fluent in both English and Afan Oromo, and has been translating for over 15 years.

3.6 DATA QUALITY ASSURANCE

The questionnaire was pretested with 10% of the total sample size in Woredas. The pretest was conducted with different group of similar socio economic attributes to the study area. Two-day training was provided for the data collectors and supervisors on the questionnaire, sampling procedures and skipping pattern. 30% of the collected data was randomly selected and reviewed by the principal investigator. Problems / challenges faced during data collection were discussed and rectified. Data editing in the field was checked for completeness before storing away.

3.7 VARIABLES

3.7.1 Background Variables

Socio-demographic variables included age, sex, religion, ethnicity, residence occupation, education, family size and marital status

3.7.2. Dependent Variables

Utilization of Integrated Community Case Management (ICCM) services

3.7.3 – Independent Variables

- ✓ Knowledge and attitude of mothers or caregivers toward ICCM services
- ✓ Existence of model families, volunteer community health promoters and Women's Development Army. Perception of ICCM care seekers

- ✓ Knowledge and attitude toward ICCM services
- ✓ Residence of HEWs
- ✓ Demand generation done on ICCM service
- ✓ Support of health system (Integrated supportive supervision or follow up, Programme performance review meeting, continuous supplying of drugs & supplies
- ✓ Opening time of HEP for ICCM service
- ✓ Physical access to the health post for ICCM services

3.8 DATA ENTRY AND ANALYSIS

Quantitative data was checked for completeness, inconsistencies etc., before coding and entering into statistical package for the social sciences (SPSS) for windows version 16.0 and EPINFO 3.5.2. Descriptive statistics was computed to determine the ICCM service utilisation rate. Bi-variate analysis (chi square test of independence) was carried out using dependent and independent variables. Binary logistic regression analysis also was done to obtain odds ratio and confidence interval of statistical associations.

For controlling of confounding effect of other variables and to appropriately determine the independent predictors of ICCM service utilisation, multivariate logistic regression analysis was carried out by selecting significant variables in the bivariate analysis. The strength of statistical association was measured by adjusted odds ratios and 95% confidence intervals. Statistical significance was declared at $P < 0.05$.

Qualitative data were transcribed into English by the principal investigator. Recorded interviews were replayed, transcribed and analysed using Strevick-Colaizzi-Keen framework of analysis discussed by Moustakas (1994:158). Outcomes with similar ideas in the same context were merged into thematic categories.

3.9 DISSEMINATION PLAN OF RESEARCH FINDINGS

The results of this study will be presented to the University of South Africa (UNISA) in partial fulfilment of the MPH programme in Health Studies. A copy of the report will be provided to the Oromiya Regional Health Bureau and Bale Zone health desk and other agencies engaged with IMNCI and ICCM services in the zone. Finally, efforts will be made to publish the result in national and international journals

3.10 VALIDITY AND RELIABILITY

Polit and Beck (2008:449) stated that an ideal data collection procedure is one that captures a construct in a way that is relevant, accurate, truthful, and sensitive. Furthermore, and in an ideal data collection procedure, cause and effect relationships are taken into account. In research, the accuracy of this relationship can be influenced by reliability and validity of the instrument. According to Parahoo (1997:269); reliability and validity of the study questionnaire can be greatly enhanced by careful preparation, through skilful construction, and paying particular attention to the needs and circumstances of potential respondents and anticipating how they would react. Reliability and validity enable the researcher a fair idea of whether all the respondents understand the questions in the same way; whether the format of the questions is the most suitable for a particular target population; whether they understand the instructions and how relevant the questions are as well as whether the length of the questionnaire and its structure are likely to affect the responses.

3.10.1 Reliability

Polit and Beck (2008:452) indicated that an instrument's reliability is the consistency with which it measures the target attribute and can be equated with a measure's stability, consistency, or dependability. It relates to the extent to which all the respondents understand each question in the same manner. To be reliable each

question in a questionnaire needs to be understood by all the respondents in the same manner and the responses need to be consistent (Parahoo 1997:265).

The reliability of a questionnaire depends largely on the question wording and questionnaire structure. Parahoo (2006:266) stated that it is difficult enough to obtain a relatively unbiased answer even from a willing, alert individual who has correctly understood the question. But the task becomes virtually impossible if hampered by a poor question wording. Some of the threat to reliability comes from questions that are ambiguous, double-barrelled, leading, double negative and hypothetical.

Question order and the length of a questionnaire can also affect responses. Lengthy and uninteresting questionnaire not only affect response rates, but can also lead respondents to take them lightly (Kathryn 2006:8-9). The order of the questions, the way in which they are grouped and their sensitivity (or lack of it) can all affect responses.

Reliability was ensured through:

- ✓ Discussions of the questionnaire with supervisors prior to actual data collection.
- ✓ Pre-testing the questionnaire with in-depth interview guide to avoid words that were vague or would yield data that was not in-line with the research questions.
- ✓ A one-day pre-test conducted at Ali Farmer kebele in Agarfa Woreda, Bale zone. The pre-test provided the opportunity to test the study procedures, refined the research guides and further train data collectors under conditions that simulated interview and data collection following the study procedures that replicated actual data collection
- ✓ Comparing the questionnaire with previous studies or standards such as demographic and health surveys

- ✓ Monitoring the data collection process to ensure everything was in place, from checking the research tool for completeness and missing data in the field by data collectors to revisiting missing information.
- ✓ Providing a unique identification code for each study participant during data entry.
- ✓ Providing information to each participant in the study on the purpose of the study, the methods used, benefits of the study and expected time to complete the interview in their home language.
- ✓ Assurance of confidentiality and reassurance that opting out of the study at any time would not compromise the benefits or care they would receive.

3.10.2 Validity

Polit and Beck (2008:457) further explain validity as the degree to which an instrument measures what it is supposed to measure. Parahoo (1997:264) also states that the validity of a questionnaire is the extent to which it addresses the research questions, objectives or hypotheses set by the researcher. In this study, the questionnaire was designed to assess the level and factors affecting ICCM service utilisation. All the questions of the research tool - reflects the concepts of ICCM service utilisation and the research objectives. This approach enhances its validity (Healey and Perry 2000:120).

- ✓ Validity was equally ensured in a similar manner to reliability as follows: The questionnaire was formulated and cross checked by academic supervisors who are experts in the field of study and have experience in advising fellow researchers.
- ✓ The questionnaire was pre-tested, reviewed and corrections made depending on finding from pre-test result.
- ✓ Data entry template was designed using EPINFO. Data editing was done on the spot in the field during data collection and through the data entry process. Data entry started two weeks post data collection from the study area.
- ✓ Data analysis was done by computer using EPINFO and SPSS version 16 in putting appropriate statistical formulae.

For the qualitative aspect of the study, the framework of trustworthiness by Guba and Lincoln (1994:107) was employed by the researcher to enhance the quality of the study. The framework includes five criteria: credibility, dependability, confirmability, transferability and authenticity. In relation to credibility, this was assured in this study by collecting both qualitative and quantitative data. Dependability was enhanced in this study by the use of a data collection instrument for the quantitative phase, pre-testing this instrument, audio-taping the entire interview process of the qualitative phase, and verbatim transcriptions. Added to this, the entire data collection process was monitored by the researcher. Confirmability relates to the degree of agreement between two or more researchers about the accuracy, meaning and relevance of data. Notes were taken during interviews. These notes were compared with transcribed data, and agreement was noticed. In relation to transferability, this was ensured by providing a detailed description of the study in the form of a dissertation. This would enable readers to make judgement about the rigour or quality of the study and its applicability to other settings.

3.11 ETHICAL CONSIDERATIONS

Ethics deals with matters of right and wrong. The following steps or ethical concerns were taken into consideration to ensure that the research was conducted in an ethical manner.

3.11.1 Permission to Conduct the Study

The University of South Africa (UNISA) as the primary institution for this study provided the required ethical clearance to conduct the study. The study approval document was presented to other parties involved in the study in Ethiopia. Hence, the research was approved by the Bale Zone Health Head Office. Informed consent was also obtained from participants before data collection after participants were informed about the objectives of the study. Participation was absolutely voluntary, and the right of not-to-answer any part or all of questions was respected. Again, each respondent was

informed about the objective of the study, selection procedure, assurance of confidentiality and no mention of their names so as to minimize social desirability bias.

In summary, and at national level, the right of institution in which research is conducted must be respected by obtaining appropriate permission. In view of this, permission was obtained from the followings institutions:

- ✓ Bale Zonal Health Head Office
- ✓ Agarfa Woreda Health Office, Health Centres and HP

3.11.2 Confidentiality and Privacy

According to Parahoo (1997:276) both confidentiality and respect of privacy are easier to promise than to fulfil. Privacy should mean what it says, and that a questionnaire must be administered to the respondents alone and in a private setting. Researchers are expected to obtain informed consent from respondents. Individual right to privacy needs to be respected, which can be easily invaded once they have given consent.

Parahoo (1997:301) states that subjects should be free to respondent or withdraw from participation without discrimination or prejudice” and “the right to privacy asserts essentially that an individual should be able to decide how much of himself or herself (including thoughts, emotions, attitudes, physical presence, and personal facts) to share with others. To ensure confidentiality, women's names were not written on the questionnaire and coding was employed instead. The content of the consent form had been translated into a local language.

3.11.3 Anonymity

The researcher has moral obligation to keep the respondent anonymous from others and the data collected should remain confidential. The behaviour of the data collector before, during and after the data collection has the potential of harming respondents (Parahoo 1997:301). In this study, data collection was held in a private room and each study respondent was given a unique identification code, which was used during data entry and their names were not recorded on the questionnaire.

3.12 LIMITATION OF STUDY

Since the study was a community based cross sectional design and limited only to Woreda, its findings might not reflect that of the other zones or regions of the country as there are differences in socio cultural, geographical features, intensity of health promotion activities, health coverage, local staff's skills as well as availability of different intervention by non-governmental organizations.

3.13 CONCLUSION

This chapter offered discussions on ethical and methodological issues, including reliability and validity. The ensuing chapter dicusses data analysis, interpretation and findings of the study.

CHAPTER FOUR- RESULT AND DISCUSSION

4.1 INTRODUCTION

A total of 401 (95.0%) mothers were involved in this study. During the in-depth interview a total of 29 mothers, VCHWs/Health Development Army (HDA), HEWs and supervisors were involved. The findings revealed information on socio demographic characteristics of study participants, main childhood illness symptoms, level of ICCM service utilisation and respondent perception, route of care seeking behaviour, and different factors affecting service utilisation.

4.2 QUANTITATIVE STUDY RESULT

4.2.1 Socio-Demographic Characteristics of Study Participants

Research findings revealed that 226 (56.4%) respondents were 30 years old and above. It also revealed that 175 (43.6%) respondents were less than 30 years of age and 373 (93%) of the mothers were married. About 251(62.6%) of mothers were Muslims, 146(36.4%) were Orthodox by religion. Oromo were the dominant ethnic group accounting for 369 (92%) of the respondents, and the rest, 32 (8%) were Amahara. One hundred and sixty three (40.6%) of the respondents could read and write or attended elementary school followed by nearly one third of mothers, 133(33.0%) who were illiterates, and the rest of them about one fourth had completed or had some secondary education. Majority of the mothers, 381 (95%) were self-employed. More than half 206 (51.4%) of them had less than six family members, and 48.6% stated having six and above total number in family size. Two hundred (49.9%) respondents had less than 500 Birr average monthly income. Eighty three percent (83%) of respondents mentioned that total time it took to reach health posts was less than two hours.

Table 4.1: Socio-demographic Characteristics of Respondents, Agarfa, March, 2013

Variables	Frequency n=401	Percentage
Age of Respondents		
<30 years	175	43.6
30 years and above	226	56.4
Educational Status		
Illiterate	133	33.2
Read& write and Elementary	163	40.6
Secondary	105	26.2
Marital Status		
Married	373	93.0
Single	5	1.2
Others	23	5.7
Religions		
Muslim	251	62.6
Orthodox	146	36.4
Catholic / protestant	4	1.0
Ethnicity		
Amahara	32	8.0
Oromo	369	92.0
Occupation of respondent		
Un-Employed	7	1.7
Self-Employed	381	95.0
Employed	13	3.2
Total # of Family Size		
<6	206	51.4
>6	195	48.6
Duration of Walk to HPs		
<2 hours walk	373	93.0
2-4 hours walk	22	5.5
>4 hours walk	6	1.5
Household Income/ month		
<500 birr	200	49.9
500 and more birr	155	38.7

I don't know	46	11.5
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Further findings indicated that age, religion and ethnicity of the mothers or caretakers had no or any difference on ICCM service utilisation.

However, a multiple logistic regression analysis showed that marital status, educational status and average monthly income had significant effect as predictive variables on the outcome of ICCM service utilisation among mothers living at Agarfa Woreda. This is consistent with a UNICEF study in 2012, which reported that socio-economic factors, maternal education and household income factors contribute to under-five deaths (UNICEF 2006:6; Kayako, Masamine and Kyo 2010:12; UNICEF 2010:10).

4.2.2 ICCM Service Utilization ICCM Utilization by Caretakers or Caregivers

Overall level or magnitude of ICCM service utilisation at health posts among mothers at Agarfa Woreda was found to be 10.5%, while the majority of mothers, 359 (89.5%) were non-users of ICCM service. About 116 (28.9%) of respondents reported diarrhoea as the most common childhood illness relative to fever, 99 (24.9%) and cough, 146 (36.4%). Most of the mothers, 334 (83.3%) claimed that the duration of a childhood illness do not usually exceed seven days. In relation to help seeking, only 48 (12%) of the mothers seek advice and treatment on the first day of a child's illness and 293 (73%) stated they only seek advice or treatment after the second day of onset of illness (Table 4.2).

Table 4.2: Reported Symptoms and ICCM Service Utilization Status at the Health Posts, Agarfa Woreda, March, 2013

Variables	Frequency n=401	Percentage
ICCM Utilization at Health Posts		
Utilize Health Post	42	10.5
Not Utilize Health Post	359	89.5
Main Child Health problems(Symptoms)		
Diarrhea	116	28.9
Fever	99	24.7
Cough	146	36.4
Others	40	10.0
Duration of Symptoms for main Child problem		
<7 days	334	83.3
7 days and above	67	16.7
Time of seek advice or Treatment after onset of illness(n=341)		
First day	48	14.10
2nd day	144	42.20
Three days and above	149	43.70

The Health extension programme in Ethiopia aimed to provide basic and largely preventive primary health services to rural villages and empower families to take charge of their own health. Primarily, the programme gives special attention to children and mothers. The Ethiopia ICCM service is one of the intervention programmes implemented to reduce the under-five mortality rate (Marsh et al 2008:382). About 89.5% of mothers in the study area seemed not to be using the ICCM service or do bypass health posts. This figure is however higher than the 58% reported from a study done in India (WHO 2009:10). The 10.5% healthcare service utilisation in this study is similar to outcomes from the systemic review conducted by WHO (2009:10) in Bangladesh, Uganda and Tanzania.

This study showed a slightly lower ICCM service utilisation than figures from a study conducted in Liben, Boloso Sore, North Showa by the EDHS in 2011 (Tedbabe et al., 2009:124; EDHS 2011:5). This can be attributed to socio-demographic differences between the study areas affecting ICCM service utilisation.

The main symptoms of childhood illnesses revealed in this study were diarrhoea (28.9%), fever (24.9%), cough (36.4%) and others 10%. These figures are quite similar to those from the study done in Liben that reported 38% for fever, 30% for ARI, 19% for diarrhoea, and 14% for conjunctivitis (Tedbabe et al., 2009:123). In the 2011 EDHS survey, mothers reported that 17% of children under-five had fever and 13% of the children had diarrhoea (EDHS 2011:5).

About 12% of mothers stated that they seek advice and treatment on first day of suspected signs and symptoms of a childhood illness. This outcome is similar (10.5%) to that reported in another study conducted in the Dera district. The rest of the mothers in this study reported to seek healthcare for their children after two or more days of suspected signs and symptoms of childhood illnesses. Such delays in seeking health care services may contribute to the incidence and prevalence of childhood mortality (Wagstaff et al., 2004:727).

4.2.3 Factors influencing ICCM Service Utilisation at Health Posts

Regarding Knowledge and ICCM care seeking attitudes (Perception) of mothers in Agarfa Woreda, 370(92.3%) of study respondents had knowledge about ICCM service. About 288(71.8%) claimed to perceive that common childhood illness can be mild and moderate and 118(28.2%) of the mothers perceived childhood illness as severe.

The study also showed that capacity building of mothers was provided by HEWs. About 243 (60.6%) mothers got model family training on service delivery package of the health extension programme. Most of the women, 249 (62.1%) were trained as health development Army's of which 235 (94.4%) of the mothers were organised in teams of 25 to 30 households. Each group consisted of one to five networks, established by five to seven mothers to discuss health matters in their respective organised teams (Table 4.3).

Table 4.3: Factors for ICCM Service at Health Posts, Agarfa woreda, March, 2013

Variables	Frequency	Percentage
n=401		
Perception of illness by Caregivers		
Severe	113	28.2
Mild and Moderate	288	71.8
Knowledge of ICCM service by Respondents		
Yes	370	92.3
No	31	7.7
Source of information for ICCM service		
HEWs	320	79.8
Health workers	8	2.0
Others (VCHWs, students)	73	18.2
Graduated Model Family		
Yes	243	60.6
No	158	39.4
Trained on Health Development Army (HDA)		
Yes	249	62.1
No	152	37.9
HDAs organized by one to five network		
Yes	235	58.6
No	166	41.4

Mothers or caregivers had their own perception about common childhood illness depending on their experience. While 28% of mothers or caregivers perceived childhood illness as severe, 78% perceived it as mild and moderate. Multiple regression analysis outcomes on perception of severity of childhood illness by mothers were not revealed as a predictor of ICCM service utilisation. In similar studies, the preference of care was dependent on the perception that stemmed from the mothers' responses and practices that influenced their perception of severity (Tedbabe et al., 2009:124).

The study revealed that the majority of mothers had knowledge of ICCM service at Health posts and they got information from health extension workers. A multiple regression analysis also revealed that caregivers who got information from HEWs were true predictors of ICCM service utilisation. These findings were similar to that reported in a study carried out in the Dera District that looked into challenges to child health in the Western Pacific region by the WHO. The study reported that the lack of knowledge and awareness resulted in low demand for and use of services among caretakers (WHO and UNICEF 2010:4). Even though training was provided to the women in teams, it did not significantly affect ICCM service utilisation. This could be due to poor concentration on ICCM services in discussions during periodical review meetings.

4.2.4 Promotive and Preventive Service Utilisation at the Health Posts

The study also showed that different services were integrated. Mothers indicated that they utilised health service at least once in their respective health posts. The results indicate that the places of delivery utilised by 80.5% of respondents for their last or current child were their respective homes. However, about 78 (19.5%) of respondents utilised institutional delivery services (such as health centres) to deliver their current children. More than half of respondents (56.4%) were Expanded Programme of Immunization (EPI) service users. About 20.4% were on Family Planning (FP), 20.4% on Antenatal care (ANC), 9.7% on Postnatal Care (PNC), and 13.2% Nutrition service users (see Table 4.4).

Table 4.4: Promotive and Preventive Service Utilisation at Health Posts Agarfa Woreda, March, 2013

Variables	Frequency	Percentage
	n=401	
Any Other Service from HPs		
Yes	366	91.3
No	23	8.7
Delivery Service		
Home	323	80.5
Inst. Delivery(HP, HC& Hosp)	78	19.5
EPI Services		
Yes	226	56.4
No	175	43.6
FP services		
Yes	180	44.9
No	221	55.1
Antenatal Care Service HPs		
Yes	82	20.4
No	319	79.6
Postnatal Care Services		
Yes	39	9.7
No	362	90.3
Nutrition Services		
Yes	53	13.2
No	348	86.8
Other Services		
Yes	44	11.0
No	357	89.0

The study revealed that caregivers who were utilising other services at a health post at the same time were better users of ICCM service. Mothers who gave birth at institutional facilities were better users of ICCM services at HP than mothers that gave birth at home. In fact, caregivers who did not visit health post for other services utilised the ICCM service less than other service at health post. Both factors were predictors of ICCM service utilisation. These results indicate that encouraging health service utilisation, especially institutional delivery provides better opportunities for essential newborn care, which is one of the ICCM and PNC services' components. Both service delivery programmes provide good healthcare access for infants less than two months of age and PNC is more accessible to persons of low ICCM service utilisation.

Reports on the use of maternal care and family planning by the L10K survey in 2009 showed that 16% of mothers utilised institutional delivery service, 54% used ANC, and 32% used less family planning services (ESHE 2008:40; L10K 2011:16). The present study findings are slightly different from the EDHS 2011 report that indicated service utilisation of 9% for antenatal care, 67% for vaccination and 27% for family planning service through health extension workers (Marsh et al 2008:384; Asheber, Ali, Mary and Solomon 2010:4; EDHS 2011:5). This variation could be attributed to deep socio-cultural differences of study areas.

4.2.5 Perception of the Care Takers toward ICCM Service at Health Posts

The perception of caretakers as non-users of ICCM services at health posts (HP) was well noted. In general, reasons provided for not visiting or utilising ICCM services at HP were mostly negative. Nine seven, 97/359 (27.02%) of caretakers perceived HEWs as lacking adequate skills to provide proper care, 94/359 (28.18%) perceived Health posts as lacking adequate drug supply, 78/359 (21.73%) claimed that health posts are often closed or operate for short hours, 34/359 (9.47%) believed that illness gets cured by itself, 32/359 (8.91%) perceived the illness was not serious, and 17/359 (4.74%) attributed poor utilisation of services to other factors, such as financial problems, not allowed to visit HP on their own without permission etc (Figure 4.1).

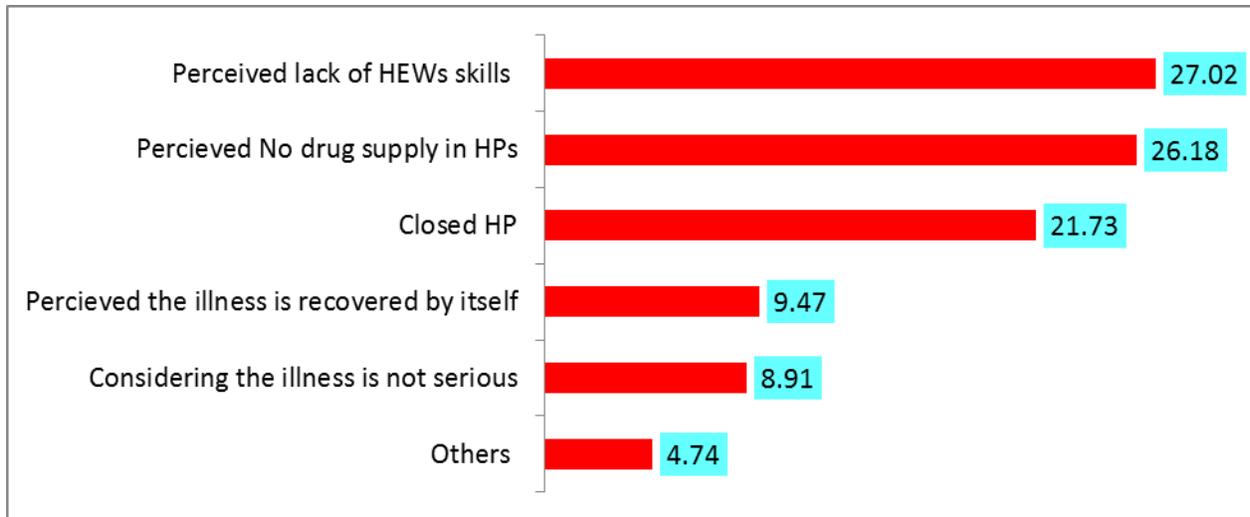


Figure 4.1: Perception of mothers toward ICCM service utilization at health posts, Agarfa woreda, March 2013

4.2.6 Determinants for ICCM Service Utilization at the Health Posts

The study findings singled out mothers with secondary level of education. These mothers seemed to utilise ICCM service at health posts and were three times more likely to do so compared with illiterate mothers or mothers of lesser educational level (AOR= 3.10; 95% CI [1.28,7.50]). Mothers who were not married were four times more likely to utilise ICCM service than married mothers that use health post (AOR= 4.28; 95% CI [1.52, 12.04]). Mothers earning approximately 500 Birr per month (AOR= 3.10; 95% CI [1.38, 6.82]) as well as those earning above 500 Birr (AOR= 3.53; 95% CI [1.20, 10.38]) were three and four times more likely to utilise ICCM service at health post than those earning less than 500 Birr per month. Caregivers who got information about ICCM service at health posts from others (students, VCHWs etc) were less likely to utilise ICCM services than HEWs (AOR= 0.10; 95% CI [0.01, 0.75]). Mothers who gave birth at institutional delivery centers use more of ICCM service at HP than Mothers that gave birth at home (AOR= 2.03; 95% CI [1.05, 4.94]). In addition, mothers who will not visit health post even for other services were less likely to utilise ICCM services (AOR= 0.34; 95% CI [0.14, 0.83]) (Table 4. 5).

Table 4.5: Determinants for ICCM Service Utilization at the Health Posts, Agarfa woreda, March 2013

Variables	ICCM service utilization		COR *(95%CI)	AOR **(95% CI)
	No	Yes		
Education				
Illiterate	124 (93.2%)	9(6.8%)	1.0	1.0
Read & write, Elementary	150 (92.3%)	13(8%)	1.19(0.49-2.89)	0.92(0.35-2.46)
Secondary	85 (81%)	20(81%)	3.242(1.41-7.46)*	3.10(1.28-7.50)**
Marital Status				
Married	338 (90.6%)	35(9.4%)	1.0	1.0
Others	21 (75%)	7(25%)	3.22(1.28-8.11)*	4.28(1.52-12.04)**
Income/month				
< 500	188 (94%)	12(6.0%)	1.0	1.0
500 & more birr	132 (85.2%)	23(14.8%)	2.82(1.64-4.83)*	3.10(1.38-6.82)**
I don't know	39 (84.9%)	7(15.1%)	2.81(1.04-7.60)*	3.53(1.20-10.38)**
Source of information on ICCM services				
HEWs	250 (49.9%)	251(50.1%)	1.0	1.0
HWs	231 (82.2%)	50(17.8%)	0.0	
Others	250 (49.9%)	251(50.1%)	0.10(0.01-0.74)*	0.10(0.01-0.75)**
Delivery Service				
Home	291 (90.0%)	29(9.0%)	1.0	1.0
Inst.Deliver (HP,HC&Hosp)	65 (83.8%)	13(16.7%)	2.03(1.00-4.11)*	
Other Services at HP				
Yes	35 (90%)	9(10%)	1.0	1.0
No	328 (90.6%)	34(9.4%)	0.40(0.17-0.94)*	0.34(0.14-0.83)**

4.3 QUALITATIVE STUDY REPORT

4.3.1 Demographic Details

Eight in-depth interviews were conducted with mothers. The ages of mothers ranged between 18 and 49 years. The number of children mothers indicated to have given birth ranged from one to nine. Seven mothers were married and one was divorced. Of those that were married, one was in a polygamous relationship. All mothers were caring for

their biological children and the average number of children in their households was three, with a range of one to six.

With regard to educational status, only a minority of mothers or caregivers attended formal schooling. Two of the caregivers could read and write, one attended primary school but did not complete the same. One caregiver stated that she attended secondary school but also failed to complete. None of the caregivers completed secondary school. Such limited educational achievement may deter caregivers' help seeking behaviours and thus contributes to childhood mortality. This finding is consistent with the outcome of Zelee et al's (2003:8) study conducted in Ghana on caregivers' perceptions of severity of signs and symptoms of childhood illnesses.

In terms of household income, all mothers interviewed were farmers who mostly grow wheat and barley, as well as practice animal husbandry. One mother combined farming with trade. Even though it is very difficult to provide a precise estimate of average monthly household income, the outcome of this study revealed that the household income from farming yields range between 2000 and 25,000 Ethiopian Birr per year. Some suggested an estimated household income range of about 1500 to 8000 Birr per year. One mother stated an annual income less than this range and one greater than this range. The household income determines the type of care services caregivers will seek when their children are ill (Balabanova et al 2004:22). Thus, rural families in Ethiopia will only identify treatment services they can afford in the context of cost of the service and fare to the same.

The time required to travel to the nearest health post is very important to service utilisation, a finding also echoed by Zelee et al (2008:8) and EDHS's (2011:8) survey. When mothers were asked to estimate the length of time it took them to travel from their home to their respective health posts, they indicated a walk time of three minutes to one-hour. The majority indicated a walk time of between ten minutes to 25 minutes. During the data collection period, an attempt was made to identify equal numbers of caregivers that utilised and those that did not utilise the health post over the course of

the research. Analysis of this data indicated that seven mothers had heard about ICCM, of which four mothers did visit the health posts, three mothers' utilised ICCM services, but one did not because she finds the health post closed when planned to consult. Four mothers reported not visiting any health post during their child's illness episode. Six mothers stated that they had visited one or more of the following: a health post, a health center, a private clinic and/or hospital. Of these mothers, all were able to recall the main child symptoms in the last two weeks of the study. Three mothers stated that their child was ill with diarrhoea, two with fever, two with cough and one had skin problem.

Ten individual interviews were held with HEWs. Their experience as HEWs ranged from one to eight years. Six HEWs stated that they were transferred to their current post from another kebele. All were trained on ICCM services over the past two years. The six HEWs primarily reside in the same kebele, but four of the HEWs did not reside in the same kebele they served and most lived within ten minutes' walk to their health post. Three health posts were served by one HEW, six health posts were served by two HEWs.

Seven VCHWs were interviewed. Their experience as VCHWs ranged from one to twelve years. Six VCHWs stated that they had received some training as VCHWs. All VCHWs stated that their primary residence was in the sub-village of the kebele in which they worked.

4.3.2 Main Childhood Illness Symptoms

Diarrhoea, fever and cough were the main childhood illness symptoms reported by IDIs. Afaan Oromo speaking caregivers use local names to describe illnesses. For example, diarrhoea was referred to as 'Garaa kaasaa' and 'Baasaa', and sometimes as 'demsisaa', 'tessisaa' and 'buxuchaa'. The use of such descriptors was to enhance understanding of these illnesses, and such understanding can influence caregivers' uptake of health services (WHO 2009:10). According to mothers or caregivers, diarrhoea relates to the occurrence of frequent loose stools, an explanation consistent with that offered by WHO (2011:12) and Gupta et al (2007:471). In relation to severity of diarrhoea, caregivers are

generally worried when there is evidence of vomiting, and or blood in the stool. According to Tsion et al (2008:6), such concerns may enable caregivers seek care from health facilities, and to pay more attention to maintaining good hygiene in their home environments. It was not surprising for caregivers to be concerned when evidence of vomiting and blood in the stool of their children was noted, as diarrhoea contributes to most of the 10.9 million annual deaths among children in the sub-Saharan region of Africa (Sahalu 2006:22). Caregivers were aware of the view that one of the possible causes of diarrhoea is poor environmental hygiene.

Caregivers referred to 'fever' as 'Qaama gubaa' and 'tikusat'in Afaan Oromoo and Amharic languages respectively. Fever, a sign of malaria, was commonly referred to as 'shivering' or 'gubsiisaa' by caregivers. They referred to malaria as 'woba'and 'busaa' in Amharic and Afaan Oromo languages respectively. Surprisingly, almost all IDI respondents except HEWs and their supervisors did not report cases of malaria. However, several caregivers stated that malaria was common among children and often manifested by shivering, fever and headache. The presence of these symptoms signal serious signs of malaria, and may result in care-seeking action outside the home. Few caretakers indicated that the presence of convulsion is a worrying sign requiring urgent action to prevent death (Save the Children 201:14). Such an action to perception of severity of symptoms was revealed in Zelee et al's (2003:8) study. They reported that people would usually seek medical help when there is a perceived high risk to the health of family members.

Pneumonia was a common childhood illness noted in the Afaan Oromo region of Ethiopia. However, there was and still no equivalent term for pneumonia in Afaan Oromo language. HEWs stated that for children having pneumonia, caregivers usually describe their child's illness as 'qufa', with the equivalent symptoms of coughing and shallow breathing. Pneumonia is also sometimes referred to as 'qillensaa' or 'qora' to describe symptoms of cold or flu, fever and body pain. HEWs recommended the use of the English term, 'pneumonia' and Afaan Oromo term, 'michii somba' ('lung disease') in health education to better explain the symptoms of pneumonia to caregivers.

4.3.3 Sources of Care

4.3.3.1 Home-Based Care

When asked what mothers do at home upon recognition of a child's illness, most caregivers stated they actually do nothing except pray to God and wait for the child's recovery. However, when probed about herbal treatments, a large number of them indicated a variety of actions taken within the home before going to health facilities for care or treatment. Not seeking immediate treatment upon recognition of signs and symptoms of childhood illness is consistent with Tedbabe et al (2009) findings in their study of help seeking behaviours. They stated that over 50% of their participants (caregivers in rural communities) only seek help after two or more days of perceived onset of childhood illness. Caregivers in rural communities in the main tend to use home remedies before seeking help from treatment centres, an outcome reported in a survey conducted by the EDHS (2011:23).

Herbs are the most commonly used home remedies. They are usually given to children with diarrhea, and or cases of suspected involvement of witchcraft or evil eye also called 'alaty'. For evil eye or 'alaty' cases, local roots called 'habsud', izawaa/tenadaam' and 'wanijolee' are frequently offered as a mixture. This mixture of herbs are grounded and mixed with water, then burned and inhaled by patients. In some cases, the mixture is applied to the eyes or prepared as a special body bath solution. VCHWs stated that mothers often obtain knowledge of traditional herbs from elders in their community. It is such knowledge and familiarity of the use of herbs may contribute to deter caregivers' utilisation of modern health services (WHO 2012:22).

Traditional herbs or plants like 'habsud', 'tungit', 'demakese' and 'barzaafe', are reported to be common in the gardens of most community households as they are easy to grow and sustain. Added to this, they are commonly prepared as herbal treatments for qillensaa or qora and/or qufa/a'jii.

These herbal home remedies / treatments are preferred because they are not only considered effective in treating childhood illnesses, but they are also less expensive relative to medication provided at health centres (Tsion et al 2008:6). Although this is the case, it is reported in this study by some caregivers that they have on occasions advised some communities members not to use herbal remedies because of their negative effects on human health. Thus, these caregivers together with VCHWs claimed that it is always better to take ill children to the nearest health facilities. They therefore make efforts to discourage the use of herbal remedies.

Most caregivers and VCHWs indicated that HEWs actively make efforts to minimize the use of home or herbal remedies in their health messages. HEWs emphasised in these messages the need for caregivers or mothers to visit health posts even if they may be using herbal remedies. The study participants unanimously agree that home-based treatments are considerably less effective than other forms of treatment and therefore suggest that it is not appropriate for a caregiver to solely rely on home-based treatments for seriously sick children.

4.3.3.2 Traditional Healers and Traditional Medicine

In addition to gathering herbs themselves, mothers and VCHWs stated that some caregivers have reduced the frequency of their visits to traditional healers. Traditional healers often referred to as ‘elders’ are respected by community members for their knowledge of Qoriichaa or traditional medicine. Traditional healers are usually not paid for their services. Some traditional healers were elderly family members. Caregivers buy herbs and medicines from individuals selling Qoriichaa Oromo in markets.

Mothers and VCHWs /HDAs reported that caregivers hardly utilize traditional healers’ services. However, they sometimes go to traditional healers when their children are unwell. Balabanova (2004:22) agrees with this by stating that caregivers make most of the decisions about help seeking for the health of their children. However, such

decisions are informed by a number of factors. For example, in this study caregivers are reported to visit traditional healers because their services are less expensive and more convenient. So, cost is a determining factor for caregivers to seek care for their sick children, a view echoed in Zelee et al's (2003) study. However, irrespective of cost, some caregivers reported instances of being pressurised by family members, especially mothers and mothers-in-laws to visit traditional healers.

4.3.3.3 Religious Healers

In addition to the use of services of traditional healers or Qoriichaa Oromo, mothers and VCHWs also stated that religious leaders or healers played significant roles in a child's illness in the study areas. Religious leaders or healers were often called upon and utilized for serious illnesses regardless of the type or cause of illness. These leaders or healers were also often used in conjunction with other sources of care. They were not known to provide medicines, but rather read verses from the Koran or Bible and pray to God on behalf of sick children and their mothers.

HEWs often did not mention 'Shekas' during their interviews other than stating that 'it is not treatment.' However, HEWs at one low-utilization site did mention that local Shekas were creating difficulties for their work by actively prohibiting caregivers and community members from utilizing the health post. One of the HEWs stated that they are faced with conflict from the Shekas in their community because the latter do not approve of family planning services. Such disapproval by the Shekas resulted in them discouraging community members from going to health posts.

4.3.3.4 Local Shops and Private Clinic

Some VCHWs in individual interviews suggested that local shops or kiosks (suqii, mana dunkana and madaberi) played large roles in promoting healthcare in rural communities. Typically, a shop is located in each sub-village in a kebele. Some shops in certain sub-villages stock medicines that are sold to community members.

VCHWs stated that ‘tetracycline’, ‘ampicillin’ and ‘amoxicillin’ are the most common medications caregivers use for treating children with diarrhea. These medications are available for sale at the community shops. Easy access to health facilities can influence people’s use or uptake of services (WHO 2009:10). Caregivers generally buy medication from their local community shops not only because of occasional closure of health posts or absence of HEWs at health posts, but also because these shops are easily accessible (Tzion et al 2008:6). Even though this was the case, concerns were repeatedly expressed by caregivers about whether the community shops are legally and medically authorised to dispense medications. While some caregivers stopped buying medication from the community shops because of these concerns, the majority continued to do so. Why the latter? This is probably because of the proximity of these shops, as those that are legally and medically authorised to sell medication are far away from the homes of caregivers (WHO 2009:10). Despite these constraints, VCHWs and HEWs strongly warn caretakers against buying medication from unauthorised shops not only because it is illegal to do so, but also because the medications sold in these shops may contain compounds, such as chalk that may be hazardous to people’s health. HEWs themselves repeatedly mentioned that discouraging caregivers from buying medication from local community shops has been an ongoing challenge for their work in the communities, and they claimed to have mentioned this challenge to authorities.

Private clinics are usually not a good option for caregivers, as they are generally expensive (EDHS 2011:22). Caregivers in rural communities are reported not to have adequate financial resources to buy medication from private clinics. Thus, only caregivers deemed to have adequate income can afford to utilize private clinics (EDHS 2011:22). However, it is worth noting that private clinics are rare in rural communities.

4.3.3.5 Health Post

VCHWs and HEWs work together at health posts. These health workers were informed during ICCM training to commence using health post for the treatment of under-five childhood illness. Caregivers were also encouraged by VCHWs and HEWs to use health posts. Caregivers are reported in this study to utilize health posts, and they did so for a

variety of reasons. Most of the ICCM users, mothers and VCHWs claimed to have used the health posts because they wanted their children to get better. These participants noted that they were offered free medical tests and medication at health posts. Added to this, they were also provided advice by HEW on how to support ill children. The HEWs were generally regarded as highly knowledgeable persons on childhood illnesses, and caregivers appreciated the professional and health care support they tend to offer. Many caregivers indicated that they prefer health post and HEW services because they can seek clarification on their child illness as well as receive prompt responses for concerns (WHO 2009:10). In addition to this, they were also preferred by caregivers because of their training and experience on childhood illnesses, and willingness to dispense authentic medication.

HEWs indicated that the number of sick children that visited their health posts ranged between 40 and 200. However, less than 100 cases or ill children are treated in a health post in the past two years. Some caregivers reiterated on few occasions that they were acknowledged by HEWs during their visits to health posts. Added to this, they were also offered prompt service and support by HEWs during their visits. Whilst caregivers considered it appropriate to talk about their children's health with female HEWs, they reported that they were offered a variety of services at health posts (Asheber et al., 2010:10). Examples of such services include antenatal and family planning. It is worth stating that caregivers did not only appreciate the service offered at health posts, but they were also appreciative of the fact that they can be offered a range of services in a single health post in their communities (EDHS 2011:27).

Almost all respondents stated that they trusted and valued HEWs as members of their communities. These respondents went on to state that HEWs are not only familiar with their communities and children, but they were also willing to offer treatment to children in need of care. One older VCHW's mother summed up the discussion as follows:

“In previous years in this community, many children died from diarrhoea, malaria and other childhood illnesses. Today, this situation has changed since the

government implemented the health post and HEW in our community. I am thankful to our government because we have not experienced death of children for while”.

4.3.3.6 Reasons by Respondent's for not Visiting ICCM Services

Some respondents stated their reason for not visiting health posts or utilizing key child health interventions services at health post. Examples of these reasons include financial constraints, distance to services, lack of knowledge and inadequate information, socio-cultural and religious barriers (EDHS 2011:2).

a) Access

In Ethiopia, most health facilities in rural areas only operate for short periods during the day. For instance, some may commence their functions, say at midday and close before 5pm. Such opening and closing hours are functions of the view that some HEWs do not reside in the 'kebeles' where they work. Another reason was that the health posts are generally located one hour walk away from most caregivers' households. Generally, health posts were difficult to access. This was because of the poor conditions of the roads, a view shared by HEWs and VCHWs. Even though this was the case, HEWs also attributed the limited utilisation of health care services to distance of caregivers' homes to health posts, a view echoed in Zelee et al's (2003:10) study. In addition to limited utilisation, delays in accessing health posts were also attributed to distance from caregivers' homes and poor road conditions. Some caregivers reported that they were in the main usually weak and thus unable to take their children to health posts.

b) Financial difficulties

Nearly all the caregivers identified financial difficulties as barriers to care-seeking, an outcome also reported by WHO (2012:22). It is important to state the health care services provided at health posts were free for all caregivers. However, most caregivers were of the opinion that any visit to a health post could result in referral to a health centre. Such referrals may have financial implications, as narratives from some

caregives indicate that they paid for the services at the health centres they attended. Some caregivers narrated during this study instances when financial difficulties prevented or delayed care seeking. Some caregivers complained of lack of control over household finances. According to these caregivers, the lack of control over household finances created additional financial barriers to seeking care for their children, particularly in the event of a disagreement with their spouse about the need for and the path of treatment for their children.

c) Perceptions

According to most HEWs and VCHWs, knowledge and information barriers are important factors that may influence caregivers' care seeking behaviours, like utilization of services at health posts (WHO 2009:10). The majority of caregivers claimed that they were provided inadequate information of the signs and symptoms of some of the childhood illnesses, like pneumonia. Given that there was no Afaan Oromo term for pneumonia, HEWs stated that they used term 'michii somba' to describe pneumonia. But the majority of caregivers were unfamiliar with the term. With regard to health posts, most caregivers were of the view that they lack capacity to successfully treat childhood illnesses. This claim was a function of the view that health posts usually do not have adequate supply of drugs.

d) Socio Cultural Barriers

Socio-cultural factors can delay or prevent caregivers from seeking appropriate treatment for their children when childhood diseases, such diarrhoea, malaria and pneumonia are indicated (WHO 2012:22). Failure to seek treatment for these diseases can result in fatal outcomes, as most infant deaths in developing countries are attributable to the same (UNICEF 2012:13). Because childhood diseases are sometimes attributed to witchcraft or evil eye in rural communities, caregivers in these environments are more likely to consult with traditional healers than seek healthcare HEWs at health posts. These caregivers claimed that biomedical treatments would aggravate, make worse childhood illness caused by witchcraft. It is therefore not

surprising for caregivers in rural communities to consult with traditional healers when their children are unwell.

4.3.3.7 Health System

These are service related factors that may hinder or prevent utilisation of services at health posts. An example of this includes lack of / or limited medication (EDHS 2011:20). The absence of medication at health posts to treat childhood illnesses was a common perception among some caregivers. Such perceptions were in the main commonly expressed by mothers or caregivers who were reluctant to use health posts. These perceptions were formed from caregivers' past experiences of health posts and general discussions of care-seeking services.

There was a common perception among caregivers, VCHWs and HEWs that injections were the most potent forms of medications followed by liquids or syrups. Medications in the forms of tablets were considered the least potent. These forms of medication, tablets were frequently dispensed at health posts in rural areas. Injections and syrups were reported to be available mainly in large health centres of urban towns. Caregivers in rural areas prefer syrups for their children, as children sometimes find it difficult to swallow tablets.

Another service-related barrier to utilisation of services at health posts reported by caregivers was occasional absence of the HEWs. One contributory factor to the absence of HEWs was their frequent attendance to meetings and trainings. In such cases or instances, children will be deprived of healthcare services. This is particularly problematic for caregivers who may be residing in a village many miles away from health posts. However, effort has been by the Ethiopian government to address this problem by suggesting that there should always be one HEW at a health post to meet both the health needs of caregivers and their children (FMOH 2010:12).

4.4 CONCLUSION

This chapter has presented the findings of the study. Specifically, it illustrated socio demographic characteristics of study participants, main childhood illness symptoms, level of ICCM service utilisation and respondent perception, route of care seeking behaviour, and different factors affecting service utilisation. The next chapter focuses on the conclusions of the study including recommendations for improvement.

CHAPTER FIVE- CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents a summary of the rationale for undertaking this study, followed by its aim and objectives. The chapter also presents a summary of the findings, and recommendations based on the data analysed in the previous chapter.

5.2 CONCLUSION

5.2.1 Rationale of the Study: Its Summary.

Ethiopia has a high child mortality rate that is in the main attributed to common childhood illnesses, like pneumonia, malaria and measles. These deaths mainly occur in rural communities where healthcare are mainly inadequate and sometimes inaccessible. To address this concern, the Ethiopian government introduced a health extension programme with the view to provide both preventive and curative interventions to all Ethiopians. This programme involves offering ICCM training to health extension workers in rural communities to develop their skills and knowledge on the management and treatment of common childhood illnesses. Despite this, the utilisation of ICCM services, in other words, service offered by HEWs is low in rural communities. This study therefore explored factors affecting ICCM service utilisation at health posts in Agarfa district, Bale zone guided by the following objectives:

- To assess the level of ICCM service utilisation of under-five sick children in HPs, agarfa woreda
- To identify the socio-demographic characteristics of those that utilise ICCM services.
- To explore factors affecting ICCM service utilisation at health posts levels in Agarfa Woreda
- To offer recommendations for improving ICCM service utilisation at health posts levels in Agarfa Woreda

5.2.2 Summary of the Study Findings

The study utilised a cross sectional and interpretive phenomenology in depth designs. Participants / respondents of this study were mothers of sick under-five children, care takers, HEWs, health centres staff and volunteer community health workers or community leaders in Agarfa Woreda of Bale zone. Quantitative and qualitative data were collected using a structure questionnaire and individual interviews respectively. Quantitative data were analysed using descriptive, bivariate and multivariate logistic regression analyses that projected frequency distributions and associations. The qualitative data were analysed thematically using a Strevick-Colaizzi-Keen framework of analysis illustrated in Moustakas (1994:158).

It is noted in this study only a small proportion of caregivers use the ICCM services for advice and treatment of their children's illnesses. The most common childhood illnesses of the study site were diarrhoea, followed by fever and cough, and caregivers seek help from HWEs at health posts two or more days after identifying signs and symptoms of these illnesses. The delay in seeking help from HEWs at health post is function of caregivers' tendency to visit traditional healers and use of herbs to treat childhood illnesses. The delays were also attributed in this study to the cost of traveling to the health posts and poor conditions of the roads. Added to this, the study findings also revealed other factors that may determine ICCM service utilisation. Examples of these include level of education, marital status of caregivers, negative perceptions of caregivers about ICCM services, religious barriers, sociocultural barriers, and service related factors like absence of HEWs.

With regard to perceptions, caregivers were of the view that health posts sometimes do not have adequate supply of medications. Such perceptions are generally influenced by prior experiences. Members of rural communities sometimes believed that childhood illnesses are sometimes caused by witchcraft or an evil eye. Added to this, rural communities claim that any treatment from HEWs that includes the use of medication would aggravate childhood illnesses. It was therefore not surprising to note in this study for caregivers to first seek help for their children's illnesses from traditional before

consulting with HEWs at health posts. The occasional absence at health posts can also influence utilisation of ICCM services. One contributory factor to the absence of HEWs noted in this study was their frequent attendance to meetings and trainings leaving the health posts with no HEW to attend to the needs of caregivers and their children. Exposure to such an experience would prevent caregivers from making future visits to health post to seek help.

The findings of the study generated insights into factors affecting ICCM service utilisation at health posts in Agarfa district, and thus can be of utility in other districts outside the study area. Despite this there are suggestions or recommendations for improvement that may needs to be highlighted.

5.3 RECOMMENDATIONS

- Caregivers to be educated about the benefits of ICCM services. This can be done through the provision of meaningful information and mobilisation activities, like door-to-door campaigns. Doing so would help to improve ICCM utilisation. Mobilisation activities to include caregivers, including their husbands.
- A number of factors were noted in this study to hinder ICCM service utilisation. Examples of these include religious beliefs and socio-cultural barriers. Since religious leaders and traditional healers can play a significant role influencing people's help seeking behaviours in rural communities, it is critical that they are educated about the benefits of ICCM use, such as reduction of infant mortality. It is also critical they are involved in training programmes, as they are respected by community members, including caregivers.
- HEWs are the key personnel for delivering ICCM services. Thus, their presence at all times at health posts is critical. It is therefore a good practice for at least one

HEW to be at health post at all times to address the needs of caregivers and their children.

- Adoption of an integrated approach to ICCM service provision is critical for ensuring the utilisation of the same. It is therefore suggested for ICCM services to be intergrade at health posts with other health extension programmes, such as family planning, EPI, ANC and PNC. Such integration would attract caregivers to visit health posts. Added to this, it is also important for the health posts to always have adequate supply of medications and other medical materials.
- Future researcher is needed to explore factors influencing ICCM utilisation in other districts in Ethiopia.

5.4 CONCLUDING REMARKS

The utilisation of ICCM services is limited among caregivers in rural communities. There is a range of factors responsible for the limited utilisation. However, negative perception of ICCM services, including health extension workers at health post were revealed as major reasons for limited utilisation of these services.

6.0 LIST OF REFERENCES

Akin, J & Hutchinson, P. 1999. Health care facility choice and the phenomenon of bypassing. *Health Policy Planning* 14:135–151.

Andersen, R & Newman F. 2005, Societal and individual determinants of medical care utilization in the United States. *Milbank Memorial Fund Quarterly Health and Society*: p. 95-124.

Andersen, RM. 1995. Revisiting the behavioral model and access to medical care: does it matter? *Journal of Health and Social Behavior* 36: 1-10.

Asheber, G, Ali, A, Mary, C & Solomon, T. 2010. Special Issue. *Ethiopian Journal of Health and Development* 6:1-10.

Balabanova, D, Mackee, M, Pomerleau, J, Rose, R & Haerper, C. 2004. Health Service Utilization in the Former Soviet Union: Evidence from Eight Countries. *Health Services Research* 39 (Part II):6.

Bhutta, ZA, Lassi, ZS, Pariyo, G & Huicho, L. 2010. Global experience of community health workers for delivery of health related millennium development goals: a systematic review, country case studies, and recommendations for integration into national health systems: Global Health Work Force Alliance and WHO. Geneva. http://www.who.int/workforcealliance/knowledge/publications/CHW_FullRepor_2010.pdf (accessed 20 January 2013).

Central Statistical Agency (CSA) and ORC Macro 2006. *Ethiopia Demographic and Health Survey 2005*. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ORC Macro.

CORE Group, Save the Children, BASICS and MCHIP, 2010. Community Case Management Essentials: Treating Common Childhood Illnesses in the Community. A Guide for Program Managers. Washington, D.C: CORE Group, Save the Children, BASICS and MCHIP; 2010.

Daniel, WW. 2010. *Biostatistics: a foundation for analysis in the health sciences*. 10th edition. New York: John Willey & Son's, Inc.

EDHS. 2011. *Ethiopia Demographic Health Survey*. Ethiopia.

ESHE. 2008. Essential Health Services in Ethiopia End line survey. From: <http://www.eshe.org.et> (accessed 30 May 2011).

Federal Ministry of Health (FMOH). 2005a. Essential Health Services Package for Ethiopia, Addis Ababa. Ethiopia.

Federal Ministry of Health (FMOH). 2005b. National strategy for child survival in Ethiopia, Family Health Department. Addis Ababa, Ethiopia. Federal Ministry of Health 2010. National Implementation plan for community Based case Management of common childhood illness .Addis Ababa.

Federal Ministry of Health (FMOH). 2006. Report on the Safe Motherhood Community-Based Survey, Ethiopia. Addis Ababa: Family Health Department.

Fessahaye, A, Ayalew, T, Abraham, H & Wondwossen K. 2008. Caregivers' knowledge about childhood malaria in Gilgel Gibe Field Research Center, southwest Ethiopia. *Ethiopian Journal of Health and Development* 22(1):49-54.

GBD. 2010. Global Burden of Disease Study 2010: Understanding diseases, injury and risk. *The Lancet* 380(9859):2053-2054. doi:10.1016/S0140-6736(12)62133-3

Global Health Initiative: Ethiopia Strategy. 2011. From: <http://www.ghi.gov/country/Ethiopia/index.htm> (accessed 21 May 2011).

Guba, EG & Lincoln, YS. 1994. Competing Paradigms in Qualitative Research. In Handbook of Qualitative Research. Eds. Norman K. Denzin and Yvonna S. Lincoln. Thousand Oaks, London, New Delhi: Sage Publications.

Gupta, N, Jain, S, Ratnesh, C, Shah, H & Venkatesh, S. 2007. An Evaluation of Diarrheal Diseases and Acute Respiratory Infections Control program in a Delhi Slum, National Institute of Communicable Diseases and 1Division of Reproductive Health & Nutrition, Indian Council of Medical Research, New Delhi, India. *Indian Journal of Pediatrics* 74(5): 471-476.

Haines, A, Sanders, D, Lehmann, U, Rowe, A, Lawn, JE, Jan, S, Walker, DG & Bhutta Z. 2007. Achieving child survival goals: potential contribution of community health workers. *Lancet* 369:2121-2131.

Healy, M & Perry, C. 2000. Comprehensive criteria to judge validity and reliability of qualitative research within the realism paradigm. *Qualitative Market Research – An International Journal* 3(3):118-126.

Hildegalda, P. 2009. Policy Brief June 2009. IMCI implementation in Tanzania: experience, challenges and lessons. UK Department for International Development. From: <http://www.crehs.lshtm.ac.uk> (accessed 21 May 2011).

Horwood, C, Voce, A, Vermaak, K, Rollins, N & Qazi S. 2009. Experiences of training and implementation of integrated management of childhood illness in South Africa: a qualitative evaluation of the IMCI case management training course. *BMC Pediatrics*. doi:10.1186/1471-2431-9-62.

IMCI 2009: Integrated Management of Common Childhood Illness (IMCI) implementation in Tanzania, Experiences, Challenges and Lessons; policy brief.

John, W. 2007. The cost of quality improvement due to Integrated Management of Childhood Illness (IMCI). Department of Population and Family Health. Makerere University, Uganda. <http://www.interscience.wiley.com> (accessed 21 May 2011).

Kathryn, E. 2006. *Measurement of Health Outcomes: Reliability, Validity and Responsiveness*. Department of Physical Therapy. Miami. Florida 18(3):8-12.

Kayako, S, Masamine, J & Kyo, H. 2010. *Poor mothers' care-seeking behaviours in response to childhood illness*: BMC International Health and Human Rights. From: <http://www.biomedcentral.com./1472-698X> (accessed 21 May 2011).

Kumar, PP & Gemechis F. 2010. Infant and child mortality in Ethiopia: A statistical analysis approach. *Ethiopian Journal of Education & Science* 5(2): 51-57.

Laura, M, David, R, Tanya, G, Kate, G, Lawrence, M, Daa, H, Emmanuel, W, Stefan, P, Davidson, H, and Asha, G. 2012. A Health Systems Approach to Integrated Community Case Management of Childhood Illness: Methods and Tools. *The American Society of Tropical Medicine and Hygiene* 87(5):69–76.

L10K. 2011. *Integrated Community Case Management of Common Childhood Illnesses*. Ethiopia UNICEF. From: <http://www.jsi.com> (accessed 30 May 2011).

Liu, A, Sullivan, S, Khan M, Sachs S & Singh P. 2011. Community health workers in global health: scale and scalability. *Mount Sinai Journal of Medicine* 78:419–35.

Mahfouz, A, Al-Sharif, A, El-Gamal, M & Kisha, A. 2004. Primary health care services utilization and satisfaction among the elderly in Asir region, Saudi Arabia. *Eastern Mediterranean Journal* 10(3): 365 – 371.

Marsh, D et al. 2008. Community case management of pneumonia: at a tipping point? *Bulletin of the World Health Organization* 86:381–389.

MCHIP- Maternal and Child Health Integrated Program. 2003.1776 Massachusetts Avenue, NW Suite 300, Washington, DC.

Maternal and Child Health Integrated Program. 2013. *Indicator Guide; Monitoring and Evaluating Integrated Community Case Management*. Washington, DC.

Mondal, MNI, Hossain, MK & Ali, MK. 2009. Factors influencing infant and child mortality: A case study of Rajshahi District, Bangladesh. *Journal of Human Ecology* 26 (1):31-39.

Moustakas, C. 1994. *Phenomenological research methods*. Thousand Oaks, CA, Sage

Mullei, F, Wafula, C & Goodman, G. 2008. A Case Study of Integrated Management of Childhood Illness (IMCI) Implementation in Kenya. From: www.crehs.lshtm.ac.uk/downloads/.../IMCI_implementation_in_kenya. (accessed 30 May 2011).

Parahoo, AK. 1997. *Nursing research principles process and issues*. New York: Palgrave Macmillan.

Parahoo, K. 2006. *Nursing research, principles, process and issues*. 2nd Edition. Basingstoke: Palgrave Macmillan.

Polit, DF & Beck, CT. 2008. *Nursing research: generating and assessing evidence for nursing practice*. 8th edition. Philadelphia, PA. Philadelphia, USA: Lippincott Williams & Wilkins.

Sahalu A. 2006. House hold illness prevalence and its determinants among under-five children. *Ethiopian Journal of Health and Development* 23:1-10.

Save the children. 2011. Tools to Introduce Community Case Management (CCM) of Serious Childhood Infection. From: <http://www.savethechildren.org> (accessed 21 May 2011).

Save the Children UK. 2011. Ethiopia Health & HIV Policy & Programme Overview Everyone. From: <http://www.savethechildren.org> (accessed 21 May 2011).

Tedbabe, D, David, M, Abebe, G, Worku, T, Garth, O & Karen, W. 2009. Community case management improves use of treatment for childhood diarrhoea, malaria and pneumonia in a remote district of Ethiopia. *Ethiopian Journal of Health and Development* 23:120-126.

Tsion, A, Tefera, B, Ayalew T & Amare, D. 2008. Mothers health care seeking behavior for childhood illness in Derra district, Northshoa zone, Oromia Regional state, Ethiopia. *Ethiopian Journal of Health Science* 18(3):1-10.

UNICEF. 2006. Management of Sick Children by Community Health Workers Intervention models and programme examples.

UNICEF 2010. Case Study. CCM Pneumonia and MgSO₄ policy breakthrough in Ethiopia.

UNICEF and WHO. 2010. Implementation guideline: *Integrated Community Case Management of Childhood Malaria, Pneumonia and Diarrhea*. Kampala, Uganda.

Wagstaff, A. et al. 2004. Child health: reaching the poor. *American Journal of Public Health* 94(5):726-736.

Walker, CL, Rudan, I, Liu, L, Nair, H, Theodoratou, E, Bhutta, ZA, O'Brien, KL, Campbell, H & Black, RE. 2013. Global burden of childhood pneumonia and diarrhoea. *Lancet* 381(9875):1405-16. doi: 10.1016/S0140-6736(13)60222-6.

WHO. 2004. International statistical classification of diseases and related health problems, 10th revision. Volume 2. 2nd edition .Geneva .From: http://www.who.int/classifications/icd/ICD-10_2nd_ed_volume2.pdf (accessed on 14 September 2010).

WHO 2009. Regional Office for the Western Pacific World Health Organization, Challenges for Child Health in Western Pacific Region the importance of tackling inequalities in Child health, United Nations Avenue1000 Manila, Philippines. From: www.wpro.who.int (accessed on May 5 2013).

World Health Organization and UNICEF 2010. Countdown to 2015 Decade Report (2000-2010), Taking Stock of maternal, newborn and child survival. From: <http://www.who.org> (accessed 21 May 2011).

World Health Organization. 2011. Integrated management of childhood illness: *caring for new-borns and children in the community*. Department of Maternal, Newborn, Child and Adolescent Health, Geneva, Switzerland

WHO. 2012. Under-five mortality is defined as the probability of a child born in a specific year or period dying before reaching the age of five, if subject to age-specific mortality rates of that period, World Health Organization Report 2012. From http://www.who.int/gho/countries/eth/country_profiles/en/index.html (accessed May 5, 2013).

Zelee H et al. 2003. Recognizing childhood illnesses and their traditional explanations: exploring options for care-seeking interventions in the context of the IMCI strategy in rural Ghana. *Tropical Medicine and International Health* 8(7):668–676.

Annex 1. Questionnaires

Annex 1a. Quantities Questionnaires

Woreda-----

Health post-----

Nearby Health center-----

PART I. QUESTIONNAIRES FOR CARE TAKERS**SECTION I: SOCIO DEMOGRAPHIC OF CARE TAKERS**

No	Questions	Response
101	AgeAge in completed year
102	Sex	1. Male 2. Female
103	What is your educational level?	1. did not attend formal education 2. Read and write 3. Elementary School: Grade 1-4 4. Secondary school: Grade 5-8 5. High school: Grade 9-10 6.Others specify_____
104	What is your current marital status?	1. Single 2. Married 3. Widowed 4. Divorced 5.Others specify_____
105	Ethnicity	1. Amahara 2. Oromo 3. Tigre 4. Others (specify)_____
106	Religion?	1. Muslim 2. Orthodox 3. Protestant 4. Catholic 5. Others (specify)_____
107	Occupational Status?	1. Un employ 2.self employ 3. Employe

108	What is your average monthly income?	1.....Eth .Birr 2.No Income 3.Do not Know 4.Other(specify)
109	Family size?	_____
110	How many hours do you walk to reach to your HP?	1. <2 hours 2. 2- 4 Hours 3. >4 hours
111	Have you been trained on Women Development Arms (WDAs)?	Yes.....1 No.....2 Don't know..... 8
112	If you say "yes" are you a member of one- to five teams?	Yes.....1 No.....2 Don't know..... 8
113	Are you trained on model family?	Yes.....1 No.....2 Don't know..... 8 How frequent.....

SECTION II: ICCM Service utilization of the Care taker

No	Questions	Response	
201	Has your Child been ill at any time in the last 2 weeks?	Yes1 No.....2 Don't know.....8	
202	If You say "Yes" to Q 201; What was/is the main child health problems?	1. Diarrhea 2. Fever 3. Cough 4. _____ ther(specify)_____	

203	How severe was the problem?	1.Low 2. Medium 3.High	
204	How long did it last?	_____ days.	
205	Did you seek advice or treatment for the illness from any source?	Yes 1 No.....2 Don't know.....8	
206	If You say "yes" for Q 106; where did you seek advice or treatment from?	1. Home Treatment 2. T raditional Healer 3. Health center 4. Private clinics 5. Health post 6. Hospital 7. Other public (specify)	
207	Reason for visiting health posts?	1. Child's condition worsened 2. Other people advise. 3. To seek /Medical advice/treatment. 4. Other public (specify) _____	
208	Time of health seeking after onset of the illness?	1. First day 2. 2 nd day and 3. 3 rd 4 th and 5 th day 4. After 5th day -	
209	If you say "no" for Q 206; Why did you not seek treatment from the health post or health extension worker?	1. considering the illness is not serious 2. considering the illness recover by it self 3. closed HP 4. lack of drugs and supplies in HP 6. lack of skills by HEW 7. financial difficulties 8. transportation difficulties 9. long waiting time 10. Limited autonomy in decision-making. 11. Poor health status of the care taker 12. local understandings of illnesses 13.Others(specify)_____	

210	Did you receive any service from HPs or HEWs?	Yes.....1 No.....2 Don't know.....8	
211	Do you know of any ICCM service offered by HEWs in HPs	Yes1 No.....2 Don't know.....8	
212	Where did you get information about ICCM service?	1. HEWs..... 2. HWs..... 3. VCHWs... 4. Others (specify).....	
213	What services are offered by HPs?	1. Expanded program of immunization (EPI)..... 2. Family Planning (FP)..... 3. Antenatal care (ANC)..... 4. Postnatal care (PNC)..... 5. ICCM.... 6. Others (specify).....	
214	Do you explain about the ICCM service offered by HEWs in HPs	Yes1 No.....2 Don't know.....8	
215	Where did you give birth to this child?	1. Home..... 2. Health Posts..... 3. Health centre..... 4. Hospitals..... 5. Other (specify)....	

Annex 1b. Qualitative Questionnaire

PART II. In-depth Interview for HEWs

1. Socio demographic back ground of HEWs
-Age, spouse, experience,
2. What are the main child health problems commonly presented in your community?
Probe: - Do many young children die in this area?
- What do they die from?
- Please tell me about this?
3. Where Caregivers do is seek advice or treatment when their children are sick?
4. What measure do the mother/care takers take during child's illness before brought him / her to the health post?
5. Does the mother/caretaker seek advice or treatment for sick child to the HP? – after how many days from onset, who were commonly visit you (Father, mothers), what drive them to use HPs
6. For which common childhood illness could caregivers seek advice or treatment at you or HPs?
7. What do you know about ICCM services?
8. Have you been trained on ICCM? If yes, by whom?
9. Is there ICCM service in your HP?
10. How would you describe the level of utilization of the ICCM services by the community?
Probe: Good. Why?
Low: Why
11. What strategies you have been using to improve the ICCM service utilization?
12. What are the main factors affecting the mother/care taker on utilization of the ICCM service? Perception for HP or HEWs
13. Do you get support from the Health centre, WoHO, NGOs?
Probe: What kind of support?
14. Have you encountered any shortage or ran out of stock of drugs or supplies for ICCM service?
15. What would you recommend to improve the utilization of the ICCM service?

16. Where is your residence? How many hours do you think you would need to get to HPs?
17. How many hours do you open the HPs per day, week?

PART III. In-depth Interview for Health centres/WoHO

1. What are the main child health problems in your catchment? **Probe:** - Do many young children die in this Woreda? Why do you think so?
2. Where caregivers commonly seek advice or treatment for sick children at community?
3. Are there any devised strategies to tackle child health problems?
4. How do you describe the level of ICCM service provided in your woreda at the HP?
5. What are the factors that affect utilization of the ICCM service?
6. How would you describe the linkage between PHCU? Bypass
7. How would you describe the level of support (ISS, Review Meeting done, drug and supplies), If done how frequent? Logistic supply , Capacity Building
8. Have you seen any case observation on ICCM service at HPs?
9. Where HEWs do are living? how many hours could HPs are opened for ICCM service
10. What do you recommend to improve the utilization of the ICCM service?

PART IV. In-depth Interview for Community Health promoters/vCHWs or community/kebele leaders

1. Back ground; age, family size, distance from HP & HPs, Income
2. What are the main child health problems in your catchment? **Probe:-** Do many young children die in this kebele? Why do you think?
3. Where do caregivers seek advice or treatment for children seek? **Probe:** For what where?
4. What measure do you undertake before visiting any source?

5. How do you describe the ICCM Service provided in your kebele at the HP?
6. How do you describe the level of utilization of the ICCM services by the community?
Probe: Good. Why? What drive you to utiliz Low: Why do not utilize the HEWs or HPs?
7. **What** are factors that affect iCCM utilization in your community?
8. What are the support do you are giving to improve the ICCM service utilization in kebele?
9. Where HEWs do are living? For how many hours could HPs open for ICCM service?
7. What would you recommend to improve caretaker utilization of the ICCM service?

Gaafannoo Tajaajila Yaala Daa'immanii Waggaa shanii gadii irratti Qophaahe

Uunkaa 1. Gaaffilee Ragaan lakkaahamu

Aanaa _____

Kellaa Fayyaa _____

Buufata Fayyaa Dhihoo _____

Kutaa I. Gaafannoo Guddistoota Daa'immaniif

Haala Hawaasummaa Guddistoota Daa'immanii

Lakk	Gaaffilee	Deebiiwwan
101	Umurii	Waggaa _____
102	Saala	1. Dhiira 2. Dubartii
103	Sadarkaan Barnootakee meeqa?	1. Goonkumaa hin baranne 2. Dubbisuu fi Barreessuu 3. Kutaa 1- 4 4. Kutaa 5-8 5. Kutaa 9-10 6. Kan biroon haa ibsamu
104	Haalli ga'ilakee yeroo ammaa maal fakkaata?	1. Hin heerumne/hin fuune 2. Heerumte/fuudhe 3. Abbaan manaa kan du'e 4. Kan wal-hiikan 5. Kan biraan haa ibsamu
105	Sabummaa	1. Amaaraa 2. Oromoo 3. Tigiree 4. Kan biraan haa ibsamu
106	Amantaa	1. Musiliima 2. Ortoxii 3. Pirotistaantii 4. Kaatoolikii 5. Kan biraan haa ibsamu
107	Sadarkaa hojii	1. Hoji-dhabaa 2. Hojii dhuunfaa 3. Qaxaramaa
108	Giddu-galeessaan galiin ji'aan argattu meeqa?	1. Qarshii _____ 2. Galii hin qabu 3. Hin beeku 4. Kan biraan haa ibsamu
109	Baay'inni maatiikee meeqa ?	_____
	Kellaa fayyaa naannookeetii gahuuf	1. Sa'a <2 gadi

110	yeroo hagamii sitti fudhata?	2. Sa'a 2-4
		3. Sa'a >4
111	Raayyaa fayyaa dame dubartootaa leenjitee jirtaa?	1. Eyyee
		2. Hin leenjine
		3. Hin beeku
112	Yoo gaaffii 111'f eyyee jette,miseensa tokko shanee keessa jirtaa ?	1. Eyyee
		2. Hin jiru
		3. Hin beeku
113	Leenjii maatii adda duree leenjitee?	1. Eyyee
		2. Hin leenjine
		3. Hin beeku

B. Itti fayyadama guddistoota Daa'immanii tajaajila yaala Daa'immaniin waggaa < 5

Lakk	Gaaffilee	Deebiiwwan
201	Torban lamaan darban keessa daa'mman kee dhukkubee beekaa?	1. Eyyee
		2. Miti
		3. Hin beeku
202	Yoo gaaffii lakk 201'f eyyee jette,dibeen daa'ima sanaa maalture?	1. Baasaa (garaa kaasaa)
		2. Qaama gubaa
		3. Qufaa
		4. Kan biraan haa ibsamu
203	Dhibeen Daa'ima Sanaa Hagam ulfaataa /Cimaa Ture	?????????
204	Guyyaa hagam irra ture?	Guyyoota _____
205	Daa'ima dhibamee tureef gorsa ykn yaala barbaaddee turtee?	1. Eyyee
		2. Miti
		3. Hin beeku
206	Gaaffii lakk 205'f yoo eyyee jette,garsa ykn yaala eessaa argatte?	1. Yaala manattii
		2. Yaalaa aadaa
		3. Buufata Fayyaa
		4. Kiliika dhuunfaa
		5. Kellaa fayyaa
		6. Hospitaala
		7. Kan biraan haa ibsamu
207	Sababaan kellaa fayyaa deemteef?	1. Dhibeen daa'imatti waan hammaateef
		2. Gorsa nama biraan
		3. Gargaarsa ykn yaalaa medikaalaa barbaadeen
		4. Kan biraan haa ibsamu
208	Daa'ima erga dhukkubee yeroo ammamii keessatti yaala barbaadde?	1. Guyyaa jalqabaa
		2. Guyyaa 2 ^{ffaa}
		3. Guyyaa 3 ^{ffaa} fi 4 ^{ffaa}

		4. Guyyaa 5 ^{ffaa} booda
209	Gaaffii lakk 205'f miti yoo jette,kellaa fayyaa ykn hojjetoota exteenshinii fayyaa irraa maaliif gargaarsa hin barbaanne?	1. Dhibeen daa'ima hammaataa waan hin turreef
		2. Dhibeen daa'maa ofiin ni fayyaa jedhee yaaduun
		3. Keellaa fayyaa cufaa waan tureef
		4. Kellaa Hanqinni qorsaa fi dhiheessaa waan tureef
		5. Hojjetooti exteenshinii hanqina ogummaa waan qabaniif
		6. Rakkoo maallaqaa waan qabuuf
		7. Rakkoon geejjibaa waan jiruuf
		8. Yeroo dheeraa waan eeguuf
		9. Murtee kennuu waan hin dandeenyeef
		10. Kunuunsoti daa'immanii rakkoo hawaasummaa waan qabaniif
		11. Dhukkuba daa'immanii kana ilaalcha boodatti hafaan ilaaluu
		12. Kan biraan haa ibsamu
210	Kellaa fayyaa ykn hojjetoota exteenshinii fayyaa irraa tajaajila argattee beektaa	1. Eyyee
		2. Miti
		3. Hin beeku
211	Tajaajilayaa yaala fayyaa daa'imman waggaa <5 kellaa fayyaatti hojjetoota eteenshinii gandaan kennamuu ni beektaa?	1. Eyyee
		2. Miti
		3. Hin beeku
212	Odeeffannoo yaala daa'immanii waggaa shanii gadii eessaa argatta?	1. Hojjetoota exteenshinii fayyaa irraa
		2. Hojjetoota fayyaa
		3. Hojjetoota tola ooltota fayyaa hawaasaa
		4. Kan biraa
213	Kellaa fayyaa irraa tajaajila akkamiitu siif godhame?	1. Talaallii
		2. Karoora maatii
		3. Tajaajila yaala da'umsa duraa
		4. Tajaajila yaalaa da'umsa booda
		5. Yaala daa'immanii waggaa <5
		6. Kan biraan haa ibsamu
214	Tajaajila yaala fayyaa daa'imman waggaa <5 kellaa faayyaa irratti hojjetoota exteenshinii fayyaan godhamu ibsuu dandeessaa?	1. Eyyee
		2. Miti
		3. Hin beeku
215	Daa'imni dhibamee ture eessatti	1. Mana

	dhalate?	2. Kellaa fayyaa
		3. Buufata Fayyaa
		4. Hospitaala
		5. Kan biraan haa ibsamu

Uunkaa 2. Gaaffilee Hubannoo

Kutaa II. Gaaffii fi Deebii afaanii hojjetoota exteenshinii fayyaa qofaaf

1. Dhibeen fayyaa daa'immanii Hawaasa naannoo keetii biratti mul'atu maali?
Hubannoof: - Daa'imni naannoo kanatti yeroo baay'ee ni du'aa?
- Du'i daa'ima kanaa maali?
- Waa'ee du'a kanaa himuu ni dandeessaa?
2. Haawonni/kunuunsitooti daaimman dhibaman garakee ni fiduu?
3. Dhibee daa'ima kan akkamiiti kan haawonni/gddistooti garakee fidan
4. Osoo daa'ima dhukkubsate gara kellee fayyaa hin fidin haawonni/kunuunsitoonni daa'ima dhukkubsateef maal maal godhuuf.
5. Waa'ee tajaajila yaala daa'immanii waggaa <5 maal beekta?
6. Leenjii yaala daa'immanii waggaa <5 leenjitee jirtaa?
Hubannoof: Eayyee yoo eenyutu leenjii siif kenne?
7. Keellaa fayyaa keessanitti tajaajilli yaala fayyaa daa'imman <5 yeroo ammaa kennamaa jiraa?
8. Sadarkaa itti fayyadama hawaasaa tajaajila yaala daa'immanii waggaa <5 gadii ibsuu dandeessaa?
Hubannoof : - Gaarii yoo jette maaliif?
- Gadi-aanaa yoo jette maaliif?
9. Sadarkaa itti fayyadama yaala daa'immanii waggaa <5 fooyeessuuf tarsimoo akkamii gargaaramte?
10. Sababaa gurguddoon tajaajila yaala daa'immanii haawwan /kunuunsitoota daa'immanii miidhaa jiru maali?
11. Gargaarsa buufata fayyaa, waajjira eegumsa fayyaa fi miti-mootummaa irraa argattee beektaa?
12. Rakkoowwan dhiheessaa fi hanqina qorsaa Tajaajila yaala daa'immanii waggaa <5 keessatti si muudatee beekaa?
13. Itti fayyadama yaala daa'immanii waggaa shanii gadii foyyessuuf yaada maal qabda?
14. Eddoon jireenyaa kee eessa? Kellaa fayyaa sibiraa gahuuf yeroo hamii sitti fudhata.
15. Kellaan fayyaa Guyyaatti ykn torbaniitti yeroo meeqaaf banama.

Kutaa III. Gaaffii fi Deebii afaanii Buufata Fayyaa/eegumsa fayyaaf

1. Dhibeen fayyaa daa'immanii naannoo keessanii maali?
Hubannoof: Aanaa kana keessatti daa'ima hedduutu du'ee? Du'i kun maali jettee yaadda?
2. Dhibee daa'imman kanaa maqsuuf tarsiimoon bahee jiru jiraa?
3. Kellaa fayyaa aanaa keessanii irratti sadarkaa itti fayyadama tajaajila yaala daa'immanii waaggaa <5 akkamii ibsuu dandeessa?
4. Rakkoowwan kennaa tajaajila yaala daa'immanii waggaa <5 miidhaa jiran maali?
5. Walitti dhufeenya kellaa fayyaa fi Eegumsa fayyaa gidduu jiru akkamiin ibsuu dandeessaa?
6. Sadarkaan gargaarsaa (Hordoffii fi deggersaa, qorsaa fi dhiheessaa) akkamiin ibsita.

Yoo dalagame dhiheessi meeshaa fi ijaarsi dandeettii,yeroo meeqaaf?

7. Yeroo tajaajila yaala daa'immanii waggaa <5 kella fayyaa irratti kennamaa jiru daawwatte waan argite jiraa?
8. Hojjettoonni exteenshinii fayyaa eessa jiraatu? Tajaajila yaala daa'imman waggaa < 5'f kellaan fayyaa saa'atii meeqaaf banama?
9. Itti fayyadama yaala daa'immanii waggaa < 5 fooyyessuuf yaadaa kaahuu dandeessa?

Kutaa IV. Gaaffii fi deebii afaanii hojjettoota tola ooltota fayyaa uummataa, caasaa gandaa fi hawaasaa

1. Dhibeen fayyaa daa'immanii naannoo keessanii maali?
Hubannoof: Aanaa kana keessatti daa'ima hedduutu du'ee? Du'i kun maali jettee yaadda?
2. Kellaa fayyaaGanda keessanii irratti itti fayyadama tajaajila yaala daa'immanii waaggaa <5 akkamii ibsuu dandeessa?
3. Sadrkaa itti fayyadama hawaasaa tajaajila yaala daa'immanii waaggaa <5 akkamiin ibsuu dandeessa?
Hubannoof: - Gaarii yoo jette maaliif?
- Gadi-aanaa yoo jette maaliif?
4. Rakkoowwan itti fayyadama hawaasaa, tajaajila yaala daa'immanii waggaa <5 miidhaa jiran maali?
5. Itti fayyadama tajaajila yaala daa'immanii waggaa 5 gadii ganda keessanii fooyyessuuf gargaarsi kennite jiraa?
6. Hojjettoonni exteenshinii fayyaa eessa jiraatu? Tajaajila yaala daa'imman waggaa < 5'f kellaan fayyaa saa'atii meeqaaf banama?
7. Taajjila yaala daaimmanii waggaa 5 gadii guddistootaa foyyessuuf, dhaamsa akkamii dabarsitaaf?

CONSENT FORM

Hello!, I _____ the under signed agree to participate in the research project entitled FACTORS AFFECTING UTILIZATION OF INTEGRATED COMMUNITY –CASE MANAGEMENT OF COMMON CHILDHOOD ILLNESSES IN AGARFA WOREDA, OROMIYA REGIONAL STATE, Ethiopia, conducted by a student Mr GORFU MB for an MPH degree at the University of South Africa (UNISA).

We would like to talk to you about our study. We are working to see factors affecting utilization of ICCM service for sick children in your community. I ask you to help us in our work see factors affecting utilization of ICCM service for sick children in your community.

If you say yes, we will ask you to take part in an interview. A research team member will ask the questions about child illness and utilization of ICCM service for sick children. The interview will be audio recorded. It will take 30 – 45 minutes of your time. You may feel uncomfortable discussing your experiences and opinions. You may also feel uncomfortable having your experiences and opinions recorded. You do not have to answer any questions that make you uncomfortable. You can choose to answer any questions you wish. You can leave the interview at any time. If you wish to not be recorded, we can take notes instead.

We will not collect your name or any information that may identify you. Your experiences and opinions will remain anonymous.

Information collected during this study will be used by the Ministry of Health and the Oromia Health Bureau to help improve health services provided in the community.

You will not receive any payment for participating in this study and there will be no financial cost to you.

Do you have any questions?

On satisfying myself on the conditions above, I have decided to participate in the study.

Name of the participant: _____

Signature: _____

Date: _____ Place: _____