

**Assessment on Bypassing of Lower Level Health Care
Facilities with Delivery Services in Amhara Region
Referral Hospitals, North West Ethiopia**

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Assessment on Bypassing of Lower Level Health Care facilities with Delivery Services in Amhara region Referral Hospitals

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Abstract

Background: Bypassing of nearby lower level health care facilities is frequent among women in many areas, which brings impact for the successful implementation of health sector reform. It seen as a powerful expression of people's preference for health care and high rates of bypassing have important implications for health system efficiency and actual coverage of health services.

Objective: The main objective of this study was to assess bypassing of lower level health care facilities and associated factors with delivery service in Amhara Region Referral Hospitals, Ethiopia.

Methods: Facility based cross-sectional study employing exit interviews with postpartum women was conducted. By using single population proportion formula, a total of 422 mothers were proportionally taken from four referral hospitals. Every other postnatal woman who was receiving delivery care in each hospital interviewed until sample size met. Data was edited, cleaned, coded, and analyzed using SPSS version 16.0. Bivariate and multivariate logistic regressions applied to identify the effect of each explanatory variable on the outcome variable. Explanatory variables whose p-values less than 0.05 in the bivariate analysis were transferred in the multivariate logistic regression to see the prediction power of those variables.

Results: A total of 422 women participated in the study. The overall bypass rate was 48.1%. Final predictors of women bypassing nearby lower level facility were Education status, parity, distance from referral hospitals, and women perception towards lower level health facilities, diagnostic setup and health care providers working at lower level health care facilities.

Conclusions: In this study, it was found that nearly half of women who attended delivery services at referral hospitals are by passers. Therefore, the findings have important implications on the health sector programs especially on maternal health care services. The current efforts in health system should consider and prioritize women's perceptions and expectations of care at different level of facilities in line with accessibility. It is crucial to know and utilize the limited resources at all level health care facilities to the improve quality of care.

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List of Abbreviations and Acronyms

ANC	Antenatal Care
DBRH	Deberbirhan Referral Hospital
DMRH	Debremarkos Referral Hospital
DRH	Dessie Referral Hospital
EDHS	Ethiopian Demographic and Health Survey
FHRH	Felegehiwote Referral Hospital
FLCF	First Level Care Facility
HSDP	Health Service Developmental program
HF	Health Facility
LLHCF	Lower Level Health Care Facilities
MDGs	Millennium Development Goals
MMR	Maternal Mortality Rate
PAD	Professionally Assisted Delivery
SPSS	Statistical Package for Social Science
TBA	Traditional Birth Attendant
WHO	World Health Organization

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Chapter I: Introduction

1.1 Background

In most countries of the world, there are two major types of health care facilities, primary or lower level care facilities and hospitals. Health care systems often designed to encourage caretakers to seek care first at the lower level health care facility and then to be referred, if necessary, to a higher level of care. However, caretakers often bypass primary care facilities and seek care directly at higher-level hospitals for illnesses that could be treated easily at the primary care facility despite substantial additional time and financial costs (1).

These lower level health care facilities are often run by non-physician health care providers, such as clinical officers or nurse midwives who are trained to attend uncomplicated cases and deliveries and to refer them with complications to hospitals. This pyramidal structure of health care delivery, with many primary health care facilities close to communities and district hospitals designated as referral centers, is seen as an efficient way to expand service coverage in resource-limited countries with few hospitals and doctor shortages(2).

Bypassing is a powerful expression of people's preference for health care, and high rates of bypassing have important implications for health system efficiency and actual coverage of health services. The extent of bypassing for institutional delivery in the developing African countries is different from preventive and curative care; which is not well known (3).

When lower level health care facilities bypassed, patients would be treated at a higher cost than necessary, higher level facilities become overloaded, and lower level facilities are underutilized. Furthermore, overburdened tertiary hospitals diverted from their mandate of providing advanced care for more complicated cases. It is estimated that, in developing countries, higher level government hospitals could save 10% in expenditure, if 33% of patients were shifted from upper level to lower level health care facilities(3).

An organized referral system increases the efficiency of the health system by maximizing the appropriate use of health care facilities. It strengthens the lower level health care facilities and improves the decision-making capacity of professionals at the periphery of the referral network. So early detection

and refer to higher levels of care might also significantly reduce maternal and neonatal deaths due to complications during labour, delivery and postnatal (4).

Maternal mortality has been an international priority by the international safe motherhood initiative by improving access to basic maternity care during pregnancy and delivery to all women(5). Many countries have made remarkable progress in expanding and improving maternal health care services. However, discrepancies continue to exist in access to maternal health care in developing countries (6).

Since current efforts to reduce maternal mortality in developing countries have focused primarily on training and deploying skilled birth attendants and upgrading emergency obstetric care facilities at all level of health care facilities(7)

Nowadays, many countries including Ethiopia are working to achieve the WHO recommendation of having skilled attendant for all births. In Ethiopia, reducing maternal mortality is one of the goals of the HSDP of the country. Maternal and newborn health is also among the six priority areas in the reproductive health strategy (8).

1.2 Statement of the problem

Bypassing lower level health care facilities for every minor and uncomplicated cases can overburden the referral facilities, especially in hospitals the problem can be critical and compromise the quality of service due to overcrowding, long waiting time, overburden of care providers and costlier for the caretaker and the health care system as a whole (1).

On the other hand, accessibility to health services had shown to be an important determinant of utilization of health services in developing countries. In most rural areas of Africa, one third of women live more than five kilometers from the nearest health facility. The scarcity of vehicles, especially in remote areas, and poor road conditions can make it extremely difficult for women to reach even relatively nearby facilities. Walking is the primary and most common mode of transportation, even for women in labour. Despite all the above challenges, surprisingly there are still women who prefer to bypass their nearest facility for labour and delivery services (9).

Currently maternal health is one of the major worldwide health challenges. The unacceptably high level of maternal mortality is a common matter in global health and development discussions. Although some countries have made remarkable progress, half of the maternal deaths in the world still take place in Sub-Saharan African countries where insignificant progress has been made (10).

In Ethiopia, like other sub-Saharan African countries the death of a woman while pregnant or within 42 days of termination of pregnancy remains one of the most deep-rooted problems (11). Different reports has showed maternal mortality has no significant change from its previous level where its ratio was 673 per 100,000 live births in the 2005 EDHS report, it was 676 per 100,000 live births in the 2011 EDHS report(12).Moreover the utilization of facilities for delivery services is still at lower level despite a rapid expansion and promotion of the health sector throughout the country. It is believed that there are different factors that operate at different level in determining utilization of delivery services (2).

On the other hand, high numbers of self-referrals among the obstetric population highlight women's own perception of risk, and the inappropriate use or over-utilization of higher-level hospitals may be seen to help ease patients' anxiety. Self-referrals result in lower levels health care facilities being under-utilized, and referral hospitals being over-utilized, congested and overburdened, leading to an escalation of healthcare costs. Due to high patient flow, human and physical resources are stretched to capacity which results in hospitals compromising the care that they provide to patients who genuinely and correctly deserve to be managed in a specialized care setting (13).

Several previous health systems strengthening efforts directed at improving rural primary care in low-income countries have been relatively successful. At the same time, other efforts have met with weaker outcomes (14).

The World Health Organization (WHO) Expert Committee on the role of hospitals at the first referral level identified key problems within referral systems indicated below.

- Over- loading of the hospital with inappropriate self- referrals, or poorly-judged referrals
- Barriers of distance, transport, or payment
- Lack of confidence in health care at the health post/centre levels, leading to by-passing of those levels
- Inadequate flow of information to and from the hospital
- Other concerns have been identified by investigators, such as the lack of structure or consistency in referral letters, delay in feedback from hospitals to health centers, inefficient administration at

hospitals, inadequate resources and facilities in health centers, improper use of the referral guidelines by health professionals, and physician dissatisfaction.

Ethiopia has developed a three tier system: primary level which contains health post, health centers and primary hospital, secondary level contain General Hospital and tertiary levels are referral and specialized hospitals .So the national referral system flow is based on these tiers which has double direction flow (upward and downward flow) (6).

In Amhara region under the regional health bureau, there are four referral hospitals and each of them serving more than 3.5 million people with Outpatient, Inpatient and Emergency services. Even though they have a critical infrastructure problem, currently they are providing delivery services for 200-550 women in a monthly base, on the other way they accounts almost 50% of total delivery services given by all nineteen hospitals in the region. Many pregnant women who are attending delivery service in these referral hospitals bypass their nearby health care facilities without a referral slip (regional health bureau 2013 report).

On one hand, there are functional 801 health centers, 14 primary and general hospitals and more than 3000 health posts in the region. However, these facilities in the region are still reporting under utilization of maternity services especially delivery services at health centers (regional health bureau 2013 report). Institutional delivery services in the region were indicated 10.2% in EDHS 2011. On the other hand, there is a critical infrastructure problem in those few referral hospitals to accommodate all laboring mothers in their delivery, waiting and postnatal rooms. Since they are constructed long years ago without considering the current standards of referral facilities. Sometimes whenever there is high flow of laboring mothers at these hospitals, they are obliged to deliver women in a way that couldn't ensure safety for both the laboring mother and care providers(6).

So having such, a profound gap in maternity service provision between referral hospitals and lower level health care facilities in the region had initiated to conduct this study. Moreover, there is no study done to assess the magnitude of the problem in related to women bypassing of lower level health care facilities with delivery services in the region and country as well.

Chapter II: Literature Review

Achieving significant reduction in maternal mortality and morbidity is difficult without an effective referral system for complicated cases. Early detection and referral to higher levels of care might also substantially reduce maternal and neonatal deaths due to complications during labour, delivery and postnatal period. The overall objective of such a referral system is that patients are dealt with in the right place with effective treatment provided at the minimum of cost. There are challenges, however, in monitoring the effectiveness of such referral systems and utilization of at all level health care institutions once put in place (15).

A study on the effectiveness of patient referral in Pakistan showed that despite an elaborate network of over 5000 basic health units and rural health centers, supported by higher-level facilities, primary health care activities didn't brought the expected improvement in health status, especially of rural population groups. System analysis of patient referral conducted in district of Punjab province for identifying major shortcomings, if any, in this domain. Respondents from 225 household were interviewed, of the household experiencing serious illness less than half were taken to a nearest first level care facility(FLCF). Major reasons included dissatisfaction with quality of care offered, non-availability of physician, and patients being too ill to be taken to the FLCF. The lower level utilization rate was less than 0.6 patient/ visits/person/year (16).

In addition, the performance, profile and perception of referral centers may result in patients bypassing lower levels of care and present themselves to higher levels irrespective of their medical condition. Majority (82%) of maternity hospital users in African studies have been found to be self-referrals. There are no formal studies that showed the reasons for self-referrals in most countries. Education seems to play a role but even those with higher education have a poor knowledge of referral channels in the health care system. Many patients do not necessarily know the difference between the cares given at different levels. Patients may also lack confidence in the quality of care available at lower level facilities and may perceive hospitals as providing better care, with doctors deemed more capable than nurses or midwives at managing their medical problems efficiently and effectively (13).

A study done in Alberta province in western Canada on why do rural women bypass their nearest hospital for delivery, showed that the overall delivery bypass rate of rural Alberta women was 39.2% , two-third of cases in which rural women bypassed 66.7%(4021/6032) delivery took place in a rural

hospital catchment areas ranged from a low of 10.1% and as high of 86.6%. No easily discernible bypass pattern by rural catchment areas found. Catchment areas with low, medium and high bypass rate distributed across the province and located proximal to regional and rural areas. Bypass was positively associated with a number of maternal, neonatal and delivery characteristics as well as service provider's capability at the nearest hospital (17).

Similarly a study conducted in Kasulu District, Tanzania, on bypassing primary care facility for child delivery showed that of the 441 women who delivered their most recent child in a health facility, 237 (51.7%) delivered at their nearest health facility (non-by passers) while 186 (44.2%) bypassed their nearest health facility. 18 (4.1%) women could not be classified: 3 did not give specific information about the facility of delivery and 15 were transferred from one facility to another during labour due to complications, with no information about the first facility. Only nine by passers (4.8%) delivered in a government health centers, with the remainder delivering at the government hospital or in mission facilities (3).

Another study in Zanzibar Tanzania, on analysis of factors that contribute to utilization of health facilities during labour, delivery and postpartum period concluded on the contrary to what we saw in the above literature. Hence, access to the health facility is the main factor that hinders women to reach at health facility in time. The major factors are distance and poor road infrastructure. Socioeconomic constraints contribute to the second delay in reaching health care. Women with poor socioeconomic status were the most vulnerable groups in facing the problem of payments at health facilities. Direct and indirect costs including opportunity costs create multiple obstacles for women and families in reaching medical care. Women have to pay for formal and informal costs at the health facility. In addition, the referral cost is also a challenge for the women and family. This is due to lack of ambulances, fuel or unavailability at the time when it needed at lower level of health facility that need to transfer the patient to hospitals and may contribute the decision for home delivery(18).

Similarly, another study in Tanzania on effectiveness of maternal referral system showed a supportive result with the above study. Out of 1538 referred women, 70% were referred for demographic risks, 12% for obstetric historical risks, 12% for prenatal complications and 5.5% for natal and immediate postnatal complications. Five or more gravida as well as age <20 years were the most common referral indications. The compliance rate was 37% for women referred due to socio-demographic risks and more than 50% among women referred in the other groups. Among women who did not comply with referral

advice, almost half of them responded financial constraints as the major factor. Lack of compliance with the referral did not significantly increase the risk for a prenatal death (19).

Another study on utilization of health care service by pregnant mothers in Gokana, local government area of River State, Nigeria, showed poor utilization of health facilities during delivery by pregnant mothers is still a major cause of maternal and childhood morbidity and mortality in Nigeria. Most 42(37.5%) of the mothers were between 25-29 years. Sixty four (57.1%) of the 112 mothers in their recent delivery used a health facility while 48(42.9%) did not. Factors responsible for non utilization of health facility for delivery include: long distance to health facility 33(68.7%), onset of labour at night 40(83.3%), unavailability of means of transportation 37(77.1%), lack of money for transportation 26(54.2%), unsatisfactory services at health facility 26(54.2%), unfriendly attitude of staff of the health facility 34(70.8%), unavailability of staff at health facility 32(64.0%), lack of urgency at health facility 36(75.0%),and previous uneventful delivery at the health facility 32(66.7%) (20).

The Ethiopia Demographic and Health Survey (EDHS) 2011 report showed that the reasons given by mothers for not attending delivery services in a health facility, more than six women in ten (61 %) stated that a health facility delivery was not necessary, and three in every ten (30%) stated that it was not customary. Fourteen percent of women said that the health facility was either too far or that they did not have transportation. Rural woman were more likely than urban women to report that health facility deliveries are not customary, at 31 percent versus 17 percent, or that health facilities were too far or they had no transportation, at 15 percent versus 8 percent (21).

Another study on determinant of skill attendance for delivery in North West Ethiopia a total of 1065 mothers (213 cases and 852 controls) were included in the analysis. Having ANC follow up was found to be an important determinant of skilled birth attendance in which women who had four or more visits were 2.8 times more likely to have skilled birth attendance as compared to those who didn't have follow up (22).

A study on maternal health service in Ethiopia has identified several factors that have important influence on utilization of maternal health services in Ethiopia. These include place of residence, women's education, marital status, religion, parity, and number of children under five. Place of residence and education are common predictors for the utilization of all the three maternity care services. Women's education is a significant and independent predictor of utilization of delivery care

services in rural Ethiopia. As expected, women with no education are less likely to use PAD services. The odds of utilizing such services are four and a half times and eight times higher for women with primary and secondary or higher levels of education, respectively, when compared with women with no education(9).

Another study on why do women prefer home births in Ethiopia? Overall only 16% of deliveries were assisted by health professionals, while majority (78%) was attended by traditional birth attendants. The most important reasons for not seeking institutional delivery were the belief that it is not necessary (42%) and not customary (36%), followed by high cost (22%) and distance or lack of transportation (8%). The study identified several reasons for the preference of traditional birth attendants over health facilities. Traditional birth attendants in all areas were seen as culturally acceptable and competent health workers. Women reported poor quality of care and previous negative experiences with health facilities. In addition, women's limited awareness on the advantages of skilled attendance at delivery, little role in making decisions (even when they want), and economic constraints during referral contribute to the low level of service utilization (23).

A study on institutional delivery service utilization in Munisa Woreda, South East Ethiopia showed out of the total respondents, only 105 (12.3%) gave birth at health facilities (hospitals and health centers), and the vast majority (87.7%) delivered at home. Among the mothers who delivered at home, 392 (52.2%) were assisted by their families or relatives; 23 (3.1%) delivered without any assistance. Of those who went to health facilities, 66 (62.9%) delivered at health centers, 27 (25.6%) at hospital, and the rest (11.5%) at private clinics (Table 2). Mothers gave a variety of reasons for delivering at home. For example, 450 (52.6%) said that delivering at home was the norm or the usual practice (24).

A study conducted in Amhara region in three public referral hospitals concerning women's satisfaction on delivery service, 417 delivering mothers from three referral hospitals participated in the exit survey.. The majority (84.2%) had one or more ANC visits and 15.8% did not attend ANC. Over a fifth of women (21%) had a self-reported complication in pregnancy. Normal vaginal delivery was the commonest mode of delivery (53.7%) followed by assisted delivery (24.5%) and caesarean section (21.8%) (25).

Another study on institutional delivery service utilization and associated factors among mothers who gave birth in the last 12 months in Sekela District, North West of Ethiopia, Of the total respondents, only 45 (12.1%) of them gave birth at health facilities and majority of them (87.9%) delivered at home claiming that home was best place for giving birth. Out of those mothers who delivered at home, 274 (80.0%) were assisted by family members. Among those mothers who visited health facilities, the reasons given for visiting health facilities during the last pregnancy included ANC services, delivery, problems related to pregnancy and problems not related to pregnancy. Many different reasons were forwarded for home delivery, 124(33.4%) said labour was short/urgent, 80 (21.6%) said they did not have any problem to go to health facilities, and 52 (14.0%) said influence from family members and others (26).

Another study conducted in North Shoa zone, Amhara Region, to assess factors affecting safe delivery service utilization showed that choice of delivery place is related with residence, income, husband educational status and maternal knowledge about danger sign during pregnancy. Mothers living in urban area are more likely to utilize delivery at HF (49%) than women in rural area (15%) are. Woman having husbands with educational level above secondary school (48%) prefer institutional delivery than having illiterate husband (16%). Mothers who did not face problem during pregnancy were 43% less likely to utilize facility delivery service. The same study also revealed that mothers who gave birth at health facility were more likely to utilize of the service (28%) as compared to non-institutional delivery (14%) (6).

2.1 Conceptual framework

In developing countries, the use of modern health care such as maternal health services could be influenced by the socio demographic characteristics of women, the cultural context, and the accessibility of these services (9).

Some studies have examined how and why patients bypass their local health facility to seek care at hospital. The literature identifies important determinants of this phenomenon: patient characteristics, such as gender, age, educational level, proximity to a hospital and payment sources, and hospital characteristics, such as ownership, quality of services, number of beds, and availability of drugs, medical supplies and equipments (27).

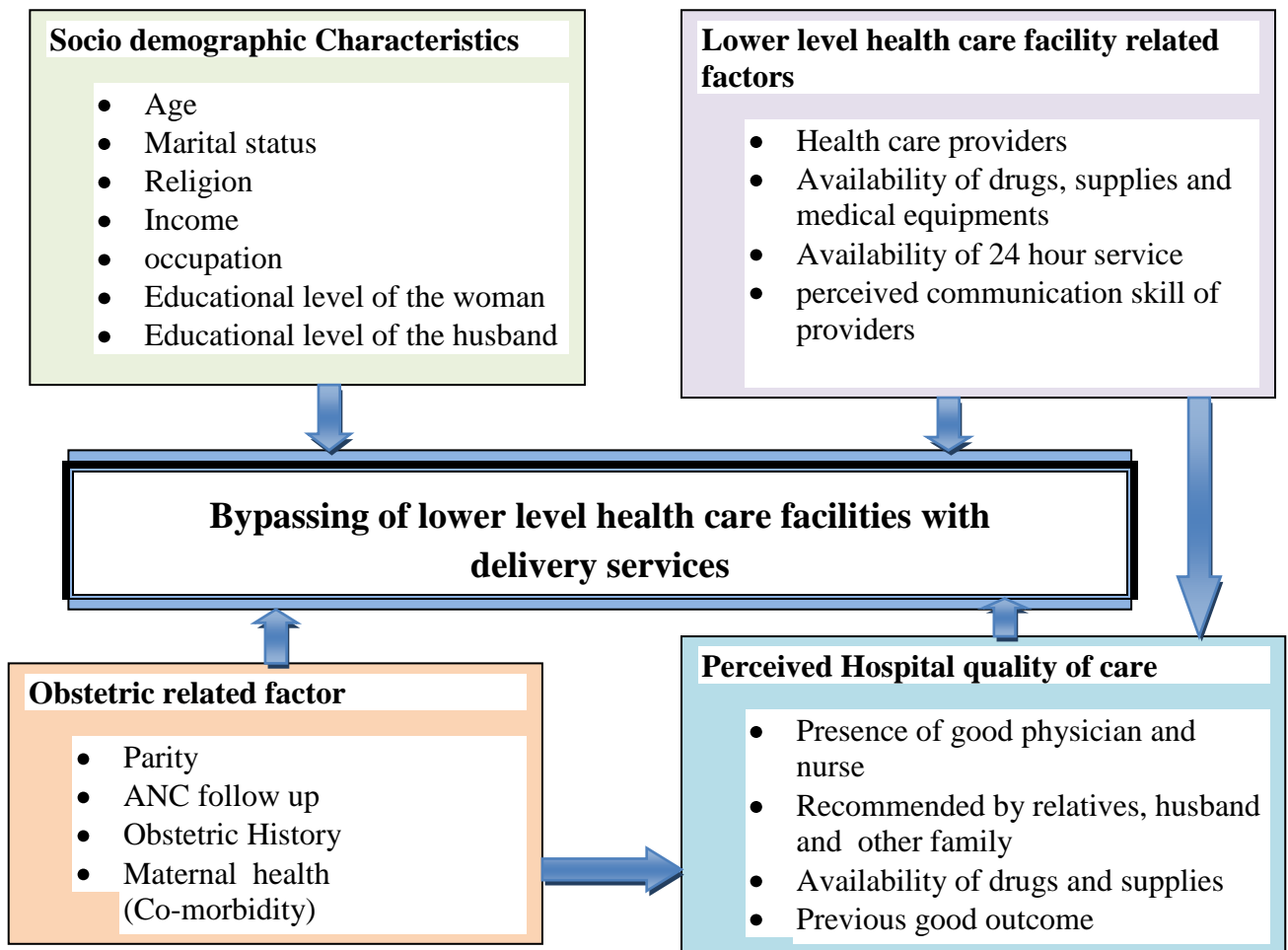


Figure 1. Conceptual framework of Bypassing of lower level health care facilities with delivery services in Amhara region Referral Hospitals developed by reviewing related literature, Amhara region, North Ethiopia. 2013.

Chapter III: Significance of the Study

It is unclear how women's decisions about facility delivery are influenced by the extremes between relatively good geographic access and potentially poorer quality of primary care facilities, and how this in turn affects utilization of nearby health centers and receiving hospitals for childbirth. High rates of bypassing have many important implications for the health system in case of evaluating the efficiency and actual coverage of services.

Therefore, the objective of this facility-based study is to explore the extent to which women in Amhara region bypass the lower level health facilities to deliver at referral hospitals. In addition to identify respondent characteristics associated with the decision to bypass; moreover, there were no previous studies done to assess the magnitude and associated factors for bypassing nearby facilities for delivery service in Amhara region. Therefore, the information obtained from the study findings will help individuals, partners and managers who are working at these referral hospitals, zonal and regional health bureau to understand the extent of the problems. It will also contribute to increase the knowledge and awareness of the problem by hospital administrative including the hospital staffs and will have significant input in the process of planning, monitoring and evaluation of health facility efficiency. In addition, this study will be useful for other researchers as reference material while conducting further studies on similar topic.

Chapter IV: Objectives of the Study

4.1. General Objective

- To assess bypassing of lower level health care facilities and associated factors with delivery services in Amhara region Referral Hospitals, Amhara Region, Ethiopia, July 2013.

4.2. Specific Objectives

- To assess the magnitude of women bypassing lower level health care facilities with delivery services.
- To identify factors contributing to bypassing lower level health care facilities with delivery services.

Chapter V: Methodology

5.1. Study Area and period

The study conducted in Amhara region, which has four referral hospitals under the regional health bureau and more than twenty million people. Currently there are nineteen functional hospitals and fifty-six primary hospitals under construction. There are 801 functional health centers. Despite having such number of facilities, there are only four referral Hospitals under the regional health bureau, which found sparsely in four areas of the regional city and zonal towns.

These are Debre Markos referral hospital, Debere Birhan referral hospital, Dessie referral hospital and Felge Hiwote referral hospital, which are located 300km, 130km, 401km and 565 km away from the capital city of Ethiopia, Addis Ababa respectively. The major Health services provided in these referral hospitals are outpatient, inpatient and emergency health care services. There are five Inpatient wards in all referral hospitals (Gynecological &Obstetric, Surgical, Medical, Pediatric and the Eye unit) . An average of 200 to 550 mothers have delivered in a monthly base in these referral hospitals and a lot of mothers have no referral slip from lower level health care facilities during their arrival. And a minimum of one obstetrician and gynecologist (in Debere Markos and Deber Berhan) and maximum of three (in Felege Hiwote and Dessie) are found in the referral hospitals. The annual budget of these referral hospitals allocated from regional health bureau ranges from ten to twelve million Ethiopian Birr. In addition to the government budget allocation, the Hospitals collect and utilize their revenue from different sources. And the study was conducted from June to July 2013.

5.2 Study Design

Facility based cross sectional study design was employed.

5.3 Population

5.3.1 Source population

All women admitted in obstetric ward for the purpose of childbirth in Amhara region referral hospitals during the study period.

5.3.2 The study population

Postnatal women who had gave birth during the study period at Amhara Region Referral Hospitals.

5.3.3 Inclusion/Exclusion Criteria

Inclusion Criteria

No especial criteria other than study population

Exclusion Criteria

Mothers who were seriously ill and did not respond due to different reason during their postnatal and study period

5.4 Sample size and Sampling Procedure

5.4.1 Sample size determination

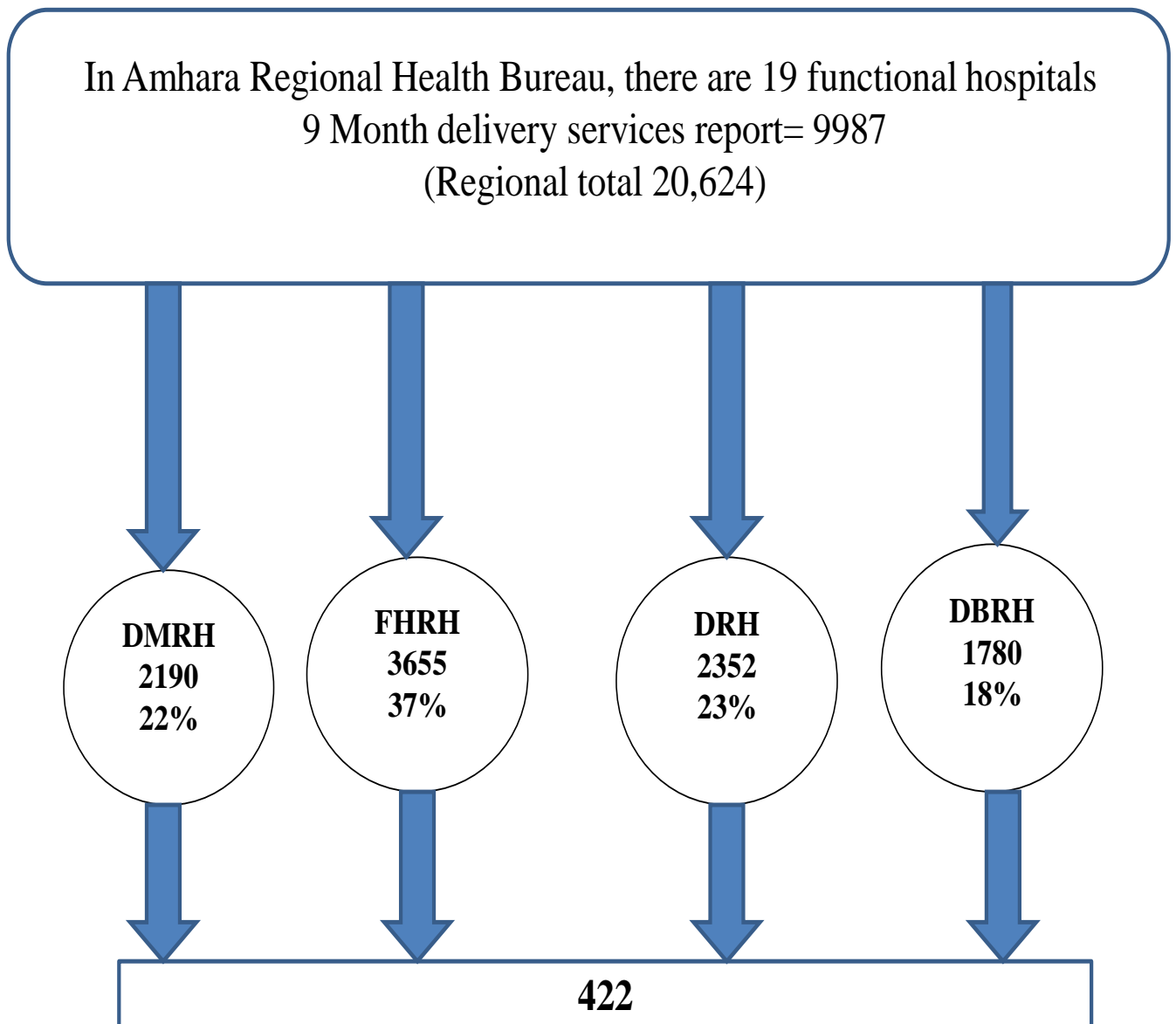
The sample size estimated based on single population proportion (p). The formula:

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

Where n is sample size, P (proportion of mothers bypass nearby facility) in the study sites & d is the margin of error. The following assumptions used. Since there is no study done in the area for the value of P , it will be taken to be 50% ($P=0.5$) to allow maximum sample size. Allowing 5% for expected margin of error (d) and 95% confidence level ($Z_{\alpha/2} = 1.96$), the required sample size n was 384. With 10% non response rate the total sample size was 422.

5.4.2 Sampling techniques

Every other postnatal woman who received delivery services in Amhara region referral hospitals interviewed on exit basis until proportionally distributed sample size met.



- Figure 2: Schematic presentation of sampling procedure for the selection of study subjects at referral hospitals, Amhara region, Ethiopia, 2013.

5.5 Data collection process and measurements

5.5.1 Study Variables

Dependent variables

Bypassing of lower level health care facilities for delivery service

Independent variables

Socio-demographic descriptive variables

- Age
- Marital Status
- Occupation
- Religion
- In-come
- Educational level of the mother
- Educational level of the husband

Lower level health care facility related variables

- Availability of health care providers
- Availability of drugs and medical supplies
- Availability diagnostic setup
- Availability of 24 hour services
- Perceived Communication skill

Obstetrics related variables

- Parity
- Obstetric history
- ANC follow up
- Maternal health (co-morbidity)

Perceived hospital quality of care related variables

- perceived good quality of service
- Recommended by relatives and family
- Good doctors and other providers
- Availability of drugs, supplies and equipment
- Previous good outcome

5.5.2 Data collection Procedures

5.5.2.1 Data collection and Instruments

Structured interview questionnaire used and developed by reviewing of relevant literatures from previous similar studies. there are four parts in the tool, the first part was socio demographic information of the respondents which included (age, marital status, occupation, mothers education, husband education, religion, ethnicity and monthly house hold income) and the second part were obstetrical history of respondent (parity, antenatal care, co-morbidity and previous maternal obstetrics' history),and the third part were perceived referral hospital service quality providers (presence of good doctors and nurses, availability of drugs and supplies, recommended by husband or other family members and relatives)and the last part of the questioner was lower level health care facilities related factors like perceived communication skill, distance of health facility, availability of 24 hours services, availability of drugs supplies and equipments.

Qualified personnel carried out data collection and supervision, four nurses who are not working in the study site recruited as data collector and four supervisors who hold BSC in health related field recruited as supervisor. One day training provided for all data collectors and supervisors at each town where referral hospitals found.

5.5.2.2 Data Quality Assurance

Before data collection, a modified and structured survey questionnaire was prepared in English and translated into Amharic and back to English by language expert. The questionnaire was pre-tested on 5% postnatal mothers in Finote selam hospital. Interviews conducted in a way that ensures the privacy at the health facility after the mothers give birth and being stable. No personal identifier was collected from the client. On average, an interview lasts 20 to 25 minutes to complete. During data collection, supervisors checked the activities of each data collectors in each hospital and sometimes crosschecked the response of 5% women in a daily base. The interviewers, supervisor and principal investigator assessed clarity, understand ability, and completeness of the questions. The principal investigator randomly checked 5 % of the supervisors work each day for completeness and gave feedback

5.5.3 Data Processing and Analysis

After data collection, the data entered, coded and analyzed by using SPSS version 16.0 statistical software. Data were cleaned for inconsistencies and missing values. Data cleaning was made by doing descriptive statistics like frequency by removing missing/conflicting ideas and responses to questions about relevant information. Recoding and re-categorizing were made for relevant variables. Frequencies and summary statistics (mean, standard deviation, and percentage) were used to describe the study population in relation to socio-demographic and other relevant variables. The degree of association between dependent and independent variables was assessed using adjusted odds ratio with 95% confidence interval. A bivariate and multivariate logistic regression performed to assess statistical association between dependent and independent variable. It was done by entering each independent variable separately into bivariate analysis. Then, variables, which showed statistical association with p-value of less than 0.05 on bivariate analysis, were candidates for the multivariate logistic regression model. In the bivariate logistic regression models significant association declared at p-value less than 0.05. Finally, data interpreted by referring to literature reviews.

5.6 Operational definition

By passers - are women who delivered their child at one of the referral hospitals other than the nearest lower level health care facilities to their village of residence and do not have any referral paper. The nearest health facility identified based on the shortest distance from the respondent's village along recognized roads. And it was assessed in this study by two questions in the tool with the expected response of "1", yes or "2", no, by passers are women whose response was "NO".

Non-by passers - are defined as women who delivered in one of the referral hospitals and having referral paper from their nearby health facilities nearest to their village of residence. And Non-by passers are women whose response was "YES" on both questions in the tool.

Lower level Health care facilities - are health care facilities which are below tertiary level (specialized /referral hospital) in the Ethiopian health tier system. These are: health post, health centre, primary hospital and general hospital, In this study, all women were asked their place of residence and nearby health facility with the possible option to respond according to the Ethiopian health tier system.

Distance - is measured in kilometers from home to the nearest health facility and hospitals. According to WHO standard distance > 5km from home to health facilities are said to be far. There is one open-ended question to assess how far the hospital from mother's village of residence is.

Antenatal care service The care given to mothers during pregnancy by health professionals (doctor, health officer, midwife, or nurse) and women should have at least once during her pregnancy. In this study there are two questions to assess ANC, the first one was answered by either YES or NO, if yes, was again requested for how many times they had ANC follow up and categorized into four 1if one ANC visit, 2 if two to three visits, and 3 for four or more visits.

5.7 Ethical Consideration

The proposal approved and ethical clearance obtained from the ethical committee of Jimma University College of Public Health and Medical Sciences before commencing data collection. Permission also obtained from each referral hospitals concerned bodies to conduct the research at

them. Prior to the interview Verbal consent was obtained from the study participants. Participants did not sign on the form and no identifiers were collected from the clients to ensure their confidentiality.

5.8 Dissemination of the Results

The findings of the study will be submitted to Jimma University, College of Public Health and Medical Sciences, Department of Health Service Management. Then it will be publicly defended at Jimma University. After approval by the department, copies of the study findings will be provided to relevant stakeholders like Zonal and regional health bureau and to referral hospitals in the region. An effort will made to present the results at scientific conferences, on the regional health bureau review meetings and to publish in a national or an international journal.

Chapter VI: Results

6.1 Socio-demographic Characteristics

A total of 422 mothers participated in the study with a response rate of 100%. From these 156 (46.2%) were from FHRH, 97 (54.6%) were from DRH, 93 (40.9%) were from DMRH and 76 (52.6%) were from DBRH.

Among these women, majorities (87.2) of the participants were in the age between 20-35 years old and large proportion of the women followed orthodox religion 319 (75.6%). As to the marital status, 347 (82.2%) and 47 (11.1%) were married and single respectively. The level of education indicated that 59 (14%) of them were not able to read and write or illiterate, 101 (23.9) of them have completed secondary school and 135 (32%) of them completed college or university (table 1).

Table 1: Socio-demographic Characteristics of Clients who gave birth at Amhara region referral hospitals, Ethiopia, from June to July 2013(n=422).

Variables	Frequency	Percent
Age in years		
15-19	7	1.7
20-35	368	87.2
>35	47	11.1
Marital status		
Unmarried	47	11.1
Married	347	82.2
Separated	26	6.2
Divorced	2	0.5
Religion		
Orthodox	319	75.6
Muslim	91	21.6
Protestant	12	2.8
Education status		
Illiterate	59	14.0
Read and write	56	13.3
Primary school	71	16.8
Secondary school	101	23.9
Higher education	135	32.0
Month income		
< 600 birr	60	14.2
600-1000 birr	85	20.1
1001-2000 birr	92	21.8
>2000 birr	140	33.2
Refuse	45	10.7
Residence		
Urban	188	44.5
Rural	234	55.5

6.2 Obstetrics characteristics of women

In this study, it was found that one hundred forty nine (35.3%) of women had gave birth for the first time(primipara), 78 (18.5%) women had 2-5 deliveries(multipara); and 195 (46.2%) women had more than five deliveries(grandmultipara). About 311 (73.7%) women had planned pregnancy. The majority,(95.5%) had ANC visits, from these 200(47.4) had full(four times) ANC follow up visit (Table2).

Table 2: Obstetrics Characteristics of Clients who gave birth at Amhara region referral hospitals, Ethiopia, from June to July 2013(n=422).

Obstetrics characteristics	Number	Percent
Parity		
One(this is my first)	149	35.3
Two-five	78	18.5
More than five	195	46.2
Plan about Pregnancy		
planned	311	73.7
Unplanned	111	26.3
ANC follow up		
Yes	403	95.5
No	19	4.5
Number of ANC visit		
1-3 times	176	41.7
≥4 times	227	53.8

6.3 Women's Perception on Lower level health care facility

Majority of women, (89.8%) responded, as there is a delivery service in their nearby health care facility. Near to half (49.1%) of the women believed that there is limitation on the competency of health care providers in their nearby health care facility and also 198(46.9%) of the respondents believe that there are no adequate drugs, medical supplies, equipments and diagnostic set up in these LLHCF (Table3).

Table 3: Perception of women to LLHCFs who delivered in Amhara region referral hospitals from June to July 2013(n=422).

Variables	Number	Percent
Availability of delivery service in nearby LLHCF		
Yes	379	89.8
No	23	5.5
I do not know	5	1.2
No nearby health facility	15	3.6
Presence of competent health care providers(perception)		
Yes	141	33.4
No	207	49.1
No suggestion and others	74	17.5
Total		
Availability of drugs, supplies(perception)		
Yes	146	34.6
No	198	46.9
No suggestion and others	78	18.5

6.4 Women perception on referral hospital's delivery services

Of those women who bypassed LLHCFs, 72 (17%) came to referral hospitals because of their previous good experience. 69 (16.4 %) came to referral hospitals by assuming that there is better availability of drug, equipment, supplies and competent health care providers and the others 62 (14.7%) women came to referral hospitals due to their husband, relatives and other families recommendation and pressure (Table4).

Table 4: Women's reasons to seek delivery care at the referral hospitals of Amhara region, Ethiopia, from June to July 2013(n=422).

Variables	Number	Percent
Previous good experience	72	17.0
Recommended by husband ,relatives and others	62	14.7
Availability of drugs , diagnostic setup, supplies, equipments and competent health care providers	69	16.4
Referred	219	51.9

6.5 Percent distributions of LLHCF bypass

In this study, 203 (48.1 %) women identified as by passers of LLHCF with delivery services from 422 study subjects taken proportionally from four referral hospitals in Amhara region. From these, the percent distribution showed that 54.6 were from DRH, 52.6 were from DBRH, 46.2 were from FHRH and 40.9 were from DMRH (Figure 3).

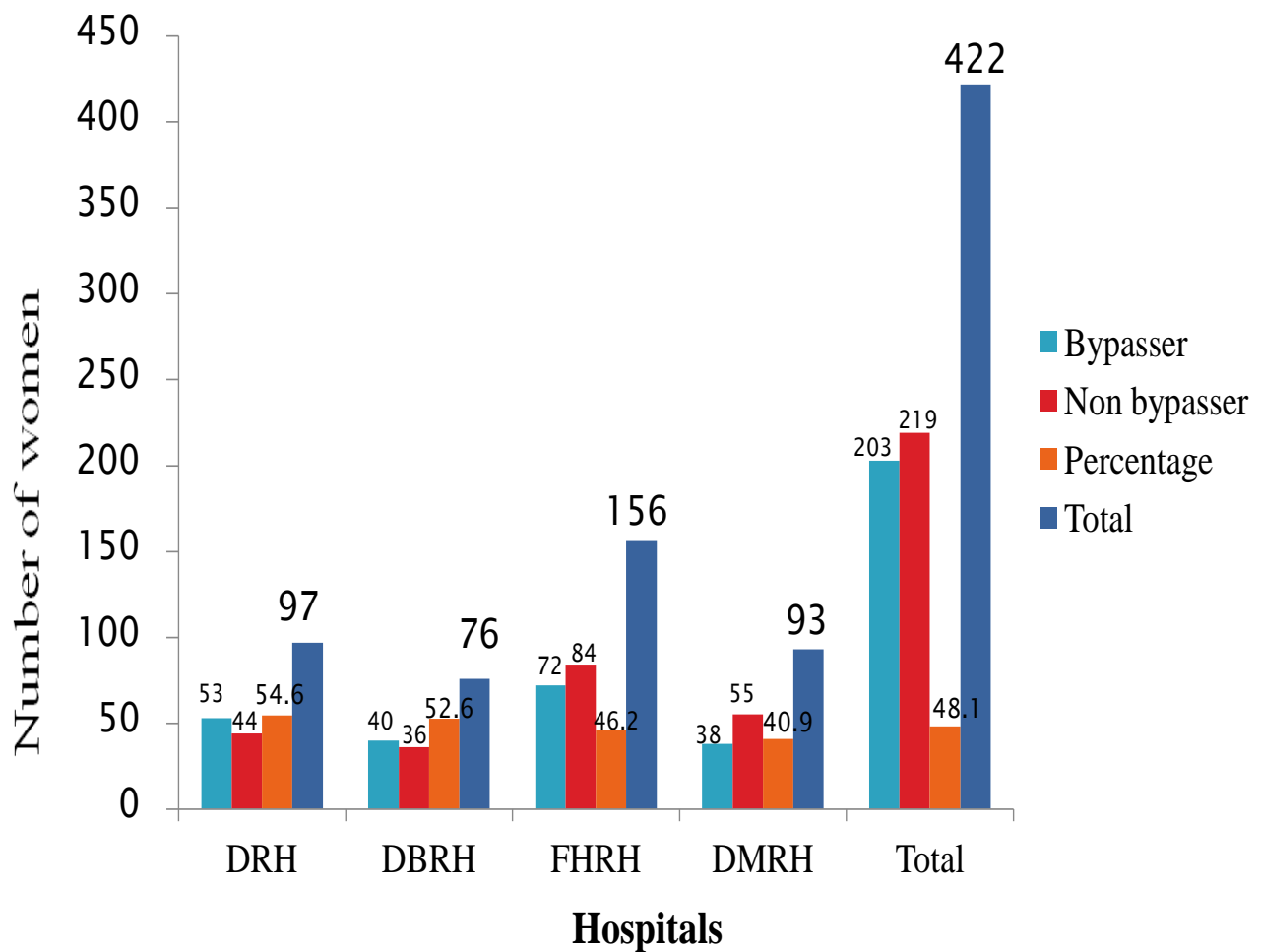


Figure 3, Rate of By passer and non By passers with delivery services in four Amhara regional referral hospitals. Amhara region, Ethiopia ,2013.

6.6 Variables associated with bypassing of LLHCFs with delivery services

Twelve associations were found to be significant in the bivariate analysis. Therefore, a multivariate approach applied to determine which factors best explained and predict bypassing of lower level health care facilities with delivery service. Consequently a number of independent variables like, education status (p-value <0.001), parity (P-value < 0.001), distance from referral hospital (p-value < 0.001), reasons for bypass nearby facilities; lack of trust on health care providers (P-value < 0.001), lack of drugs, medical supplies & equipment (p-value < 0.001), no information about delivery service at nearby health care facility (P-value < 0.001), women responded as both lack of trust and lack of drugs, supplies and equipment (P-value < 0.001), women perception to nearby facility; inadequate diagnostic set up (P-value < 0.001) and lack of trust on the competency of health care providers in the nearby health facility (P-value < 0.001) were determinants based on their p- value as indicated . However the other factors do not showed any level of significance in bivariate analysis.

6.7 Determinants of bypassing of lower level health care facilities

From the bivariate analysis, six factors considered as predictor variables in individually determining the outcomes variable. Following this, a multivariate analysis applied using multiple logistic regression models to control confounding effects of these seven significantly associated variables entered in to the model based on variable selection criteria (Table 6).

Most of the predictor variables seen as determinants of bypassing LLHCFs under bivariate analysis also revealed statistically significance in multivariate analysis in determining bypassing of LLHCF except ANC follow up visits.

Hence, bypassing of women was more likely with women reasons for bypassing of nearby lower level health care facilities, women reasons as there is inadequate drugs, medical supplies & equipment, lack of trust on health care providers and lack of information about delivery services at nearby facility were 18,7 and 3 times more likely to bypass lower level health care facility than women who gave other reasons respectively. Moreover, women who live <5 and 5-10kms around the referral hospitals were 8 and 6 times more likely to bypass LLHCFs with delivery services than women who lived >25kms from the referral hospitals respectively.

On the contrary, women who are unable to read and write were 63% less likely to bypass as compared to women completed their higher education, women who had single and 2-5 parity were 65% and 79% less likely to bypass as compared to women with > 5 parity respectively, women perceived as there is adequate diagnostic setup and no suggestion were 79% and 76% less likely to bypass as compared to women who perceived as there is no diagnostic setup respectively, and women perceived as there is competent health care providers at nearby health care facilities were 73% less likely to bypass nearby lower level health care facilities as to compare to women who perceived no competent health care provider.

Table 6: Multiple logistic regressions for determinants of lower level health care facility bypass with delivery service in Amhara region referral hospitals from June to July 2013.

variables	Categories	Bypass		Crude odds ratio (95%CI)	Adjusted odds ratio(95%CI)
		Yes N (%)	No N (%)		
Education status	Illiterate	15(7.39)	44(20.09)	0.249(0.13,0.49)	0.378(0.14,0.99)*
	Read and write	22(10.84)	34(15.53)	0.473(0.25,0.89)	0.453(0.19,1.09)
	Primary	33(16.26)	38(17.35)	0.653(0.36,1.13)	0.739(0.33,1.65)
	Secondary	55(27.09)	46(21.0)	0.847(0.52,1.47)	0.804(0.38,1.73)
	Higher edu.	78(38.42)	57(26.03)	1	1
Parity	First time(one)	69(33.99)	80(36.53)	0.629(0.41,0.97)	0.355(0.18,0.69)*
	2-5 times	27(13.3)	61(27.85)	0.323(0.19,0.55)	0.217(0.1,0.47)*
	>5 times	107(52.71)	78(35.62)	1	1
Distance from hospital	<5 km	75(36.95)	29 (13.24)	6.881(4.06,11.66)	8.07(3.86,16.8)*
	5-10 km	54(26.6)	24 (10.96)	5.987(3.38,10.59)	6.01(2.81,12.8)*
	11-25 km	18(8.87)	17 (7.76)	2.817(1.36,5.85)	2.25(0.78,6.49)
	>25 km	56(27.58)	149 (68.04)	1	1
Reasons for bypass nearby facility	Lack of trust on providers(1)	46 (22.66)	45 (20.55)	4.386(2.49,7.73)	6.21(2.97,13.0)*
	Inadequate drugs, supplies & equipment(2)	43 (21.18)	10 (4.57)	18.448(8.36,40.7)	18.4(7.0,48.39)*
	No information	15 (7.39)	15(6.85)	4.29(1.89,9.69)	3.4(1.16,10.19)*
	1 and 2	68 (33.5)	16 (7.3)	18.23(9.33,35.65)	17.8(7.67,41.3)*
	other	31(15.27)	133(60.73)	1	1
Diagnostic setup (perception)	Yes	46(22.66)	100(45.66)	0.257(0.16,0.41)	0.216(0.11,0.42)*
	No suggestion No	30(14.78) 127(62.56)	48(21.92) 71(32.42)	0.349(0.203,0.6) 1	0.246(0.11,0.53)* 1
Providers competency (perception)	Yes	50(24.63)	91(41.5)	0.339(0.22,0.53)	0.271(0.14,0.52)*
	No suggestion No	25(12.32) 128(63.05)	49(22.4) 79(36.1)	0.315(0.18,0.55) 1	0.254(0.12,0.55) 1

* = Significant Association

Chapter VII: Discussion

In this study, it was attempted to assess the rate of bypassing of lower level health care facilities with delivery service and the factors that contributed to bypass. The overall rate of by passers from four referral hospitals in Amhara region was 48.1% (95% CI:43.36,52.88), which is high and almost similar with the findings of a study conducted in Tanzania where the overall rating of by passers of primary health care facility was 44% (5). However bypassing rate in this study was found higher than the results in South Africa 19.2% (13).The possible explanation for the observed difference might be due to the intervention called triage-down referral system for low risk mothers after a study done six years back which showed a bypass rate of 32% with similar method and area.

The percent distribution of by passers on each individual referral hospitals is somewhat different, 54.6% were from DRH, 52.6% were from DBRH, 46.2% were from FHRH and 40.9% were from DMRH. The difference in rate of by passers in individual hospitals might be due to the existing difference in distance from women residence, the infrastructure they have, health care provider characteristics and women's perception difference for each hospital.

Educational level of the women is found to be one of the predictors for the outcome variable, bypassing of lower level health care facility with delivery services, Those who were illiterate were 63% less likely to bypass LLHCFs as compared to women who completed higher education (AOR= 0.378 ,95% CI: 0.14,0.99).

This might be due to the fact that better educational status is believed to be an important factor for better awareness and positive attitude related to maternal health service utilization. As expected, skilled maternal care during pregnancy, delivery, and postnatal period (4). This might be also true even to bypass nearby health care facilities and seek care at hospitals level as far as they perceived quality of care provided at referral hospitals. Moreover, it was noted that patients who referred themselves had a higher level of education and were thus able to afford the cost to deliver in the tertiary hospital, as patients were also required to also contribute towards their hospital accounts (13). On the other hand, no formal studies have looked at the reasons for self-referrals in most countries. Education seems to play a role but even those with higher education have a poor knowledge of referral channels in the health care system (13)

The finding is consistent with study done in Ethiopia on maternity services utilization and Amhara region on delivery services utilization at community level (3, 4, and 12). Mothers who had secondary and above educational level were more likely to utilize institutional delivery service than those who cannot read and write (AOR 2.99), (AOR=7.11) and (AOR=2,81) respectively.

The other factor that found to be statistically significant with the outcome variables in multivariate analysis model was birth order or parity, 64% of women who are primipara were less likely to bypass than women who had five and more parity(AOR=0.355,CI:0.18,0.68). Moreover 78% of women who had 2-5 parity were also less likely to bypass their nearby lower level health care facilities than women who had five and more parity (AOR=0.217, 95% CI:0.1,0.47). This might be due to the fact that women with multiple parity(>5) had better experience in facility delivery services and would enabled women to compare the structural components between hospitals and nearby lower level health care facilities.

The result is inconsistent with the study in Tanzania, which stated that women with five or more living children were less likely to bypass, perhaps indicating a lower perception of risk, despite there is higher actual risk and greater comfort with delivering in a primary care facility.

Women who lived in a distance of <5 kilometers around the referral hospitals were more likely to bypass than women who lived far apart >25 kilometers from referral hospitals (AOR=8.07, CI: 3.86, 16.8). Similarly women who lived within a distance between 5-10 kilometers were also more likely to bypass nearby lower level health care facilities than women live >25 kilometers far from the referral hospital (AOR=6.01, CI: 2.81,12.8). This may be because women who came for delivery service from a distant area will not easily access transportation. Even in case they have an access, they need additional money for transportation and accommodation than compared to women who came from closer areas. Moreover it would contributed a lot of expenses for indirect cost and also incur a substantial opportunity cost due to longer time away from their others children and farming work(18).

This finding is also consistent with the studies done in Kasulu Town Tanzania and Korogwe and Muheza hospitals in Tanzania, the frequency of bypassing a PHC facility for child care increased significantly with decreasing travel time to the hospital, shorter duration of symptoms and low

disease severity(AOR=3.5). Women living further from Kasulu town, the site of the government hospital were less likely to bypass their nearest facility (AOR=0.7).

The other statistically associated variable was women reasons to bypass their nearby health care facilities; women who believed in both ways that there is no adequate drugs, supplies and equipments and also no competent health care providers in their nearby health care facilities were more likely to bypass than women who mentioned other reason (AOR =17.8, 95% CI :7.67,41.3),similarly women believed that only there is no adequate drugs, supplies and equipments (AOR=18.4,95% CI:7.0 ,48.39).and the other believed that only there are incompetent health care providers at nearby health care facility (AOR=6.21 CI:2.97,13.0). and also women responded as lack of information about the provision of delivery services by nearby lower level health care facilities (AOR= 3.4 CI:1.16,10.19).This might be due to the fact that governmental facilities are not closer to women and community in terms of communicating and promoting the services what they already have and also the way how they transferring patients from one facilities to higher levels. And also there might be inadequacy in health commodities like drugs, medical equipments, supplies and health care providers. There are also reasons that caretakers sought care directly at the referral facility because they perceived that the referral facility provided better quality services (1).

The result is consistent with study done in the region and country as well on maternity service utilization (1,2,20,21) and also with a study done in Tanzania with similar topic, suggested that perceived quality of both technical like drugs & equipment and non-technical like trust in health workers are a major concern of women to choose a facility on the basis of quality or experience, to have a high level of trust in health workers at the delivery facility (AOR =2.7), and to perceive the nearest facility to be of high quality (AOR= 3.1) (2,3).

Women perception towards diagnostic set up of the nearby lower level health care facility was one of the predictors in multivariate analysis. 79% of women perceived as there is adequate diagnostic setup had less odds of bypassing of lower level health care facilities than women who perceived as no adequate diagnostic setup (AOR=0.216,CI:0.11,0.42).Similarly women who had no suggestion about the diagnostic setup of their nearby health care facility had less odds of bypassing them (AOR=0.246, CI:0.11,0.53).

Similarly women's perception towards health care providers professional competency was one of the predictor on multivariate analysis model, 73% of women who perceived as there is competent health care providers were less likely to bypass lower level health care facilities than women perceived as health care providers are not competent (AOR=0.271,95% CI:0.14,0.52).This is due to the fact that health care providers and their communication was not customary to most of rural women (21). Moreover health care providers skill deficiency is the most common and repeatedly reported reason from women in the nearby health care facility (4,5), non-availability of physician also reasons for their dissatisfaction and bypassing (16).

Many patients do not necessarily know the difference between the different levels of care. Patients may also lack confidence in the quality of care available at primary health care level and may perceive hospitals as providing better care, with doctors deemed more capable than nurses or midwives at managing their medical problems efficiently and effectively (13).

Therefore, the regional health bureau should consider implementation of by passer charge, gate keeping and triage-down referral systems to prevent unnecessary overcrowding of hospitals with low risk women to enables these few referral hospitals and senior experts to focus on complicated cases.

Strengths and Limitations of the study

Strengths

- ❖ The questionnaire was adapted from a validated statistical survey tool and pretested in 5% of the study population.
- ❖ There was a high response rate.

Limitation

- ❖ The limitation of this study is there is no data on observed or objective quality of care in lower level health care facilities in the study areas.
- ❖ It would be valuable if combining both tertiary level facilities with primary and secondary level facilities to compare perception of quality with actual quality.
- ❖ Perception measurement is not the appropriate one.

Chapter VIII: Conclusion and Recommendation

Conclusions

In this study, it was found that almost half of women who attended delivery services at referral hospitals are by passers of nearby health care facilities.

In addition to women's socio-demographic characteristics like education, the presence of high rates of bypassing is associated with multiple independent factors like women perception to lower level health care facilities: availability of drugs, medical equipments & supplies, diagnostic setup and women's perception towards health care providers.

High rates of bypassing in a resource-constrained country like Ethiopia would shift health care expenditure from direct cost in to indirect costs such as transport and accommodation costs. It imposes the poor particularly large financial burden on the most vulnerable families putting them at risk of deepening poverty.

Moreover, the presence of high rate of bypassing of government lower level health care facilities combined with high rates of home deliveries in villages suggests that the current primary health care facilities are not meeting the needs of most women.

Recommendations

The findings have important implications for the regional health bureau and the health sector as well. The current efforts in health system should consider and prioritize quality of care in line with quantity. It is crucial to know and utilize the limited resources at all level health care facilities to improve quality of care. Moreover, in a situation with limited resources, utilizing available resources would be more appropriate for improving access to health care than increasing the number of facilities. This would also improve equity in health care access since the poor who cannot afford travelling costs will then get access to quality services at their nearer lower level health care facilities.

Based on the findings of this study, the following recommendations forwarded.

To Regional Health bureau:-

- Lower level health care facilities should be strengthened with human power, drugs, medical supplies, equipments and diagnostic setup.
- In addition, the regional health bureau should consider implementation of by passer charge, gate keeping and triage-down referral systems to prevent unnecessary overcrowding of hospitals with low risk women to enables these few referral hospitals and senior experts to focus on complicated cases.

To Amhara region referral Hospitals:-

- It is very important to work closely with zonal health department and district health office from where high numbers of by passer are existed by identifying the gaps in those areas.

To zonal health department and woreda health office:-

- In addition working with hospitals, there should be an effort to establish a community interface with health care providers in improving women's attitude and perception towards lower level health care facilities and care providers working there.

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Annexes

Annex 1: Verbal Consent Form

Hello. My name is _____ and I am here to collect health related data for the purpose of research.

I would like to ask you questions related to women attitudes on the utilization of referral hospitals with delivery service while you were giving birth at this hospital. The information you provide will help us to improve the quality of delivery care, which is vital to improve maternal and child health. We assure you that whatever information you provide will only be used for the purpose of this research and will not be made available to anyone. I appreciate you too much for your willingness and support to respond the interview. We also assure that the interview process will not bring any harm to you and your family. The interview process will require approximately 20 to 25 minutes of your time. Your participation is voluntary. If you choose not to answer a particular question, that is your right. You are also permitted to withdraw any time from the study when you feel uncomfortable with it.

The purpose of the study and confidentiality procedures has been explained to me and I on my own consent: a) agree ---- b) disagree

If the subject does NOT agree to voluntarily participate in the study, document the reason for their abstention in the space provided below.

Date of Interview ----- Time Started-----Time Finished-----

Interviewer's Name -----

Interviewer's Signature -----

Thank you very much!

Annex 2: Data collection Tools

Participant # _____

Questionnaire code: _____

Part I : Socio demographic characteristics questions

S.N	Questions	Response	Remark
101	Age in completed years at interview time	----- years	
102	Marital status	1. Single 2. Married 3. Separated 4. Divorced 5. Widowed 6. Other, specify	
103	Religion	1. Orthodox 2. Muslim 3. Protestant 4. Catholic 88. Other, specify	
104	Educational status of the mother	1. Illiterate 2. Only read & write 3. Elementary (1-6) 4. Secondary school (7-12) 5. 12+ 88. Other, specify	

105	Ethnicity	1. Amhara 2. Oromo 3. Tigray 4. Agew 88. Other, specify	
106	Occupation	1. House wife 2. Farming 3. Civil servant 4. Daily Laborer 5. Merchant 6. Servant or maid 7. Student 88. Other, specify	
107	What is your house hold monthly income ?	1.----- Birr per month 2. I don't want to tell	
108	Educational status of the husband	1. Illiterate 2. Only read & write 3. Elementary (1-6) 4. Secondary school (7-12) 5. 12+ 88. Other, specify	
109	Residence	1 Urban 2.Rural	

Part Two: Obstetric related Questioner

S.N	Questions	Response	Remark
201	How many times do you gave birth?(number including the new baby)	-----times	
202	Was the pregnancy planned?	1. Yes 2. No	
203	Did you have ANC follow up during current pregnancy?	1. Yes 2. No	
204	How many times did you receive antenatal care during this pregnancy	-----times	
205	Where did you attend your ANC visit?	1. Health post 2. Health center 4. Primary Hospital 5. General Hospital 6. Private clinic 7. In this hospital 88. Other, specify-----	
206	As part of your antenatal care during this pregnancy, were any health problem identified and told?	1.Yes 2.No	

207	If yes, which signs of pregnancy complications were you told about?	<ol style="list-style-type: none"> 1. HPT disorders 2. Cardiac 3. Diabetes 4. Anemia 5. Asthma 6. Epilepsy 7. HIV 8. multiple pregnancy 9. Rhesus negative 10. other, specify..... 	
208	What was the mode of your last delivery?	<ol style="list-style-type: none"> 1. Spontaneous vaginal delivery 2. Instrumental delivery 3. Cesarean section 4. I did not remember 88. Other, specify 	
209	Did you encounter any health problems during labour, delivery and immediately after birth during your last delivery	<ol style="list-style-type: none"> 1. Yes 2. No 	
210	If yes, what were the problems?	<ol style="list-style-type: none"> 1. Excessive Vaginal bleeding 2. Prolonged labor(>12 hrs) 3. Retained placenta (>1hr) 4. Inability to control urine/faces/both 5. Mal-presentation 6. Fetal death 7. Early rupture of membrane 8. Loss of consciousness 88. Other, specify 	

Part III Perceived Hospital quality of care related Questioner

S.N	Questions	Response	Remark
301	Are you referred from other facility?	1. Yes 2. No	
302	If Yes, Do you have referral slip with you?	1. Yes 2. No	
303	If No, Why do you prefer to deliver at this hospital?(More than one response is possible)	1. Hospital is near to me 2. There is better service and out come with delivery service in the previous time at this Hospital 3. I was told to deliver at this facilities 4. Difficulty occurred in labor 5. Bad outcome with previous in other facility 88. Other, specify-----	
304	How do you evaluate the quality of care with delivery service at this hospital?	1. Excellent 2. very good 3. Good, 4. fair or 5. poor	
305	Would you recommend the delivery services of this hospital to someone else?	1. Yes 2. No	
306	How long did it take you to get here from your home?"	1. -----kms or -----walking hours	
307	What mode of transport you used to reach to the health facility?	1. On foot 2. On horse/mule back 3. Local stretcher 4. Ambulance 5. Other Vehicle 88. Other, specify	
308	Who decides place for your child birth	1. Self 2. Husband 3. Relatives 4. Other family members 5. Religious leader 88. Other, specify	

Part IV: Lower level health care facilities related questioner

S.N	Questions	Response	Remark
401	Is there health facility in your vicinity?	1.Yes 2.No	
402	If yes, how far is it?	_____kms or _____walking hours	
403	What type of health facility is it?	1.Health post 2. Health center 4. Primary Hospital 5. General Hospital 6. Private clinic 88. Other, specify-----	
404	Does the health facility provide delivery services?	1.Yes 2.No 3.I do not know	
405	If the answer is yes, If you told to go would you be able to do so?"	1. Yes , IF "YES"—GO TO 407, 2. No 3. Don't know	
406	What would be the reasons for not going to nearby health care facility for delivery services (Probe: Is there any other reason?)	1. Lack of drugs, medical equipment and supplies 2. Lack of trust on health care providers in the facility 3. Not recommended by husband, relatives and other family 4. Bad experience in the previous time 5. Unfriendly approach of health care providers 6. Facilities are not working 24 hours 7. Other, specify:-----	

407	Did health care provider in your nearby facility communicate with you effectively?	1. Yes 2. No	
408	Is the diagnostic setup in the nearby health care facilities are adequately equipped	1. Agree 2. Disagree 3. In different	
409	Health facilities in nearby are staffed with skilled professionals to provide delivery service.	1. Agree 2. Disagree 3. In different	
410	Did health care provider offered courtesy and respect?	1. Agree 2. Disagree 3. In different	
411	Where do you preferred to give birth for your next delivery?	1. In this hospital 2. In the nearby facility 3. home 4. other, specify-----	

ጅማ ዩኒቨርሲቲ የህብረተሰብ ጤና እና የህክምና ፋካሊቲ

ለተሳታፊዎች የሚነገር አጭር መረጃ

ትዉዉቅ

ጤና ይስጥልኝ እኔ ----- እባላለሁ በጅማ ዩኒቨርሲቲ የህብረተሰብ ጤና እና የህክምና ፋካሊቲ ትምህርት ቤት ጤና ነክ መረጃዎችን ለማሰባሰብ የጥናት ቡድን አባል ነኝ የጥናቱ ዓላማ እናቶች ለሪፈራል ሆስፒታሎች ያላቸውን አመለካከት እና ወደ ሆስፒታሎች የሚመጡበትን አግባብ ለማየት፣ እነዲሁም ላሉት ችግሮች የመፈተሄ ሀሳብ ለመጠቀም ነው። ለዚህ ዓላማ የወሊድ አገልግሎት በሚያገኙበት ወቅት የነበረዎትን መረጃ እንሰበስባለን በመሆኑም የሚሰጡን መረጃ መንግስትና የሚመለከታቸው አካላት የሚሰጠውን የማዋላጃ አገልግሎት ጥራት ለማሻሻል ይረዳቸዋል ። በጥናቱ ላይ በመሳተፍዎ በእርስዎም ሆነ በቤተሰብዎ የሚደርስብዎ ችግር የለም ቃለ መጠይቁ ከ 20 — 25 ደቂቃዎች ያህል የሚወሰድ ሲሆን በጥናቱ ላይ የሚሳተፍት በፍላጎት ነው ። በሙሉም ሆነ በከፊል ያለመሳተፍ መብትዎ የተጠበቀ ነው። በጥናቱ ላይ ያለመሳተፍ ውሳኔዎ የተከበረ ከመሆኑም በላይ ሚስጥርዎት እንደማይባክን እርግጠኛ ይሁኑ

በጥናቱ ለመሳተፍ ፈቃደኛ ነዎት

አዎን-----

አይደለም-----

ፈቃደኛ ካለሆኑ ያልሆኑበትን ምክንያት ይግለጹ -----

ቃለ መጠየቅ የተካሄደበት ቀን ----- የተጀመረበት ሰዓት -----

ያለቀበት ሰዓት -----

ቃለ መጠይቅ ያካሄደው ሰው ስም -----

ፊርማ -----

ስለ ትብብረዎ በጣም እናመሰግናለን !

ክፍል አንድ፣ የተጠያቂው አጠቃላይ የማህበራዊና ኢኮኖሚያዊ መረጃ የተመለከተ መጠይቅ

ተ.ቁ	ጥያቄዎች	አማራጭ መልሶች	ኮድ
101	አሁን እድሜዎ ስንት ነው	----- ዓመት	
102	የጋብቻ ሁኔታ	<ol style="list-style-type: none"> 1. ያላገባች 2. ያገባች አብረው የሚኖሩ 3. አግብታ ተለያይተው የሚኖሩ 4. ባልዋ የሞተባት 5. አግብታ የፈታች 	
103	ሐይማኖት	<ol style="list-style-type: none"> 1. ኦርቶዶክስ 2. እስላም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ(ይጠቀስ)_____ 	
104	የትምህርት ደረጃዎ	<ol style="list-style-type: none"> 1. ምንም አላውቅም 2. ማንበብና መጻፍ ብቻ 3. አንደኛ ደረጃ ያጠናቀቀ 4. ሁለተኛ ደረጃ ያጠናቀቀ 5. ከፍተኛ ትምህርት ያጠናቀቀ 6. ሌላ (ይጠቀስ) 	
105	ብሔር	<ol style="list-style-type: none"> 1. አማራ 2. ኦሮሞ 4. ትግሬ 5. አገው 6. ሌላ ይጠቀስ 	
106	የስራ ድርሻዎ	<ol style="list-style-type: none"> 1. የቤት እመቤት 2. አረሶ አደር 3. የመንግስት ሰራተኛ 4. የቀን ሰራተኛ 5. ነጋዴ 6. የቤት ሰራተኛ 	

		8. ተማሪ 10. ሌላ ካለ (ይጠቀስ) -----	
107	የወር ገቢ በወር ሲሰላ?	1-----ብር/ኩንታል እህል 2. ለመናገር ፍቃደኛ አይደለሁም	
108	የባለቤትዎ ትምህርት ደረጃ?	1. ምንም አያውቅም 2. ማንበብና መጻፍ ብቻ 3. አንደኛ ደረጃ ያጠናቀቀ 4. ሁለተኛ ደረጃ ያጠናቀቀ 5. ከፍተኛ ትምህርት ያጠናቀቀ 6. ሌላ (ይጠቀስ)	
109	የሚኖሩበት አካባቢ	1. ከተማ 2. □□ር	

ክፍል ሁለት :- እርግዝናና የወሊድ ሁኔታን በተመለከተ

201	ስንት ጊዜ ወልደዋል?	1-----ጊዜ	
202	እርግዝናዎ የታቀደ ነበር?	1. አዎ 2. አይደለም	
203	የነፍሰጡር ምርመራና ክትትል አድርገው ያወቃሉ?	1. አዎ 2. አላወቅም	
204	መልሰዎ አዎ ከሆነ እስከሚወልዱ ድረስ ስንት ጊዜ ክትትል አድርጉ?	1-----ጊዜ	
205	የነፍሰጡር ምርመራና ክትትል ያደረጉት የት ነበር?	1. ጤና ኬላ 2. ጤና ጣቢያ 3. የገጠር ሆስፒታል 4. የዞን ሆስፒታል 5. እዚህ ሆስፒታል 6. የግል ክሊኒክ 7. ሌላ ካለ ይጠቀስ-----	

206	በክትትል ወቅት ከጤና ባለሙያዎች የተነገረዎት የጤና ችግር አለ?	1.አዎ 2.የለም	
207	አዎ ከሆነ ምልሰዎ መንድን ነበር?	1.የደም ግፊት 2.የልብ ህመም 3.የስኩር ህመም 4.የደም ማነስ ህመም 5.የአስም በሽታ 6.የሚጥል ህመም 7.ኤች.አይ.ቢ ኤድስ 8.መንታ እርግዘና 9.ሾትላይ ችግር 10.ሌላ ካለ ይጠቀስ	
208	ከዚህ በፊት የወለዱት በምን መልኩ ነበር?	1. በማህፀን በኩል ያለምንም መሳሪያ 2. በማህፀን በኩል በመሳሪያ በመታገዝ 3. በሆዴ በኩል ኦፕሬሽን ተሰርቶ 4. በትክክል አላስታዎስም 5. በሌላ ካል ይጠቀስ	
209	ከዚህ በፊት ሲዎልዱ በምጥ፣በዎሊድና በድረ ዎሊድ ወቅት ያጋጠመዎት ችግር አለ?	1.አዎ 2.የለም	
210	አዎ ከሆነ መልሰዎ፣የተከሰቱት ችግሮች ምን ነበሩ?	1.ከፍተኛ ደም መፍሰስ 2.የተራዘመ ምጥ (ከ12 ሰዓት በላይ) 3.የእንግዴ ልጅ/ስንግ መቅረት 4.ሽንትና ሰገራን ምቆጣጠር አለመቻል 5.ያልተስተካከለ ፅንስ አቀማመጥ 6.የፅንስ (ሽል) መጥፋት 7.የሽንት ውሃ ቀድሞ መፍሰስ 8.ራስን መሳት 9.ሌላ ካለ ይጠቀስ	
ክፍል ሶስት : የሆስፒታሉ አገልግሎት አሰጣጥ ጥራት እይታን የሚመለከት ጥያቄዎች			
301	ወደዚህ ሆስፒታል የመጡት ለከፍተኛ ህክምና ባአቅራቢያዎ ከሚገኘው ተቆም ተልከው ነው ?	1.አዎ 2.አይደለም	

302	አዎ ካሉ ባአቅራቢያዎ ከሚገኘው ጤና ተቆም ወደዚህ ሆስፒታል ለከፍተኛ ህክምና የተላኩበት ወረቀት ይዘዋል?	<ol style="list-style-type: none"> 1.አዎ 2.አልያገዘኩም 	
303	ለጥያቄ ቁጥር 301 መልሰዎ አይደልም ከሆነ ለምንድን ነው በዚህ ሆስፒታል ለመውለድ የመረጡት? /ምርጫዎች አይነብብም /	<ol style="list-style-type: none"> 1. ከምኖርበት ቦታ ቅርብ ስለሆነ 2. ከዚህ በፊት ተገልግሎት ጥሩ ነገር ስላጋጠመኝ 3. እዚህ ሆስፒታል እንደወልድ ስለተነገረኝ 4. የወሊድ(ምጥ) ችግር ስላጋጠመኝ 5.ከዚህ በፊት ሌላ ቦታ ችግር ስላጋጠመኝ 6.ሌላ ምክንያት ካለ ይጥቀሱ----- 	
304	የሆስፒታሉን የአገልግሎት አሰጣጥ ጥራት እንዴት ይገመግሙታል?	<ol style="list-style-type: none"> 1.እጅግ በጣም ጥሩ 2.በጣም ጥሩ 3.ጥሩ 4.ደህና 5.መጥፎ 	
305	በሆስፒታሉ የሚሰጠው የወሊድ አገልግሎት ሌሎችም ተጠቃሚ እንዲሆኑ ይነግራሉ?	<ol style="list-style-type: none"> 1. አዎ 2. የለም 	
306	ይህ ሆስፒታል ከመኖሪያ ቤትዎ ምን ያህል ይርቃል?	<ol style="list-style-type: none"> 1. -----በኪሎ ሜትር ወይም በአግር ----- ሠዓት 	
307	ወደዚህ ሆስፒታል በምን መጡ?	<ol style="list-style-type: none"> 1. በእግር 2. በጋማ ከብት ጀርባ 3. በቃሬዛ 4. በአንቡላነስ 5. በሌላ ተሽከርካሪ 6. ሌላ ካለ ይጠቀስ----- 	
308	ወደዚህ ሆስፒታል መጥተው እንዲያለዱ የወሰነው ማን ነበር?	<ol style="list-style-type: none"> 1. እኔ ራሴ 2. ባለቤቴ 3. ዘመዶቼ 4. የሀይማኖት አባት 5. ሌላ ካለ ይጠቀስ----- 	

ክፍል 4: ከሪፈራል ሆስፒታል ደረጃ በታች ያሉ ጤና ድርጅቶችን የተመለከተ ጥያቄዎች

401	በሚኖሩበት አካባቢ የሚገኝ የጤና ድርጅት አለ?	1.አዎ 2.የለም	
402	መልሰዎ አዎ ከሆነ በምን ያህል ርቀት ለይ ይገኛል?	1.----- ኪሎ ሜትር ወይም ----- ስዓት የግር መንገድ	
403	በሚኖሩበት አካባቢ የሚገኝ የጤና ድርጅት ምንድን ነው?	1. ጤና ኬላ 2. ጤና ጣቢያ 3. የገጠር ሆስፒታል 4. የዞን ሆስፒታል 5. ይህ ሆስፒታል 6. የግል ክሊኒክ/ሆስፒታል 7. ሌላ ካለ ይጠቀስ----	
404	በሚኖሩበት አካባቢ የሚገኘው የጤና ድርጅት የወሊድ አገልግሎት ይሰጣል?	1. አዎ 2. የለም 3. አላዎቅም	
405	መልሰዎ አዎ ከሆነ እዚህ ከመምጣትዎ በፊትለዎሊድ አገልግሎት ወደዚህ ተቐም መሄድ እንዳለበዎት ቢነገረዎት ኖሮ ይሄዱ ነበር?	1. አዎ(አዎ ካሉ ወደ ጥያቄ ቁጥር 407ይለፉ) 2. የለም 3. አላዎቅም	
406	የለም ካሉ ወደ እነዚህ የጤና ተቆማት ሄደው የዎሊድ አገልግሎት እንዳያገኙ የሚያደርገዎት ምክንያቶች ምንድን ናቸው?	1.የህክምና መሳሪያዎችና መድሀኒት አቅርቦት ያልተሟላት በመሆኑ 2. የወሊድ አገልግሎት በሚሰጡ ባለሙያዎች ለይ እምነት የለኝም 3.ባለቤቴ፤ቤተሰቦቼና ዘመዶቼ እንድሄድ ስለማይመክሩኝ 4. ከዚህ በፊትሌላ ቦታ ወልጄ ችግር ስላጋጠመኝ 5. አገልግሎት የሚሰጡ ባለሙያዎች አቀራርብ	

		<p>ስለማይስበኝ</p> <p>6. የ24 ሰዓት አገልግሎት ስለመይሰጡ</p> <p>7. ሌላ ካለ ይገለፅ-----</p>	
407	<p>በሚኖሩበት አካባቢ በሚገኘው የጤና ድርጅት አገልግሎት ሰጭ ባለሙያዎች ሰላምታና ጥሩ አቀባበል ያድርጉለዎታል ?</p>	<p>1.አዎ</p> <p>2.የለም</p> <p>3.ምንም አስተያየት የለኝም</p>	
408	<p>በሚኖሩበት አካባቢ በሚገኘው የጤና ድርጅት በቂ የናሙና መመርመሪያ መሳሪያዎችና ቁሰቀቁሶች የተማላ ነው ብለው ያስባሉ?</p>	<p>1.እስማማለሁ</p> <p>2.አልስማማም</p> <p>3. ምንም አስተያየት የለኝም</p>	
409	<p>በሚኖሩበት አካባቢ በሚገኘው የጤና ድርጅት በቂ እና ክህሎት ባላቸው ባለሙያዎች የትማላ ነው ብለው ያስባሉ?</p>	<p>1.እስማማለሁ</p> <p>2.አልስማማም</p> <p>3. ምንም አስተያየት የለኝም</p>	
410	<p>በሚኖሩበት አካባቢ በሚገኘው የጤና ድርጅት ውስጥ አገልግሎት ሰጭው ባለሙያ ክብርና ትህትና አላቸው?</p>	<p>1.አዎ</p> <p>2.የለም</p> <p>3.ምንም አስተያየት የለኝም</p>	
411	<p>ለሚቀጥለው ጊዜ የት መውለድ ይፈልጋሉ?</p>	<p>1.እዚሁ ሆስፒታል</p> <p>2.ባቅራቢያ ባለው ጤና ተቐም</p> <p>3.እቤቴ</p> <p>4.ሌላ ካለ ይጠቀስ-----</p>	

Annex 3:Declaration

I, the undersigned, declare that this thesis is my original work and has not been presented for a degree in any other University, and that all the resources of materials used for this thesis have been duly acknowledged.

Declared by:

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Name and signature of internal examiner

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Date of submission _____

