ADDIS ABABA UNIVERSITY

SCHOOL OF MEDICINE, COLLEGE OF HEALTH SCIENCE

DEPARTMENT OF NURSING & MID-WIFERY

QUALITY OF CARE IN DELIVERY SERVICE AT PUBLIC HEALTH INSTITUTIONS IN BAHIR DAR TOWN, ETHIOPIA

BY: MICHAEL TAMENE (MSC CANDIDATE)

ADVISOR: YOSEIF TSIGE (RN, BSC, MSC)

A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS IN MATERNAL AND REPRODUCTIVE HEALTH NURSING

June 2012

Addis Ababa, Ethiopia

ADDIS ABABA UNIVERSITY

SCHOOL OF MEDICINE, COLLEGE OF HEALTH SCIENCE

DEPARTMENT OF NURSING AND MIDWIFERY

QUALITY OF CARE IN DELIVERY SERVICE AT PUBLIC HEALTH INSTITUTIONS IN BAHIR DAR TOWN, ETHIOPIA

Principal investigator: Michael Tamene

Address: Addis Ababa, Ethiopia

Mobile: +251 910 484420

Email: michaeltamene@yahoo.com

Advisor: Ato Yoseph Tsigie

Approved by the examining board

_____	_____
Chairman Dep. graduate committee	Signature
_____	_____
Advisor	Signature
_____	_____
Examiner	Signature

Acknowledgments

First of all, Praise to almighty God for his blessings and brought me to this very victorious time.

I would like to thank Addis Ababa University, department of Nursing and Midwifery for giving me the opportunity to carry out this research project.

I am deeply grateful to acknowledge my advisor Yoseph Tsige (MScN,) for his relevant and constructive comments and guidance during the whole Research proposal process.

I would like to extend my gratitude to federal ministry of health for their optimistic support and cooperation starting from the very beginning of this project.

My heartfelt gratitude goes to my lovely family for their encouragement and support in preparation of this thesis work.

At last but not least, I would like to thank Addis Ababa University, College of health science librarians for providing me the necessary facility and information.

Abstract

Background: Delivery and the time immediately after, is the most critical stage for every pregnancy, and this is the stage where quality of care available does matter. 99% of world's maternal deaths occur in developing countries. More than half of these deaths occur in sub-Saharan Africa including Ethiopia, and most were avoidable. Ethiopia's maternal mortality rate continues at an unacceptably high level. The percentage of deliveries attended by skilled health personnel at health institutions declined from 18.4% in 2009 to 16.8% in 2010, which is much below the target of 37.0% .This percentage, is very low, largely below the Sub Saharan African average of 47% in 2009 and very far from MDG target of 90% coverage. This is because of actual quality of care for deliveries have received relatively less research attention than other areas of health care.

Objective: The objective of this study is to assess the quality of delivery services at public health institutions in Bahir Dar town, Amhara regional state, Ethiopia.

Methods: Quantitative cross-sectional study was conducted on three health facilities from September 2011 to May 2012. Convenient non-probability sampling technique was used and samples were allocated proportionally to each facility according to their previous year delivery uptake. Data was collected using three data collection instruments; Exit Interview, Observation and facility assessment. Data entry, cleaning and analysis, using descriptive values and binary logistic regression for association test, were done.

Result: A total of 400 delivering mothers for exit interview and 40 deliveries for observation were participated from Felege Hiwot referral hospital, Bahir Dar and Han health centers. In exit interview, the study revealed that 216 (54%) of mothers were satisfied while 184 (46%) dissatisfied with the delivery care given. A total of 167 (41.8%) of mothers satisfy with the distance over home to facility. Among other facility related satisfaction; cleanliness of toilets, overall cleanliness and comfort of the waiting area and examination room satisfaction were the first three least values; 184 (46.0%), 179 (47.1%) and 198 (49.5%) respectively. Regarding care provider related satisfaction completeness of information given by health professionals, measures taken to assure privacy and feeling of confidentiality were the first least values according to mothers view; 163 (40.8%), 169 (42.2%) and 196 (49.0%) respectively. After adjusting for confounding socio demographic factors maternal age and monthly income were significantly associated with satisfaction of delivery services. When obstetric factors were adjusted; parity, maternal and fetal outcomes had significantly associated with mothers' satisfaction (p-values<0.05). During observation, it was revealed that in 46% of cases health

providers performed well while, 54% of them not performed well. Providers who introduce themselves were only 15% while only 40% of providers seen greeting the woman with kindness and respect. No provider encourages the woman to ask questions or explain procedures before performed except in one of cases for each. Three quarter of the providers did not maintained privacy. Labor and delivery services were available in all the three health institutions 24 hours a day, every day. However, availability of personnel as the main task in delivery care during duty times was abscent in both of health centers. Client privacy related issues were commonly lacking infrastructures in the delivery room of the three facilities. Drug shortage was prominent in Han health center. Basic equipment and supplies were fairly available and adequate than other components in all health facilities.

Conclusion and Recommendation: The overall quality of care in delivery services at public health institutions found to be suboptimal and the current performance of providers was found to be below the average. There were a lack of service availability, infrastructure, personnel, essential drugs, equipments and supplies essential to quality of delivery care. Therefore, strengthen health systems by providing indicators to measure and compare the quality of delivery care services provided at each level of health facility, make provider training and capacity building the pillar of delivery services and improvement of basic infrastructures for performance of delivery service to reduce maternal and newborn mortality in line with MDGs 4 and 5 are recommended.

Abbreviations and Acronyms

ANC - Antenatal Care

CQI - Consumer Quality Index

EmOC - Emergency Obstetric Care

EPIINFO - Epidemiological Information

MDG - Millennium Development Goal

MMR - Maternal Mortality Rate

OR - Odds Ratio

PQI - Performance and Quality Improvement

QoC - Quality of Care

SPO - Structure, Process, and Outcome

SPSS - Statistical Package for Social Sciences

TBA - Traditional Birth Attendants

UNICEF - United Nations International Children's Emergency Fund

WHO - World Health Organization

List of Tables

List of Figures

List of Annexes

Table of Contents

CHAPTER ONE: INTRODUCION

1.1. Background

Delivery services refer to the procedures associated with labor delivery and care for the mother immediately following birth. Delivery and the time immediately after, is the most critical stage for every pregnancy, and this is the stage where quality of care available does matter (1, 2). Proper care by skilled attendant during pregnancy and delivery is important for the health of both the mother and the baby, and is the fifth Millennium Development Goal (MDG). This indicator is a measure of a health system's ability to provide adequate care for pregnant women. Concerns have been expressed that the term skilled attendant may not adequately capture women's access to good quality care, particularly when complications arise (3).

Traditionally in developing countries, quantity rather than quality of healthcare has been the focus; however, for real improvement to be achieved, quality of care must be at the centre of attention, which in turn is reflected in levels of maternal mortality. In order to function adequately and facilitate improvements in health outcomes such as low rates of maternal mortality, a health system not only requires adequate resources in terms of finances, health care personnel, equipment and facilities, but also a well-developed culture of quality of care (4).

Assessing quality in delivery service means, measuring the gap between the qualities of care as perceived by the providers and as perceived by the women users. To assess and improve the quality of care at the time of delivery needs to be a priority area of enquiry. This is understandable given the lack of progress in reducing maternal and newborn deaths in many developing countries and the known concentration of these deaths at delivery (5). The importance of skilled care for mothers and newborns at this critical time has long been acknowledged and is reflected in global targets for skilled attendance at institutional deliveries.

The effect of quality delivery care considered primarily in terms of maternal and neonatal mortality. The implementation of policies to encourage birth in health facilities without proper consideration of quality is likely to produce adverse effects, or at least to prevent poor countries from realizing the full benefits of such care for mothers and babies. If, on the other hand, quality is make a priority in facilities it may lead naturally to a reduction in home births,

in line with country strategies. Poor quality of care has long been recognized as a barrier to both the timely uptake of services and the achievement of health gains. Despite this, quality has yet to be addressed in a systematic way and has been largely lacking as a core component from strategies and interventions. Significant gains have been made in developing systematic mechanisms to measure and track coverage of services, such as the Countdown to 2015. This progress now needs to be matched with strengthening approaches to capturing quality of care (4,5).

It was increasingly important to recognize that quality of maternity care such as delivery service is not a luxury; rather it is an expression of making services cost-efficient by meeting women's health needs in an appropriate way. Additionally, much empirical evidence indicates that under use of existing services, which is tangible problem in many settings in low-income countries, directly related to substandard quality of maternity care. Substantial evidence exists, which shows that quality of care is one of the major factors in women's behavior towards seeking maternity care. Quality of delivery care has a direct effect on maternal mortality ratio. Available evidence suggests that a significant proportion of maternal and newborn deaths are attributable to poor technical quality of care (6).

According to WHO Department of Making Pregnancy Safer, 2010 report: for many Africans, especially sub Saharan African countries, the lifetime risk of dying from pregnancy related cause is as high as one in 16. Women in Africa have the highest lifetime risk of maternal death because of the effect of high mortality rate is compounded by poor quality of maternity care services. This further associated with low utilization of maternity care services including delivery service. Even Fewer women have the birth attended by a skilled health worker. The 63% average for low- and middle-income countries covers large differences: from 34% in eastern Africa to 93% in South America (7, 8).

A cornerstone of the WHO guidance is guidelines on effective, efficient, safe and culturally appropriate services (7). Previous studies has shown that a number of maternal deaths occur, even after reaching and seeking maternity care services either at primary; secondary and tertiary level. Among these delivery care service is the major one. Keeping all these reasons in view, assessment of quality of delivery services has been decided to be the focus of this study.

1.2. Statement of the problem

"The question should not be why do women not accept the service that we offer, but why do we not offer a service that women will accept? (1)"

Every day, 1500 women die from pregnancy or childbirth related complications. In 2005, there were an estimated 536 000 maternal deaths worldwide. Among these 99% of all maternal deaths, occur in developing countries. More than half of these deaths occur in sub-Saharan Africa, and most were avoidable. The high incidence of maternal death is one of the signs of major inequity spread throughout the world, reflecting the gap between rich and poor (7). Maternal mortality is therefore both a health and a development indicator. In fact, the risk of dying during pregnancy is 1/16 in the poorest countries compared with 1/30 000 in Northern Europe– the largest difference between poor and rich countries of any health indicator. In Millennium Development Goal 5 (MDG5), countries have committed to reducing the maternal mortality ratio by three quarters between 1990 and 2015. However, between 1990 and 2005 the maternal mortality ratio declined by only 5%. Achieving Millennium Development Goal 5 requires accelerating progress (7,8,9).

Maternal death has an impact in the health and well-being of families, communities and in general in the social and economic situation of the societies. Each year an estimated US $15.5 billion is lost in potential productivity when mothers and newborns die. When a woman dies in childbirth, her infant and any other children's survival is threatened. Infants without mother are more likely to die within two years. Children up to 10 years whose mothers die are 3 to 10 times more likely to die within two years than children living with mothers. Maternal death has long-term effects on a child's education and health. When a mother dies, older children often leave school to support their family (8).

Global efforts to reduce maternal mortality – including the millennium development goals – have focused on increasing trained attendance at childbirth. Such a strategy would also reduce neonatal deaths. This approach indirectly encourages institutional childbirth but assumes that facility-based quality of care avoids harm and is life-saving. The actual quality of care – for both normal deliveries, which constitute the majority of deliveries worldwide, and those with complications – has received relatively less research attention than other areas of health care (10).

Quality of maternal health including delivery care internationally has been described as a 'neglected' agenda in maternal health. Numerous studies have shown that the quality of care received by mothers is poor in many developing countries, so contributing to the high levels of maternal mortality (11). International evidence suggests that the most important factor in reducing maternal and early neonatal mortality is the attendance of a skilled birth provider. However, not all "skilled birth attendants" are actually skilled. In fact, the quality of the care provided by skilled birth attendants is often unknown. Maternal deaths arise from the risks attributable to pregnancy and childbirth as well as from the poor quality care from health services (12).

Worldwide, 34% of deliveries have no skilled attendant. This means 45 million births occurring at home without skilled health personnel each year. Skilled attendants assist in more than 99% of births in more developed countries versus 62% in developing countries. In five countries, including Ethiopia the percentage is less than 20%. There are many reasons why women do not receive the care they need during childbirth. Many pregnant women do not get it because they cannot afford the services, they are too expensive or reaching them is too costly and they do not like how care is provided or because the health services are not delivering high-quality care (7,13).

Ethiopia's maternal mortality rate continues at an unacceptably high level. Even if with projections based on models estimating MMR in Ethiopia at 470 per 100,000 live births in 2011, there is still more to be done. In Ethiopia unlike to other maternal health services, the percentage of deliveries attended by skilled health personnel declined from 18.4% in 2009 to 16.8% in 2010, which is much below the target of 37.0% set for 2010, with wide variations across regions. A decrease observed in five regions including Amhara region. This percentage is very low, largely below the Sub Saharan African average of 47% in 2009 and very far from MDG target of 90% coverage (14).

The reasons forwarded by researchers for the higher maternal mortality, and lower coverage of skilled delivery in Ethiopia include the poor quality of maternity care. This includes not only the quality of clinical care but also gender sensitivity, preservation of dignity and cultural sensitivity (15). It also revealed that older mothers and Traditional birth attendants (TBAs) more accepted by the community than the health workers because of their experience and the

respect to privacy of the laboring mother. They also perceived that the health workers were not good on handling and respecting the laboring mothers (16).

Over the last decade, much attention has been given to narrowly defined provision or coverage indicators as ways to track progress at national and international levels. The quality dimension has received less attention until recently, in part owing to the challenges of defining and capturing realistic indicators (11). Only a limited number of institutions and initiatives concerned with quality of care (including delivery care) in Ethiopia were identified. In 2009, the WHO stated that the Ethiopian health system is not fully functioning to help in addressing the existing health problems; utilization of services is 0.32 per capita reflecting low availability, low basic service capacity standards, affordability and quality (17).These factors together with the community level factors explain the extremely low utilization of health services for delivery.

We cannot improve delivery care if we do not measure it. currently, a comprehensive set of nationally endorsed delivery care performance measures does not exist, many types of data relevant to maternity care quality are not routinely and systematically collected, and public reporting of delivery care performance has been very limited. Therefore, this study is aimed to assess the quality of delivery services in Bahir Dar town, Amhara regional state of Ethiopia. The result of this study will give information on the current performance of delivery care services and can help program planners, policy makers and health care providers to focus and improve on the performance of delivery care services based on the findings of the study.

1.3. Significance of the study

At most, the study findings will serve as a source of maternity care performance data to develop initiatives that foster improvement in the quality and value of maternity care at each level and throughout the system. It contributes in identifying the current weaknesses of the health system in the area of delivery care services, the critical input in maternity care service. This can help program planners, policy makers and health care providers to improve the current level of performance in obstetric care and designing of new strategies for quality improvement. Through this, performance of care and utilization skilled birth attendants increases at the same time. As a result, reduction of maternal mortality and morbidity will occur. Additionally, the result of this study will help as a baseline data for further large-scale studies in the areas of obstetric care services. It also has an implication for health professionals including nursing and midwifery since it generates obstetrics knowledge that could be incorporated into the care of delivering mother, guides and indicates direction to areas of future research in these particular health enquiries.

CHAPTER TWO: LITERATURE REVIEW

2.1. What is Quality of care?

One of the simplest definitions of *quality of care in* health is care that is "clinically effective, safe and a good experience for the patient." A more comprehensive description refers to quality of care in terms of meeting standards in ways that are safe, effective, patient-centered, timely, efficient and equitable. What is common to all definitions is the need to see quality of care as much more than just a matter of technical skills and the supply of services. Good quality care must also respect the perspectives and needs of the patient or client (18).

Defining quality in the context of maternal health incorporated the concept of both effective and timely access, and of reproductive health rights:
'Quality of care is the degree to which maternal health services for individuals and populations increase the likelihood of timely and appropriate treatment for the purpose of achieving desired outcomes that are both consistent with current professional knowledge and uphold basic reproductive rights.' This recognizes the importance of two components of care: the quality of the provision of care – the service and the system, and quality of care as experienced by users. The use of services and outcomes are the result not only of the provision of care but also of women's experience of that care. Provision of care may be deemed of high quality against recognized standards of care but unacceptable to the woman, her family and the community. Conversely, some aspects of care may be popular with women but may be ineffective or harmful to their health and that of their babies. Although this definition seems to refer to the mainly 'formal' health services, clearly problems of poor care are also prevalent in the informal sector and warrant attention, for example, services provided by 'quacks' or untrained Traditional Birth Attendants (18,19). Quality in this study is defined in terms of the way clients are treated by the delivery care service points.

Key determinants of quality include the technical competence of providers, their interpersonal skills, the availability of basic supplies and equipment, the quality of physical facilities and infrastructure, linkages to other health services and the existence of a functional referral system. High quality maternal health services must be accessible, affordable, effective, appropriate for and acceptable to the women who need them (20).

Good quality maternal health services are those, which meet the following (20,21):

- Are accessible and available as close as possible to where women live, and at the lowest level facility that can provide the services safely and effectively;
- Are acceptable to potential users and responsive to cultural and social norms, such as preferences for privacy, confidentiality and care by female health workers;
- Have on hand all essential supplies and equipment;
- Provide comprehensive care and/or linkages to other reproductive health services;
- Provide for continuity of care and follow-up;
- Are staffed by technically competent health care providers who rely on clear guidelines/protocols for treatment;
- Are staffed by workers who provide respectful and non-judgmental care that is responsive to women's needs;
- Provide information and counseling for clients on their health and health needs;
- Involve the client in decision-making, and see clients as partners in health care and active participants in protecting their own health;
- And offer economic and social support to health care providers that enables them to do the best job they can.

The most common factors that contribute to poor quality care include substandard care, lack of drugs and supplies, delays in referrals, and poor interaction between clients and health care providers.

2.2. Quality of delivery services

In the Netherlands, a new tool is being developed to evaluate the quality of care from the perspective of clients. The tool is called: 'Consumer Quality Index' or CQI is, within a standardized and systematic framework, tailored to specific health care issues. Within the framework of developing a CQI Maternity Care, data were gathered about the care women in the Netherlands received during pregnancy, childbirth, and the postpartum period. A sample of 1,248 pregnant clients involved and based on care provider and place of birth the 'care path' of the women is described. 41.5 percent of respondents remained in primary care throughout pregnancy, labor, birth and the postpartum period, receiving care from a midwife or general practitioner, 31.3% of respondents gave birth at home. The majority of women (58.5%) experienced referral from one care provider to another, i.e. from primary to secondary care or reverse, at least once. The composite measures for the quality of treatment in different settings and by different care providers showed that women, regardless of parity, were very positive

about the quality of the maternity care they received. Quality-of-treatment scores were high: on average 3.75 on a scale ranging from 1 to 4. Overall ratings on a 0 – 10 scale for quality of care during the labor, birth and the postpartum period were high as well, on average 8.36. The care path of women in maternity care was seldom straight forward. The majority of pregnant women switched from primary to secondary care and back at least once, during pregnancy or during labor and birth or both (32). The results of the quality measures indicate that the quality of care as experienced by women is high throughout the care system. However, with regard to the care during labor and birth the quality of care scores are higher when women know their care provider, when they give birth in primary care and when their own midwife assists them.

A study was conducted in Côte d'Ivoire in order to assess the quality of normal delivery care. According to that study, a total of 229 women were included in a cross-sectional study in four urban maternity wards between 2002 and 2003. Observation checklists and exit-interviews used to examine various dimensions of care. The results showed that the overall quality of care was poor, despite most women giving birth with a professional midwife. A vaginal examination performed systematically at admission but blood pressure measured in less than half of the women. The partograph completed during labour in only 5% of cases. Episiotomy and uterine revision rates were high at 24% and 32%, respectively. There was a lack of universal hygiene precautions and women received little support during labour (25).

The Kenya Ministry of Health conduct a quality of care (QoC) survey during the first six months of 2010 to assess the care received by mothers and newborns during delivery in Kenya. Among 626 observed deliveries in 207 facilities, Fifty-seven percent of the facilities had all of the essential supplies for delivery, but only 20% had all elements to support a high quality of care during delivery (guidelines, standards, partograph, 24-hour staff or on-call). Notably, only 3% of the facilities had all seven items needed for basic emergency obstetric and newborn care and only 3% had all nine items needed for comprehensive emergency obstetric and newborn care. Overall score for provider-client communication was 61%, but during the knowledge tests, less than 30% of the providers selected "reassure client" as part of management of complications. Although no harmful practices were observed in nearly 80% of the deliveries, the use of fundal pressure (a non-beneficial practice) was observed in almost 10% of births. Ninety-one percent of facilities had essential supplies for immediate newborn care. The mean score for newborn care practices was 65%, with room for improvement in the areas of delayed cord clamping (51%) and skin-to-skin care (56%). Oxytocin was available in the delivery room

at 79% of facilities. During observations, oxytocin coverage was 90%, but only 50% of women received according to standards; correct timing alone was observed in 77% of facilities (must be within one minute of delivery) and correct dosing/route was 64% (12).

A hospital-based cross-sectional survey that involved an exit interview conducted from September to November 2009 in three referral hospitals in Ethiopia. A total of 417 delivering mothers were enrolled in the study. Client satisfaction was measured. The proportion of mothers who were satisfied with delivery care in this study was 61.9 %. Women's satisfaction with delivery care was associated with wanted status of the pregnancy, immediate maternal condition after delivery, waiting time to see the health worker, availability of waiting area, care providers measure taken to assure privacy during examinations, and amount of cost paid for service. Of all satisfaction levels, client privacy related satisfaction (46.7%), health facility distance related satisfaction (51.4%), and amount of cost paid related satisfaction (52.7%) were the first three least values (15).

2.3. Quality of existing delivery care and maternal complications

In order to identify the potential for skilled attendance to prevent the major causes of maternal death, assumptions must be made about the competency of the provider; the availability of essential drugs, equipment and supplies; the access to referral facilities; the location; and the time and duration of attendance. This assumption-based approach will now be used to consider the effectiveness of skilled attendance at two levels - the individual level, and the population level. The distinction here is crucial. At the former level, the association is considered between cases of maternal death and the type of attendant at delivery or, conversely between types of attendant at delivery and deaths among those they attend. At the population level, associations are considered in the aggregate, in other words between the maternal mortality ratio for the entire population and the proportion of deliveries in the entire population with or without skilled attendance (22).

In the absence of trial data, there are two main other types of "evidence" which can be used to explore the link between skilled attendance and the risk of maternal death at the individual level: historical and epidemiological. Neither of these can provide proof that there is a lower probability of dying of maternal causes with than without skilled attendance, owing to the

difficulty of controlling for confounding factors, such as differences in women's risk at outset or place of delivery (22, 23).

A qualitative study interviewing members of 164 households where a maternal death occurred in Mexico, found that quality of care in health services was a significant factor in a woman in labor delaying seeking medical care. Relatives reported that the decision to not to seek medical care when danger signs appear is an outright negative opinion that the woman and her partner has of modern health services, which derives from previous interactions with health providers. Another frequent problem at health services is lack of medical supervision which translated into inadequate follow-up of patients (29).

A pilot study in Punjab, Pakistan was one of the five paired demonstration projects in the "Save the Mothers" maternal mortality project. The goal of the project was to bring and improve basic and comprehensive emergency obstetric care (EmOC) in a semi urban and rural area some 30 km from Lahore. The aim was to achieve this by using the existing facilities within the rural health system without the deployment of extra specialist staff other than as initial facilitators. This report shows trebling of some performance indicators and an improvement in met need. Proportion of births at health care facilities, within the project area increased from 442 to 1694, proportion of complications treated from 379 to 1091 and proportion of caesarean section from 62 to 310 in periods Jan-Jun2000 and July2001-June2002. There is coincidentally a similar increase in the uptake of general medical services (26). It was concluded that reducing maternal mortality requires building local capacity for EmOC; the essential components being the premises, trained personnel, equipment, and availability of drugs and blood. Availability and provision of EmOC coupled with changes in the attitude of the population resulted in marked improvement of process indicators.

Safe motherhood programs assume that maternal health services can reduce maternal mortality- a serious problem in developing countries. The assumption that services make a difference is supported by historical data on the timing of maternal mortality declines, which suggest that such declines have not coincided with socioeconomic gains but with improvements in specific services. Data supporting the effect of services is also now coming from case control and experimental studies. For instance, Midhet *et al* linked lower maternal mortality in rural Pakistan to health facility staffing and the availability of essential obstetric care (27).

To help strengthen the components of the skilled attendance system, the Maternal and Neonatal Health Program used performance and quality improvement (PQI), a technique for achieving desired performance at service delivery sites and within communities. The maternal and newborn Program has used PQI to help health facilities and their beneficiaries take a comprehensive look at their skilled attendance system and identify, implement, and monitor a range of targeted interventions aimed at improving maternal and newborn healthcare services. The PQI process has proven to be an effective technique to guide key stakeholders as they systematically improve components of skilled attendance. Interventions focus on improving clinical and behavioral aspects of skilled attendance as well as factors that staff and community perceive to be crucial to enhanced performance and quality of care. PQI empowers individuals and communities to seek knowledge and services, thus increasing informed demand for high quality services. In addition, PQI can be a catalyst for collective action aimed at bringing about policy change and improving the quality of healthcare. A review of evidence concerning maternal deaths attributable to service-related factors at various levels of the referral system suggests that a substantial percentage of maternal deaths in more than thirteen countries are due to inadequate supplies and equipment or poor client management (27,28).

A study in which pregnant women were interviewed in India found that respondents identified the poor quality of service offered at government institutions to be a motivating factor for delivering at home (30).

Satisfaction with prenatal care was associated with positive perceptions of staff, long visits with doctors, ease in contacting the doctor, and shorter waiting time. A study conducted in Cebu, Philippines showed that improved quality, as measured by the availability of services and supplies, provider training, facility size, degree of crowding, price, and distance, increased the probability that poor women used formal services (6).

There is a recent and developing country example of a descriptive study. Within this cohort study of pregnant women, the component conducted in two different areas of Senegal found that among those delivering in health facilities, there were higher risks of maternal death for those conducted by non-professionals compared to women delivering with health professionals. However, again the number of deaths is extremely small and thus the confidence intervals very wide. Moreover, as for all descriptive studies there is uncertainty about the comparability of the populations in the two areas, since maternal characteristics appeared to

differ significantly in a number of respects. Interestingly, for maternal morbidity the reverse pattern was observed - with higher rates recorded in the area where more women delivering in health facilities had professional attendance. Such a finding may be attributed to improved diagnostic techniques among the professionals or to greater iatrogenicity. Further analysis to examine the proportion of women admitted in normal labour and developing complications versus those admitted with complications could help to throw some light on this (23).

A survey was conducted of 19,545 pregnant women in West Africa who were followed through the second trimester and puerperium, and the 66 resulting maternal deaths were analyzed. Twenty women died outside health facilities. The analysis confirmed that most of the maternal deaths might have been avoided had access to quality care been available. Lack of attention to women in labor at health care facilities was also responsible for a great proportion of deaths (24).

It is obvious from the results shown above, that quality of maternity care has a direct impact on maternal mortality. Quality of any health care facility has three major aspects: structure, process and outcome (28). As is shown in the studies quoted above, the most common practice is to first assess, which of these three aspects has deficiencies and problems. Number of such assessment and improvement tools and techniques have been and are being used. Choice of the method depends on a number of factors, including availability of resources, set-up of the organization, social and cultural set-up etc.

Improvement in the quality of maternity care services affects the maternal mortality ratio, in two ways (6).

1- First through better management and services provision directly to the complications brought to the facility

2- Secondly, indirectly by changing behaviors of the community towards consulting the facility, when in need of it.

There are some populations in which more than a quarter of their deliveries occur without health professionals however, the level of maternal mortality is below 250 per 100,000 live births, such as Peru, Tunisia, Egypt and Namibia. Conversely, there are other countries with nearly half of their deliveries with health professionals but maternal mortality remains high - above 500 per 100,000 live births, such as Malawi, Ghana, Bolivia, and Zambia (22). The key words here are access and quality. Thus those countries with lower than expected maternal mortality may have achieved this not by ensuring that all deliveries occur with skilled

attendance but rather that those who need emergency care receive it. Conversely, those countries with higher than expected mortality may have health professionals without a functioning enabling environment and/or professionals who are not in fact skilled.

This is not to suggest that skilled attendance for all deliveries should not be a goal, but it does raise questions about the most effective and efficient intermediate steps to reaching it. Childbirth is undeniably a normal physiological process as well as the cause of some tragedies. Many women in poor developing countries will continue to deliver without skilled attendance for the foreseeable future. An impact on maternal mortality may however be possible with improved mechanisms for referral. Those settings in which skilled attendance is not negatively correlated with maternal mortality raise major questions about the quality of care, and bring us back to the question of the definitions. Skilled attendance implies competent attendants and an enabling environment. The partnership between these attendants is crucial - and particularly between midwives and doctors, so that their different skills can be used appropriately to meet the different needs of women at the time of delivery (22).

2.4. Research Questions

1. To what extent do the clients satisfy with the service delivery environment? (Client satisfaction)
2. To what extent does the service delivery process follow generally accepted standards? (Care Process)
3. Are public heath institutions resources available and adequate for delivery care service? (Availability and adequacy of Resources)
4. To what extent do support systems for maintaining or improving the services exist, and how well are they functioning? (Support Services)

2.5. Conceptual framework of the study

In this study, Donabedian framework is used. Avedis Donabedian, a public health pioneer is widely honored in the field of quality measurement and improvement. His conceptual framework provides a solid foundation for systematic research and evaluation in healthcare quality, a field that has been beleaguered by subjectivity. The model is linear and includes the three dimensions of structure, process, and outcome. These three dimensions are equally formed into three components, in which the antecedent directly influences each component **(Fig.1).** Donabedian suggests that these components are interdependent and that these relationships impact the next dimension either positively or negatively. The Donabedian SPO model provides a roadmap to improving quality by illustrating that there must be a focus on improving structures and/or processes in order to improve patient or organizational outcomes (28, 31).

Structure

The first dimension of Donabedian's SPO model—structure—is defined as the setting where care takes place. The primary premise of the structure component is that given the right setting, high-quality medical care will exist. The structure or setting of an organization is multi-faceted, including material and human resources, and organizational factors, such as leadership and safety culture, all of which influence the delivery of healthcare.

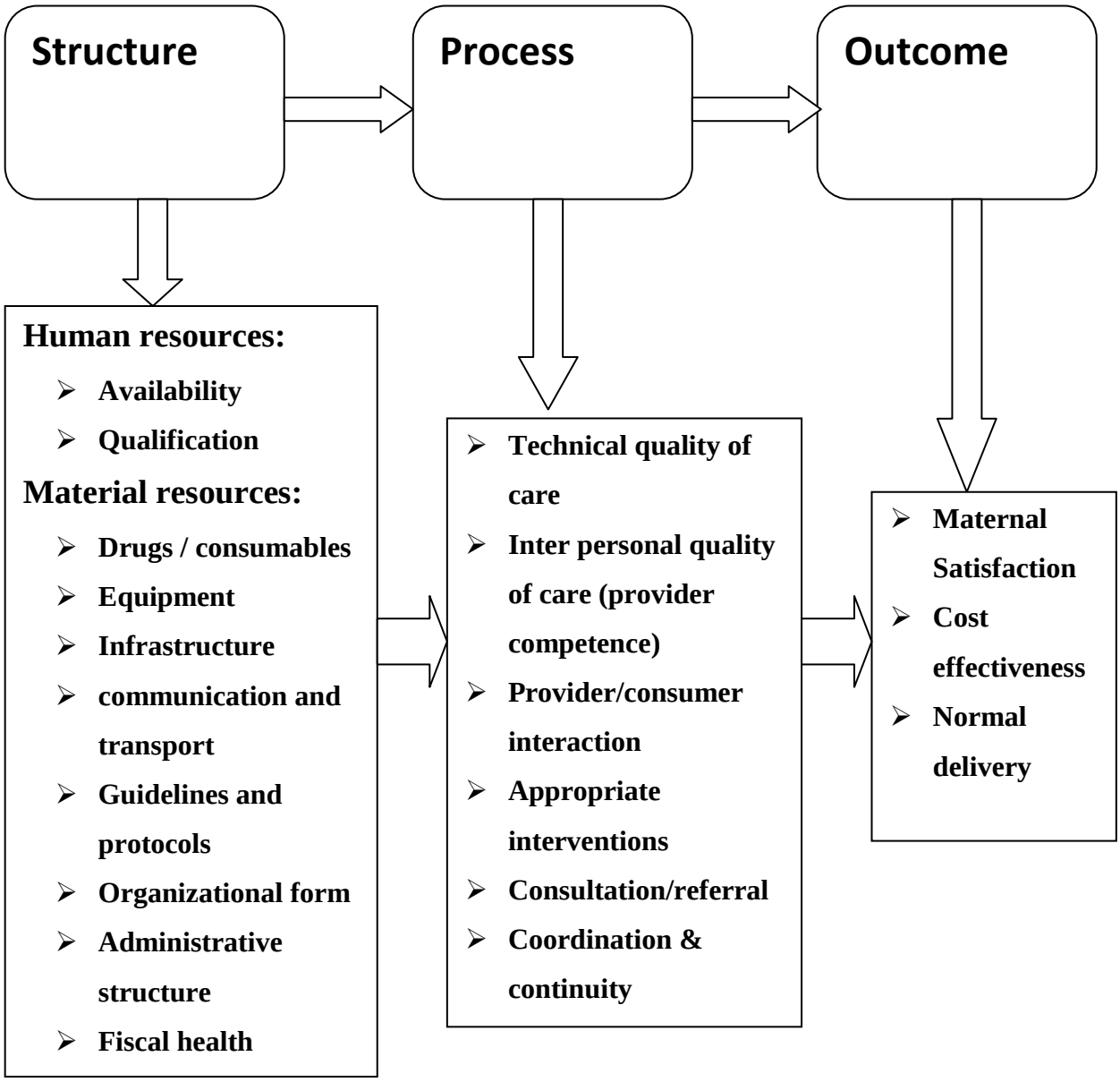
Process

The second dimension of Donabedian's conceptual framework—process—is described as the intervention or service that provides patients with an improved outcome. This is commonly referred to as the ''actual provision of care''.

Outcome

The final dimension of Donabedian's conceptual model—outcome—is the explicit result that occurs from the antecedents of structure and process. Outcomes are the ultimate indicator of care provided. Outcomes not only provide concrete measurements of individual performance, but collectively they also can serve as benchmarks for quality performance.

Figure 1: A conceptual framework for quality of delivery service modified from Donabedian's model of quality care (28).



CHAPTER THREE: OBJECTIVES

3.1 General objective:

To assess the quality of care in delivery services at public health institutions in Bahir Dar town, Amhara regional state, Ethiopia.

3.2 Specific objectives:

1. To identify client satisfaction in the delivery care service.
2. To assess health providers performance in delivery care.
3. To assess the availability and adequacy of services, infrastructure, drugs, equipments & supplies for delivery care service.

CHAPTER FOUR: METHODOLOGY

4.1. Study design

A health institutions-based quantitative cross-sectional survey was conducted based on the Donabedian's quality assessment framework.

4.2. Study Area and period

This study was conducted in Bahir Dar town. Administratively, Bahir Dar is considered as a Special Zone and is the capital city of Amhara Regional State. Bahir-Dar is located 565kms from Addis Ababa and bounded by S/Gondar in the north, West Gojjam in the east and south, Lake Tana in western part. This town is recognized as one of the tourist attraction area in the country and a growing metropolitan hosting a number of gusts from many areas in the country and other parts of the world. With the new administrative organization, B/Dar Special Zone includes 17 kebeles for B/Dar town, 4 other small towns, and 5 surrounding rural kebeles. According to Planning and Economy Bureau of Amhara Regional State, total population of Bahir-Dar Special Zone in 2004/05 is 188,964. From this population 168, 084(88.9%) were resident of B/Dar town, while 20,880(11.1%) was rural population.

There are many economical and social institutions in this zone. Currently there are one public referral hospital, namely Felege Hiwot, two private hospitals and four Governmental Health centers, seven health posts and ten private clinics. This study was done on those public health institutions namely Felege Hiwot referral hospital, a tertiary level teaching and referral hospital, which acts as the referral centre for district hospitals in the area, has 300 inpatient beds, and provides health referral services for over 5 million inhabitants in the northwest region of Ethiopia. Within its 250 staffs it employs 20 doctors, 137 nursing staffs. Bahir Dar and Han health centers were also parts of the study, which are providing maternity care services including delivery care from September 2011 to May 2012 (33).

4.3. Source and study populations

Source population

All mothers who visited the public health institutions for delivery care in Bahir Dar town.

Study population

All mothers who visited the public health institutions for delivery care during the data collection period in Bahir Dar town.

4.4. Inclusion & exclusion criteria

Inclusion criteria

- All mothers who delivered during the data collection period in that specific public health institution.
- Postnatal mothers who delivered in the same health institution within the past three months of the data collection period coming back for postnatal care.
- Those public health institutions, which conveniently sited for transportation while having labor and delivery wards.

Exclusion criteria

- Postnatal mothers who came for the second time during the data collection period either for her baby's immunization or for any complication arise are eligible only once.
- Postnatal mothers who delivered in other health institutions coming for postnatal care to this particular health institutions.
- Postnatal mothers who delivered in the same health institution prior to three months of the data collection period coming back for postnatal care.
- Those public health institutions, neither have labor and delivery wards nor too far from the town.
- Mothers who are not mentally and physically capable of being interviewed.

4.5. Sample size and sampling procedures

Sample size

The required sample size was determined by using single population proportion formula considering the following assumptions:

Proportion of delivering mothers satisfied with public health institutions delivery care in Amhara region is 62 % (p = 0.62) (15).

Level of significance to be 5% (α = 0.05), Z α*/2* = 1.96 and margin of error to be 5% (**d** = 0.05)

Adding non responses rate of 10%Non-response rate = 10%

The formula for calculating the sample size is:

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

With the above assumptions, the sample size was calculated and the overall sample size was found to be =362 + 38 (10% non-response rate) = 400.

Convenient sampling was used, So that Data was collected continuously until the required sample size obtained. All delivery service-seeking mothers who are available during data collection time were included in the sample unit for exit interview.

For observation of deliveries, purposive convenient sampling was used and it was participatory type of observation. The goal for the observational component of the quality of care (QoC) survey was to observe at least 40 deliveries based on the resource and time available before ending of the data collection period.

Sampling Procedure

The sampling technique for selecting study participants was purely non-probability sampling technique, the convenient sampling technique. However, simply for making the procedure systematic and convenient, the minimum number of participants included in the study from each respective public health institution was assigned proportionately based on their previous year delivery up take obtained from the respective institution.

Proportionate minimum sample size allocation to each health institutions:

Total sample size was allocated proportionally to each of public health institutions based on the previous year up take of delivered mothers at each public health institutions, the minimum sample size to be assigned to each public health institutions calculated using the following formula:

ni = (Ni/N) X n,

Where I, is 1, 2, and 3 ni is the minimum sample size that was taken from each public health institutions delivery ward.

Hence, nT = n1+n2+n3,

(i.e. the sum total of sample size for the study),

Ni is the 2011 year's delivery up take for each public health institutions, and

N is the sum total of each public health institution's year up take of delivered mothers.

The 2011 year's average delivery up take of Felege Hiwot referral hospital, Bahir Dar health center and Han health center was 4810, 450 and 388 respectively making the total delivered population of the year 4810 + 450 + 388 = 5648. Therefore, using the formula

ni = (Ni/N) X n, **for exit interview**:

1. Felege Hiwot referral hospital, n_1 = (4810/5648) (400) = 341
2. Bahir Dar health center, n_2 = (450/5648) (400) = 32
3. Han health center, n_3 = (388/5648) (400) = 27

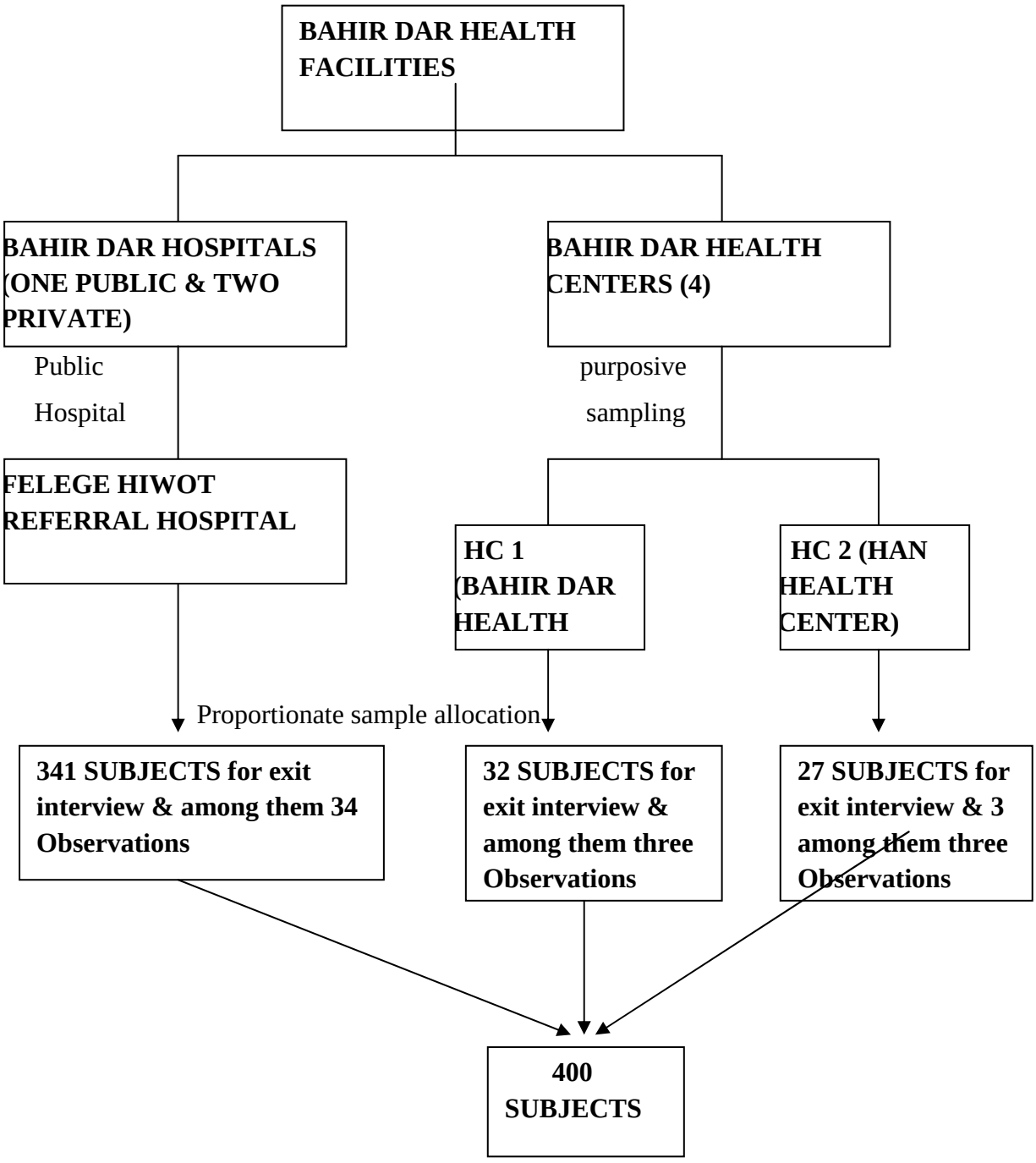
Total = $n_1+n_2+n_3$ = 341 + 32 + 27 = **400 deliveries for exit interview.**

For observation of deliveries using the same method of proportionate sample allocation:

1. Felege Hiwot referral hospital, n_1 = (4810/5648) (40) = 34
2. Bahir Dar health center, n_2 = (450/5648) (40) = 3
3. Han health center, n_3 = (388/5648) (40) = 3

Total = $n_1+n_2+n_3$ = 34 + 3+ 3 = **40 deliveries for observation** (**Figure 2**).

Figure 2: schematic presentation of sampled study subjects among delivering mothers at public health institutions of Bahir Dar, September 2011 to May 2012.



4.6. Data collection instruments

The study used three different data collection instruments. These were **Exit Interview, Observation and Inventory.**

The first is an ***Exit Interview***, which assesses the client's satisfaction of the delivery care received (Annex V). Clients were interviewed after they completed providers' care in comfortable and isolated place.

The second is an ***Observation*** protocol tailored to the service provided. Participatory type of observation using structured clinical observation checklists during deliveries was conducted to assess the extent to which service providers adhere to service delivery standards based on WHO accepted components for good service delivery. The process used when conducting specific procedures, physical examinations, and the content of information exchanged between the provider and client were components of the observation. (Annex VI)

The third is **facility *assessment questionnaire*** of resources and support services of the facilities. This inventory collected information on the adequacy and availability of specific facility items including their location and functional status (Annex VII).

4.7. Pretest

For validity and reliability, the data collection instrument was piloted on 10% of clients in the same public health institutions before the study period and these clients were excluded during data collection period. After the pretest, the investigator cleared any misunderstanding of the questionnaire and unclear items were written in clear and easily understandable language.

4.8. Questionnaire development and data collection

A structured English language Exit Interview, Observational checklist and facility assessment questionnaires were used (Annex V - VII).

In Exit Interview questionnaire, delivery service satisfaction related questions adopted from the Donabedian quality assessment framework based on WHO guidelines. The format of questionnaire consists of likert type format. Likert type approach provided clients with a statement asking them to indicate how strongly they satisfy or dissatisfy. using a 5- scale likert scale (1-very dissatisfied, 2-dissatisfied, 3-neutral, 4-satisfied, and 5-very satisfied). The first draft of the English questionnaire was translated to Amharic language by independent translators then back to English language to check for consistency.

The Exit Interview questionnaire has three parts:

Part 1 - Socio-demographic characteristics

Part 2 - obstetric History

Part 3 - client satisfaction with two sections of:

A) Health facility related and

B) Care provider related

The observational checklist provided in two sections of:

I. General assessment (provider-client interaction) and

II. Intrapartum phase (1^{st}, 2^{nd} and 3^{rd} phases of labor) assessment (provider performing procedures)

The facility assessment questionnaire provided in five sections of:

I. Service availability
II. Infrastructure
III. Personnel
IV. Essential drugs
V. Equipment and supplies

In the facility assessment questionnaire and observational checklists, WHO minimum accepted standards that can be used for primary perinatal care or even secondary and tertiary perinatal care services used.

Six diploma nurse and fluent Amharic speakers for exit interview, three BSc nurses for direct observation of client provider interactions and one supervisor were recruited and trained for data collection. One day theoretical and one day practical training was given. The training was based on the guide that was developed by principal investigator for data collectors and clarifying how to interview the questionnaire.

They were allowed to fill the questionnaire and later discussion was made in all contents of the format and areas of difficulties were revised. Beside this, they was trained on their responsibilities for describing the purpose of the study, giving orientation, telling service users and providers the importance of honest and sincere reply, on responding to questions. The principal investigator and the coordinator was strictly follow the overall activities for each activity on daily base to ensure the completeness of questionnaire, to give further clarification and support for data collectors.

4.9. The study variables

A. Dependent *(outcome)* variable:

Quality of care in delivery service, which is correlated in terms these variables:

- Mothers' satisfaction
- Provider performance (skill, adherence to standards, guidelines and protocols)

B. Independent *(determinant)* variables:

- Socio demographic factors (age of mother, marital status, education, monthly income, residence)
- Obstetrics factors (Parity, Reason for visit, Wanted status of pregnancy, Mode of delivery, Maternal outcome, Fetal outcome, ANC, Previous history of delivery service utilization)
- Availability and adequacy of facility items (Service, Infrastructure, Personnel, Essential drugs, Equipment and supplies)

4.10. Data processing and Analysis

After the data collection, the principal investigator coded each questionnaire and data entry was made using EPI INFO version 3.5.1 and exported to SPSS version 16 for data cleaning and analysis. Frequency output was used to check missing values and outliers and cleaning was done using original code number.

The responses of 'very satisfied' and 'satisfied' were classified as satisfied and responses of 'very dissatisfied', dissatisfied" and 'neutral' as unsatisfied. Neutral responses were classified as dissatisfied considering that they may represent a fearful way of expressing dissatisfaction. This is likely because the interview was undertaken within the institution and mothers may have been reluctant to express their dissatisfaction feeling of the services they received. For the overall satisfaction level, those who were satisfied in greater or equal to 75% of the items were categorized under "satisfied" and those who were satisfied in less than 75% of the items were categorized as "un satisfied". For the provider competence, the mean score was calculated and those who scored equal and above the mean were categorized under "well performed" and those who scored below the mean were categorize under "not well performed".

Descriptive statistics and summary measures were employed to the data. The association of dependent and independent variables was assessed and their degree of associations was computed by binary logistic regression using Crude ORs and by adjusting for the potential effects of confounding variables (Adjusted ORs) with 95 % limit of confidence interval. Variables were selected for the logistic model based on previous literature reviewing.

4.11. Quality Assurance

To ensure the completeness, accuracy and consistency of data collection, training was given to data collectors and questionnaire was prepared by local language. A session was held each day of the data collection period. During these sessions thorough checking was done before receiving the filled questionnaires from each data collector, which helped to crosscheck for their performance and improving proper data collection.

4.12. Ethical considerations

Before the beginning of data collection, the principal investigator received paper of approval from Institutional Review Board (IRB), and letter of permission from Addis Ababa University, college of health sciences department of nursing and midwifery to the concerned study areas. Respective administration of each public health institution of the study area was communicated and informed about the objective of the study and official permission was obtained. Furthermore, the participants were explained the purpose and procedure of data collection, and that confidentiality and privacy was ensured. Additionally, it was made clear that participation was totally based on their willingness and verbal consent.

4.13. Dissemination of Findings

The findings of this study will be disseminated to Addis Ababa university department of nursing and midwifery, studied health institutions, federal ministry of health, Amhara health bureau and putting the result documents in the libraries; the findings also will be presented in various Seminars/workshops and may be also published in a scientific journal.

4.14. Operational Definitions

Mothers' Satisfaction: The contentment that delivering mothers feels when they have fulfilled a desire, need, or expectation for time spent by health worker, cleanliness of place & instruments, supplies, respect & comfort, and competency of health workers procedures in health institutions. This is measured from the response against the four degrees of satisfaction as reported by the mother, namely; highly satisfied, moderately satisfied, dissatisfied, and highly dissatisfied.

Quality: is the degree to which delivery services for individuals and populations increase the likelihood of timely and appropriate treatment for the purpose of achieving desired outcomes that are both consistent with current professional knowledge and satisfy clients which is

measured from the cumulative of client' satisfaction level, provider's competency and the availability, adequacy and accessibility of equipments and supplies.

Standards: are performance specifications of delivery service, if the service attained, would lead to the highest possible quality in the system that are measured through their availability and utilization.

Guidelines: are systematical developed statements that assist practitioners and mothers in making decisions about delivery service that are measured through their availability and utilization..

Protocol: is a precise and detailed plan for a process of delivery service activities of the health institution that are measured through their availability and utilization.

Infrastructure: buildings and support services available in delivery services including Partitions of the delivery room for privacy, Means of ventilation in delivery room, Running water, Functioning toilet, Autoclave and other services. Their availabilities are directly measured through observation.

CHAPTER FIVE: RESULT

I. Socio-demographic characteristics

A total of 400 delivering mothers from three public health institutions participated in the exit interview with 341 (85.25%) of the women obtained from the Felege Hiwot referral hospital, 32(8%) from Bahir Dar health center and the rest 27 (6.75%) from Han health center proportionally. The mean ± SD age of the mothers was 26.1 ± 4.45 years. Three fourth (75%) of the delivering mothers were married. The majorities were Amhara (85.2) by ethnicity and orthodox Christianity by religion (85.5). About 38.2% of them cannot read and write, 37.8% were housewives and 71.5% mothers came from urbanareas. The median monthly household income of the delivering mothers was 800 birr (44.4USD) **(Table 1).**

Table 1: Socio- demographic characteristics of respondents, Bahir Dar town, March 2012

Socio demographic variables	[n=400]	
	Number	Percentage
Age		
18-23	114	28.5
24-29	202	50.5
>29	84	21.0
Marital status		
Single	80	20.0
Married	300	75.0
Divorced	20	5.0
Ethnicity		
Amhara	342	85.5
Others	58	14.5
Religion		
Orthodox Christianity	341	85.2
Muslim and others	59	14.8
Education		
Not able to read and write	153	38.2
Able to read and write only + 1° education	116	29
Secondary education and above	131	32.8
Occupation		
House wives	151	37.8
Governmental, private and other workers	143	35.7
Farmers	106	26.5
Economic status(monthly income)		
500 birr or less	81	20.2
501-1000 birr	247	61.8
Greater than 1000 birr	72	18
Residence		
urban	286	71.5
Rural	114	28.5

II. Obstetrics characteristics of delivering mothers

For 41.5% of women, this was the first delivery. About 17 % of women had had an unwanted birth. Spontaneous vaginal delivery is the commonest mode of delivery (60.5 %). The maternal outcome of 111 (27.8 %) delivered mothers' was with some complications. Death was the fetal outcome of 49 (12.2%) fetuses. About 70% had one or more ANC visits. The majority (70.5%) of the mothers' do not have previous health facility delivery experience **(Table 2).**

Table 2: Obstetric history of respondents, Bahir Dar town, March 2012

	(n=400)	
Obstetric variables	**Number**	**Percentage**
Parity		
1 or none	166	41.5
2-3	173	43.3
4 or more	61	15.2
Reason for visit		
Normal delivery	225	56.2
obstetric complication treatment	63	15.8
Referral	112	28.0
Wanted status of pregnancy		
Wanted	332	83.0
Unwanted	68	17.0
Mode of delivery		
Spontaneous vaginal delivery	242	60.5
Assisted delivery	116	29.0
Caesarian section	42	10.5
Maternal outcome		
Normal	289	72.2
With some complication	111	27.8
Fetal outcome		
Normal baby	323	80.8
Still-born	28	7.0
Death	49	12.2
ANC follow up		
Yes	280	70.0
No	120	30
previous health facility delivery		
Yes	118	29.5
No	282	70.5

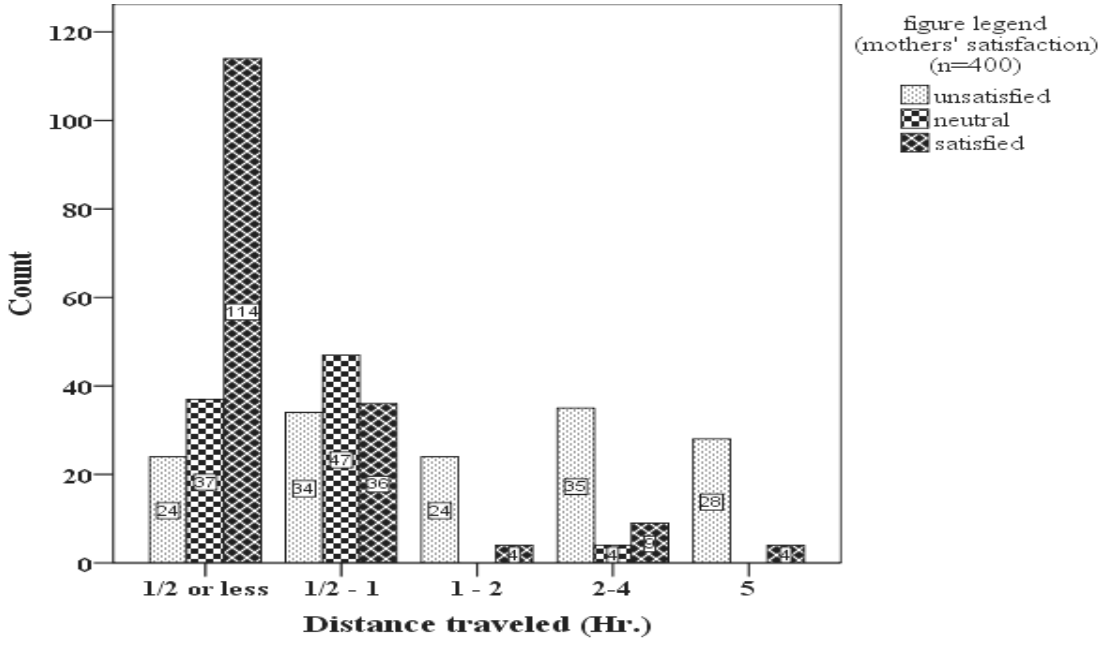
III. Mothers' satisfaction on delivery

The over all maternal satisfaction based on the analysis of each factor considering those who score very satisfied and satisfied as satisfied and those who score neutral, dissatisfied and very dissatisfied as dissatisfied , it is found that among the clients who used delivery service at public health institutions 216 (54%) were satisfied and 184 (46%) dissatisfied. Here for descriptive purpose only variables were presented with neutral values as it is. Mothers' satisfaction of the delivery sevice were assessed and presented below interms of health facility and care provider related factors.

1. Health facility related satisfaction

Maternal satisfaction regarding health facility related factors assessed interms of distance over home to institution, general information & services received, referral link, access and cleanliness of toilets, waiting time, payment, drugs and supplies, waiting area for the patients and relatives, examination room and the overall cleanliness and comfort of the health institution. Among the clients who used delivery services (n=400), 175(43.8%) travelled 30 minute or less, 117(29.2%) travelled 30 minute-1 hour, 28(7%) travelled 1-2 hours, 48(12%) travelled 2-4 hours and 32(8%) travelled more than 4 hours. Totally 167 (41.8%) of mothers satisfy with the distance over home to health facility where they delivered **(Figure 3)**.

Figure 3: Distance over home to health institution and its associated maternal satisfaction Bahir Dar town, March 2012 (n=400)



One hundred eighty nine (47.2%) received the information and service they desired, 16 (4.0%) did not have, 123 (30.8%) did not received sufficient information and service, 72 (18%) got the service but not the information. Regarding waiting time it was long for 34 (8.5%), average for 159 (39.8%) and short for 207 (51.8%) delivered mothers. Two hundred sixty six (66.5%) got the delivery service with payment while 109 (27.2%) for free and 25 (6.2%) paid only for card. The majority of mothers (64.3%) were paid between 200-300 birr and most of the clients 203 (76.3%) thought that the payment was fair **(Table 3).**

Table 3: Response of mothers' satisfaction, by predictor variables Bahir Dar town, March 2012

Variables	(n=400) Number	Percentage
Information & service received (General)		
Yes	189	47.2
No	16	4.0
Some but not adequate	123	30.8
Got the service but not the information.	72	18.0
waiting time		
Long	34	8.5
Average	159	39.8
Short	207	51.8
Service payment status		
Paid	266	66.5
Free	109	27.2
Paid only for the card	25	6.2
Direct cost of service in birr (for those who paid)		
200 or less	29	10.9
200-300	171	64.3
More than 300	66	24.8
Feeling about payment (for those who paid)		
Expensive	52	19.6
Fair	203	76.3
Cheap	11	4.1

According to mothers' view regarding facility related satisfaction cleanliness of toilets, overall cleanliness and comfort of the waiting area, overall cleanliness and comfort of the examination room are the first three least values; 184 (46.0%), 179 (47.1%) and 198 (49.5%) respectively. Fifty six mothers response indicate as they and there family didn't saw and used any waiting area around the delivery service unit **(Table 4).**

2. **Care provider related satisfaction**

Maternal satisfaction was assessed interms of courtesy and respect of the provider, sex of the health professional, privacy, Information received by health professionals, Feeling of confidentiality in this regard. Among these completeness of Information given by health professionals, measures taken to assure privacy during examination and delivery and Feeling of confidentiality were the first least values according to mothers view; 163 (40.8%), 169 (42.2%) and 196 (49.0%) respectively **(Table 4).**

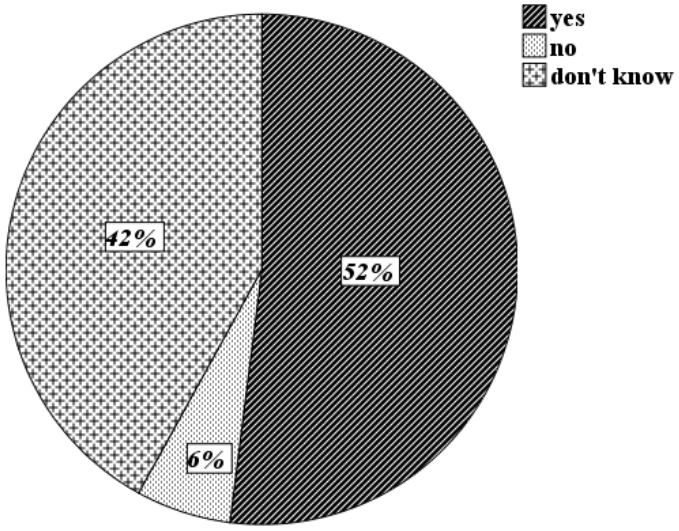
Table 4: Health facility and Care provider related maternal satisfaction, Bahir Dar town March 2012 (n= 400 if not specified)

Variables	Satisfied No (%)	Neutral No (%)	Unsatisfied No (%)
Referral link (n=152)	118 (77.6%)	24 (15.8%)	10 (6.6%)
availability of drugs & supplies (n=197)	125 (67.6%)	60 (25.3%)	12 (6.1%)
access of toilets	221 (55.2%)	151 (37.8%)	28 (7%)
cleanliness of toilets	184 (46.0%)	119 (29.8%)	97 (24.2%)
overall cleanliness and comfort of the waiting area (n= 344)	179 (47.1%)	55 (20.9%)	110 (32%)
examination room	198 (49.5%)	182 (45.5%)	20 (5.0%)
overall cleanliness and comfort of the hospital compound	219 (54.8%)	178 (39.5%)	23 (5.8%)
courtesy and respect of the provider*	206 (51.5%)	166 (41.5%)	28(7.0%)
sex of the health professional*	336(84.0%)	52(13.0%)	12 (3.0%)
privacy during examination & delivery*	169 (42.2%)	47 (11.8%)	184 (46.0%)
Information got(by health professional)*	163 (40.8%)	193 (48.2%)	44(11%)
Feeling of confidentiality *	196 (49.0%)	216 (44.0%)	28(7.0%)

*- care provider related variables

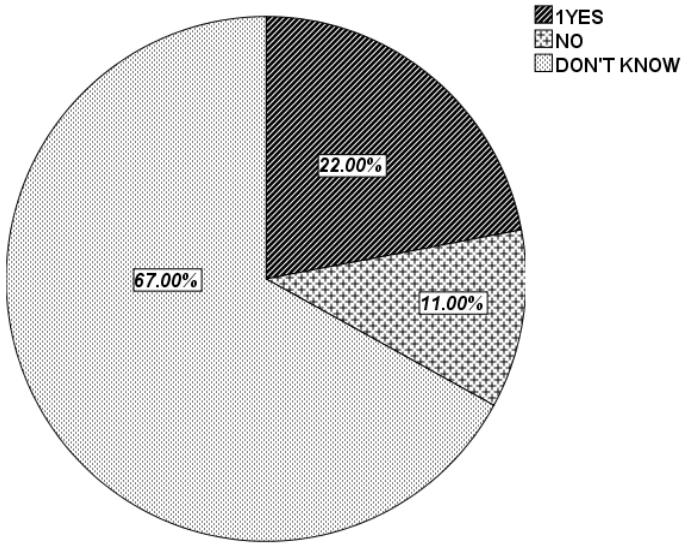
Moreover, among the mothers who delivered in those facilities thought of their experience 208 (52.8 %) of them want to deliver again in the same health institution, if they ever became pregnant. 24(6%) mothers did not want to deliver again in the same health institution and 168 (42%) of them didn't know where to deliver in their future pregnancies (Figure 4).

Figure 4: Response of delivered mothers' willingness to deliver again in the same health institution, Bahir Dar town March 2012



Regarding mothers' recommendation of the facility, Only 88(22%) of them likely to recommend the health institution to family or friend, 44 (11%) of mothers did not recommend and 268(67%) don't know what to recommend.

Figure 5: Response of delivered mothers' willingness to recommend the health institution to family or friend, Bahir Dar town March 2012



For mothers' satisfaction by applying binary logistic regression on socio demographic variables after adjusting for confounding factors mothers' age and monthly income were significantly associated with satisfaction of delivery services (p-values<0.05). Women with an age of 18 to 23 were more likely to be satisfied with the delivery care than women aged >29 (OR=5.698 and 95%CI= 2.792-11.631). Those mothers with monthly Income of 500 birr or less and 501 to 1000birr were more likely to be satisfied with the delivery care than women with monthly Income of greater than 1000 birr. (OR=3.297 and 95%CI=1.587-6.847 and OR=2.657 and 95%CI=1.396-5.056) respectively **(Table 5).**

Table 5: Socio- demographic factors influencing delivery service satisfaction adjusted for Socio- demographic variables in Bahir Dar town, March 2012 [n=400]

Variables	Satisfaction		OR (95%CI)	
	Yes	No	Crude	Adjusted
Age				
18-23	78	36	2.50(1.396 4.478)*	5.698(2.792-11.63)**
24-29	99	103	1.109 (0.666-1.847)	1.682(0.968-2.924)
>29	39	45	1	1
Marital status				
Single	36	44	0.643(0.391-1.056)	0.286(0.146-0.563)
Divorced	12	8	1.179(0.468-2.96)	1.251(0.470-3.328)
Married	168	132	1	1
Education				
Not able to read & write	93	60	1.725 (1.0762.766)*	1.830(0.888-3.771)
Read and write only,1˚ edu	61	55	1.234 (0.748-2.036)	1.063(0.599-1.884)
2˚education and above	62	69	1	1
Monthly Income				
500 birr or less	50	31	2.688(1.397 5.173)*	3.297(1.587-6.847)**
501-1000 birr	139	108	2.145(1.2513.678)*	2.657(1.396-5.056)**
More than 1000 birr	27	45	1	
Residence				
urban	154	132	0.978 (0.633-3.410)	2.223(1.151-4.295)
Rural	62	52	1	1

*** Statistically significant at P<0.05 in the crude analysis**

****Statistically significant at P<0.05 after adjusting for selected confounding variables**

When Obstetric factors were adjusted; Parity, maternal and fetal outcome had significantly associated with mothers' satisfaction (p-values<0.05) (Table 6).

Table 6: Obstetric factors influencing delivery service satisfaction adjusted for Obstetric variables in Bahir Dar town, March 2012 [n=400]

Obstetric variables	Satisfaction		OR (95% CI)	
	Yes	No	Crude	Adjusted
Parity				
1 or none	94	72	1.880 (1.036-3.410)*	3.141 (1.360-7.256)**
2-3	97	76	1.838 (1.017-3.322)*	2.052 (0.935-4.504)
4 or more	25	36	1	1
Reason for visit				
Normal delivery	113	112	0.653 (0.421-1.035)	0.402 (0.174-0.932)
Complication treatment	68	28	0.809 (0.433-1.511)	0.351 (0.117-1.050)
Referral	68	44	1	1
Wanted status of pregnancy				
Wanted	184	45	1.734 (1.024-2.938)*	1.391 (0.730-2.650)
Unwanted	29	39	1	1
Mode of delivery				
Spontaneous vaginal	121	121	0.615 (0.314-1.205)	0.890 (0.372-2.130)
Assisted delivery	69	47	0.905 (0.438-1.865)	2.051 (0.759-5.541)
Caesarian section	26	16	1	1
Maternal outcome				
Normal	171	118	2.125 (1.361-3.319)*	4.899 (2.591-9.263)**
With some complication	45	66	1	1
Fetal outcome				
Normal baby	170	153	1.364 (0.746-2.494)	0.735 (0.305-1.768)
Alive still-born	24	4	7.364 (2.220-24.42)*	16.048(3.479-74.031)**
Death	22	27	1	1
ANC follow up				
Yes	148	132	0.857 (0.557-1.319)	1.557 (0.713-3.404)
No	68	52	1	1
Previous facility delivery				
Yes	64	54	1.098 (0.711-1.695)	1.849 (0.978-3.496)
No	150	132	1	1

*** Statistically significant at P<0.05 in the crude analysis**

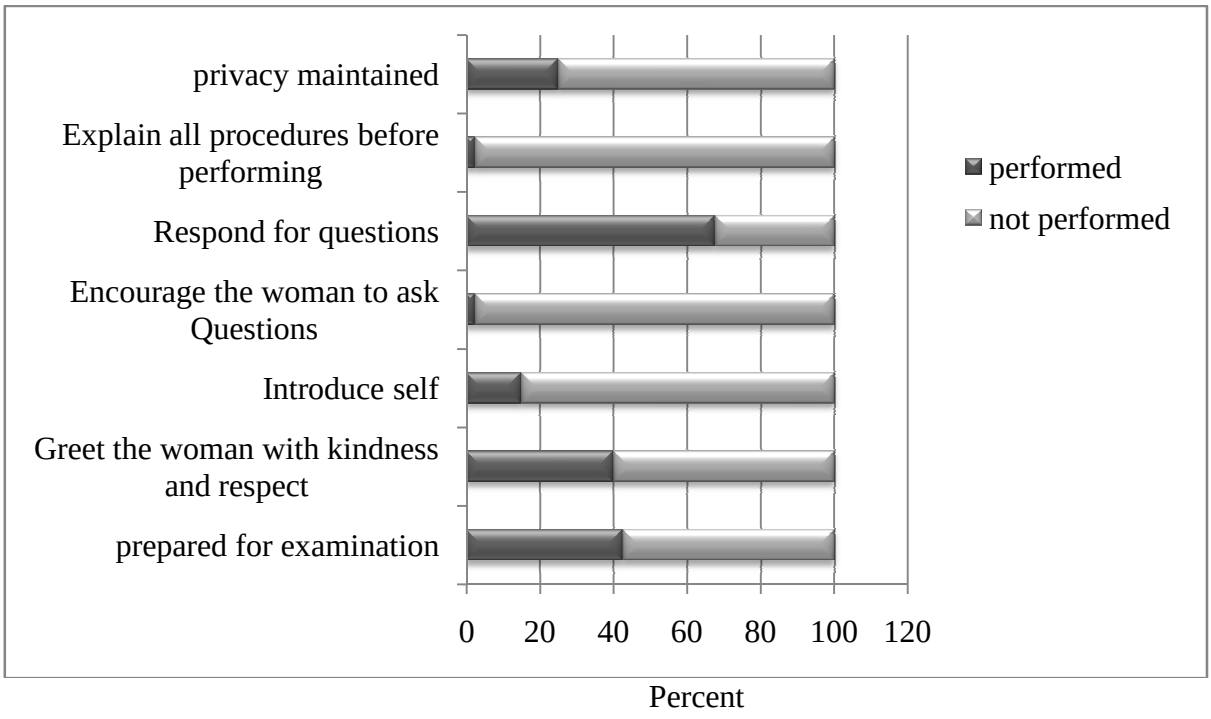
****Statistically significant at P< 0.05 after adjusting for selected confounding variables**

As shown above (Table 6), the likelihood of women who had their first parity (none parity included due to very few number) to be satisfied were more than three times (OR=3.141, 95% CI=1.360-7.256) higher than women with 4 or more parity. The likelihood of women with normal outcome to be satisfied were five times (OR= 4.899, 95 CI= 2.591-9.263) higher than women with some complications.women who had alive still born fetal outcome were sixteen time (OR= 16.048, 95%CI =3.479-74.031) more satisfied than women with fetal outcome of death.

IV. OBSERVATION OF PROVIDER PERFORMANCE

A total of 40 deliveries were observed. All mothers were followed starting from early phase of labor till immediate post partum phase. Less than half, seventeen (42.5%) of health providers prepared the exam area, equipment and documents for examination, only 16 (40%) of providers seen greeting the woman with kindness and respect. Providers who introduce themselves were only 6 (15%). Except one of providers, for each tasks, all neither encourage the woman to ask questions nor explain all procedures before performed. Twenty seven (67.5%) providers responded for mothers questions. Three fourth of the providers did not maintained privacy **(Figure 6)**.

Figure 6: Mothers-Provider interaction during observation, Bahir Dar town March 2012 [n=40]



Provider performance during first, second and third stage of labor was thoroughly observed for 40 deliveries in three health facilities of Bahir Dar town. The findings of the observation were summarized as follows **(Table 7).**

Table 7: Observation of provider performance during Intrapartum Phase of delivery in Bahir Dar town March 2012 [n=40]

Task /Activity	**performed**		**Not performed**	
	NO	%	NO	%
Intra partum (First stage of labor)				
FHR	24	60	16	40
Maternal blood pressure	39	97.5	1	2.5
Maternal pulse	36	90	4	10
uterine contractions	28	70	12	30
Vaginal exam	36	90	4	10
Partograph use	16	40	24	60
partograph filled according to the standard	9	56.25	7	43.75
Intra partum(second stage of labor)				
Wash hands	20	50	20	50
Use new or sterilized gloves	40	100	0	0
Clean delivery bed(kotch)	32	80	8	20
Sterilized delivery sets are used	40	100	0	0
Protect perineum	11	27.5	29	72.5
Intra partum(third stage of labor)				
Clamp and cut umbilical cord	39	97.5	1	2.5
Suction newborn*	20	50	18	45
Put baby skin-to-skin with mother*	27	67.5	8	20
Dry and cover newborn*	27	67.5	8	20
Give oxytocin after delivery	26	65	14	35
Observe or manage placenta delivery	37	92.5	3	7.5
Confirm uterus is well contracted	23	57.5	17	42.5
Examine placenta	7	17.5	33	82.5
Instruments disinfected and prepared for sterilization	18	45	22	55

* -‘n’varies based on the fetal outcome.

The mean ± SD of the provider performance score was 28± 4 out 50. Those providers who scored equal and above than the mean (28) were categorized under “well performed” and those who scored below the mean (28) were categorize under “not well performed”. Out of a total 40 deliveries observed 18 (46%) of them performed well while 22 (54%) of them not performed well.

V. Health facility assessment

Service availability, infrastructure, personnel, essential drugs and equipment and supplies were assessed among three delivery care health institutions namely Felege Hiwot referral hospital (FHRH), Han health center (HHC) and Bahir Dar health center (BHC).

I. service availability

Labor and delivery services were available in all three health institutions 24 hours a day, every day. However, neither of the facilities provide cesarean section, blood supply for transfusions and anesthesia services 24 hours a day, every day though Felege Hiwot referral hospital (FHRH) providess those services for some non fixed days depending on the availability of obstetrician, blood to be transfused and anesthetic drugs. Only FHRH got separate examination room for pregnant mothers. The number of delivery beds/couches available was 3, 2 and 2 while the number of beds available in the postnatal clients’ admission was 24, 1 and 3 for FHRH, HHC and BHC respectively. Neither of the facilities had continuous supervision of the service.

II. Infrastructure

All the three facilities had Delivery or labor room with bed and lighting, autoclave, waiting area for visitors and family and refuse disposal with cover. Only FHRH had somewhat partitions of the delivery room for privacy. Client privacy related issues like no separated room for examination, counseling and screening and absence of curtains and heating arrangements (stove) were commonly lacking infrastructures in the delivery room of the three facilities. Unlike others HHC lacks post-delivery room, runnig water, tolilets in the delivery room and Storage area or cupboard for drugs and other supplies. Means of ventilation and refrigerator were solely held by FHRH.

III. Personnel

The total numbers of health professionals who work in the delivery service of FHRH were thirty seven. Among whom 29 were registered midwives and nurse/midwives, 5 were general practitioner doctors, and 3 were Obstetrician and gynecologists. Among nurse/midwives and general practitioners there was at least one person on duty and physically present 24 hours a day, 7days a week. In BHC and HHC there were only two nurse/midwives and one of the facility nurse/midwife present in the delivery service during duty times as an additional task beside other health center services. However, availability of personnel as the main task in delivery care during duty times was abscent in both of health centers.

IV. Essential drugs

Bahir Dar health center (BHC) was the only one which had antibiotics in the ward. Although there were oxytocics and prostaglandins like ergometrine, pitocin and prostaglandin E2 in all the facilities, stock out of the drugs in the last 1 year was their shared problem. Unlike others Han health center lacks most of the listed drugs including drugs used in emergency, IV fluids, vitamin K for newborns and tetracycline 1% or erythromicin eye ointment. There were no anesthetic drugs in the health centers.

V. equipment and supplies

Basic items including Filled oxygen cylinder, Ultrasound, BP cuff, Stethoscope, Fetal stethoscope, Examination table, Labour or Delivery table, Baby weighting scale, Partograph(WHO modified), NG tube for oxygenation and Neonatal resuscitation table were atleast one available and functional currently in Felege Hiwot referral hospital. However it lacks some of the essential equipment and supplies like incubator and measuring tape. Although both of the health centers hadn’t had filled oxygen cylinder, Ultrasound, Neonatal resuscitation table, incubator, measuring tape and NG tube for oxygenation, they had all other equipment and supplies that fond in the FHRH.

CHAPTER SIX: DISCUSSION

This institution –based study identified the current weaknesses of the health system in the area of delivery care services in Bahir Dar town, which was the critical input for performance improvement in quality of care at delivery services. The overall proportion of mothers who were satisfied with delivery care in this study was 54%. This percentage is very low compared to other studies in developing countries – 92.5% in Senegal [23] but it is comparable to a study in Nairobi, Kenya 56% [34] and greater than a study in Sri Lanka 48% [35].

Certain high variations were usually seen across and within the nations. For example here in Ethiopia, if we consider one of the factors, courtesy and respect offered by the provider, it was among the major reasons for dissatisfaction in Gondar (36) .The finding was rated to be 36%, which was lower than the finding of this study, for the unsympathetic behavior of the health workers. In other study conducted in Mekelle a much higher result was seen, the over all clients' satisfaction to institutional delivery service was (95%) (37). This variation may be because of a real difference in quality of services provided, expectation of mothers or the type of health facilities. Such high results in some parts of the country may be due to the relationship of dependency which exists between clients and their relatives on service providers may make them unwilling to express their dissatisfaction for fear of antagonizing service providers and experiencing even worse service in the future.

In a review of satisfaction-theory, it was infered that expectations govern satisfaction, i.e. the more a service meets with the expectations of a user; the more that user will be satisfied with that service. It is also noteworthy that high levels of satisfaction equate with high quality care. They infer that high levels of satisfaction commonly reported suggest that "dissatisfaction is only expressed when an extreme negative event occurs''. Despite the low technical quality, not well equipped facility and the far from optimal personal support given to women during and after labour, most women reported to be satisfied with the care received. Some studies have revealed that pregnant women were fairly uncritical of health care, accepting whatever care they receive as appropriate. Women's satisfaction is an important indicator but its measurement remains a challenge. Overall satisfaction assessed through closed-ended questions represents a limitation and it might be important to examine expressed preferences rather than the absolute magnitude of expressed satisfaction [38].

The study has revealed certain variables that have important influence on maternal satisfaction of the delivery service. In this study considering socio demographic variables delivering mothers' satisfactions was significantly predicted by age and Monthly Income of respondents. Women with an age of 18 to 23 were more than five times likely to be satisfied with the delivery care given than women aged higher than 29. This was may be due to unlike older women, younger ones had less previous exposure to delivery that resulted to be more satisfied till they accustomed and recognize the actual quality of care. In related studies Consistent trends with this finding were seen [15,25].

In this study, women with monthly income of 500 birr or less and 500-1000 birr were three and two times more likely to satisfy than women with monthly income of greater than 1000 birr respectively. The likelihood of beng satisfied with the care given was lesser among those with relatively high income mothers. This was mainly due to the fact that high income mothers expect high quality service that was comparable with their living standard and they may be easily dissatisfied with the care given. The findings of this study were closely related with study done in southern India; in which women with higher level of living standard were about 3 to 5 times more likely to unsatisfy in health institutions than those with lower living standard [30].

This study had indicated that obstetric variables that significantly affect mothers' satisfactions were parity, fetal outcome and maternal outcome. The study showed that women who had their first parity more than three times likely to be satisfied than women with four or more parity. This was most probably due to primipara mothers had not had previous delivery experience that was used as a reference to evaluate the current one or atleast they have baby for the first time and enjoying that joyfull moment forgetting all their pain they had in the health facility. In other hand multiparous woman may had better previous delivery experience than the current one, wheather that was in health institutions or not in mothers' view they got better way of delivery care. A study in India and Netherlands showed similar findings [26, 32]

Regarding maternal outcome this study was indicated that Mothers without complication satisfied five times higher than mothers with some complications. Women who experience no complications may be pleased that they were safe and this may result satisfaction with care. Similarly, the study conducted in west Africa showed that those who hadn't had the presence of pregnancy and delivery complication were three times more likely to satisfied from care given during their delivery (24). Women who had still born fetal outcome were sixteen time

more satisfied than women with fetal outcome of death. This high result was may be due since it's a human nature to feel of sorrow and sad ness during baby's death and associated dissatisfaction raised as a result of this whoever and whatever the guilty party was than those with the fetal outcome of alive births even if they are stillborn. This was because mothers don't blame the providers for the infant stillborn because there was no direct relationship with the care given during delivery. Contrastly, they may be thankfull for what the provider done and kep doing to save ther stillborn baby. However, infants' death may have direct association with the delivery care given. Somewhat Comparable results were seen in India and Kenya [26, 34].

This study shows that the general client- provider interaction was poor in all three Facilities, Encourage the woman to ask questions, explain all procedures before performing, introduce self privacy maintained, greet the woman with kindness and respect and preparation of examination were those activities that frequently not performed by the provider. A number of studies in developing countries show consistent results with these [22, 23, 25, 26]. For example in Côte d'Ivoire Women received very little supportive care. They were generally told how to lie down on the delivery table but few women were helped to climb up on to it. Little or no information was given about progress of labour, and in only 15-30% of cases did someone come at some point to support the woman, mostly maternity staff, and seldom family members. During the intrapartum phase, women were moderately exposed to other patients (35%), although this varied between facilities [25]. The findings were lower than results in Kenya which showed during the initial client assessment in labor, 78% of clients were greeted by their health care providers, 77% had a provider who explained the procedure before proceeding, and 76% were informed of the provider.'s findings. However, comparable results was seen regarding asking clients wheather they have any question or not and privacy issues with the few health workers asked clients if they had any questions, and only 24% of clients were draped during labor, indicating privacy was largely inadequate. It was also comparable with partograph filling. The Providers were less consistent in filling in details on the partograph during labor and delivery, with all components completed in only 58% of cases. The action line was not reached during observation in most cases (81%) [12].

This study revealed that the technical standards of care for normal delivery in the first, second and third intrapartum phases were not mainly performed. Out of the total deliveries observed in all three Facilities 46% of them performed well while 54% of them not performed well. Based on the standards among those task/ativities that has to be performed during first stage of labor

includes monitoring fetal heart rate that was performed in 60% of case even if it was not routinely monitored, although measuring maternal vital signs was performed atleast once by most of providers, it was not routinely monitored, check uterine contraction and vaginal exam was among mainly performed activities in first stage of labor while the use of partograph is poor. Only 40% of the cases used partograph and nearly half of them did not filled according to the standard. Most of these findings were consistent with other studies in Africa. For example a research conducted in Côte d'Ivoire indicated that vital signs or labour progresswere not routinely monitored the partograph was rarely filled in during labour [25].

According to the finding of this study during second stage of labor, in half of cases hand washing before examination of patients, both at the initial client assessment and during labor was seen while all of them use new or sterilized gloves and delivery sets. Protecting perineum was only done in quarter of cases. These findings were supported by studies done in Kenya, Malawi, Côte d'Ivoire and India [12, 17, 25, and 30]. Hand washing before examination of patients, both at the initial client assessment and during labor, was the least practiced infection control practice (only 36% of cases) in Kenya [12] and Midwives almost never washed their hands before examination or delivery A different glove was used for each vaginal examination and sterile gloves were always used for the delivery. Instruments for delivery were sterilized in all health facilities in Ivory Coast [25].

During third stage of labor nearly all of them also clamp and cut umbilical cord. Examining placenta and to disinfection of instruments and preparation for sterilization were least frequently done activities while there is a good performance concerning observation or management of placenta delivery. Suctioning newborn was performed in half of cases. Put baby skin-to-skin with mother, dry and cover newborn and give oxytocin after delivery were done fairly good. There were studies consistent with these findings (12, 26, 28) for example in Pakistan, the most commonly practiced element of essential newborn care was cutting and tying or clamping the cord.The vast majority of women in the third stage of labor were given a uterotonic (predominantly oxytocin) after birth [26].

This study also revealed findings on facility assessment of service availability, infrastructure, personnel, essential drugs and equipment and supplies of the three delivery care health institutions namely Felege Hiwot referral hospital (FHRH), Han health center (HHC) and Bahir Dar health center (BHC). The findings showed that labor and delivery services were

available in all three health institutions 24 hours a day, every day. However, neither of the facilities provides cesarean section, blood supply for transfusions or anesthesia services for 24 hours a day, Felege Hiwot referral hospital (FHRH) was the only one which providess those services for some non fixed days. These results were also seen in Cebu, Philiphines and Senegal where there were a lack of availability of supplies and infrastructure to support quality delivery services [6, 23].

Concerning essential drugs, equipment and supplies results were presented in this study which showed that there were no antibiotic drugs in the delivery rooms at FHRH and HHC. In HHC there were no drugs used in emergency, IV fluids, vitamin K for newborns and tetracycline 1% or silver nitrate 1% or erythromicin eye ointment. In all three facilities ther were no adequate oxytocics and prostaglandins. In Kenya key drugs for management of complications in pregnancy within the facilities were more often stocked in the pharmacy than in the delivery rooms. The majority of facilities had magnesium sulfate on hand in both the facility and the delivery room. The drug that was least often stocked was injectable ampicillin, with only 10% or fewer of the facilities having it in both the facility and the delivery room [12].

Strength of the study

- There was no none response rate.
- Qualified data collectors used for observation of client/provider interaction and delivery care.
- Privacy and confidentiality was maintained as far as possible during observation and exit interview. This might make clients feel free to give information about health institution and about serviceproviders.
- Triangulation methods were used to collect the data from different sources to increase the validity of the study.

Limitations

- Potential response biases often present in patient satisfaction studies related to social desirability. We tried to minimize this bias by interviewing mothers in a separate room.
- Observation bias cannot be excluded. However, the fact that providers performed so poorly while under observation suggests that this bias is small.
- Since the study was institutional based might underestimate the results related to Satisfaction. It is possible that dissatisfied clients might not come to health institutions.
- Lack of literature done in our country for comparison.

CHAPTER SEVEN: CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Several shortfalls in quality delivery service had been identified by this study in Bahir Dar town publc health institutions:

- The overall quality of care in delivery services at public health institutions found to be Suboptimal.
- Maternal satisfaction with the care received was mainly predicted by mothers' age, economic status, parity, maternal and fetal outcome.
- The current performance of providers was found to be below the average.
- There were a lack of service availability, infrastructure, personnel, essential drugs, equipments and supplies essential to quality of delivery care.

Recommendation

1. **Strengthen health systems by providing indicators to measure and compare the quality of delivery care services provided at each level of health facility.** Development of indicators and quality improvement activities should focus on the following recommendations**:**

- The quality of delivery care must be achieved and maintained by adhering to quality assurance standards.
- Develop and distribute standard guidelines, procedure manuals, and job aids for delivery care that are based on standard protocols.
- Ensure consistent follow-up of corrective actions in the clinical and quality audits and feedback mechanisms on the reviews.

2. **Make provider training and capacity building the pillar of delivery services.**

- Strengthen basic pre-service education programs for all staffs of skilled health workers that provide care to pregnant women and in-service training programs for clinical care and service management.

- Design mandatory in-service and routine staff development programs in order to improve skills and increase the use of preventive practices in both clinical care and service management

3. **Improvement of basic infrastructure for performance of delivery service signal functions.**

- Improve available infrastructure, supplies, and equipment to increase the quality of delivery Services to reduce maternal and newborn mortality in line with MDGs 4 and 5.

- Ensure the availability of essential drugs for routine delivery care such as oxytocin and essential supplies such as soap and protective equipment for providers.

4. **Further large scale studies should be conducted on quality of care at maternity care services.**

REFERENCES

1. Rosemary Lawrence, Opportunities and Choices Programme. Evaluating the quality of care in maternity services. Executive summary. University of Southampton; 2009.
2. Arkansas Payment Improvement Initiative. Report on Episode overview: Pregnancy, Delivery, Neonatal Intensive Care; 2011.
3. World Health Organization. Indicator Code Book: World Health Statistics - World Health Statistics indicators.WHO. Geneva; 2011
4. Clar et al. Quality care at birth: An international comparative review of the evolution of quality systems. Executive Summary No. 2. September; 2010.
5. Clar et al. developing a framework and instrument to assess the quality of delivery care. Executive Summary No. 5. September; 2010.
6. M. Tauqeer Mustafa Choudhry, Bo Jan Anders Haglund. Maternal mortality and quality of maternity care implications for Pakistan; 2005.
7. World Health Organization. Factsheets Maternal Mortality. http://www.who.int/making_pregnancy_safer/events/2008/mdg5/factsheet_maternal_mortality.pdf ; 2008. Accessed on November.20, 20011.
8. UNFPA, United Nations Population Fund Agency maternal health thematic fund http://www.unfpa.org/webdav/site/global/shared/documents/publications/2009/mhtf_annual report.pdf ; 2008. Accessed on October 17, 2011.
9. Ronsmans C, Graham WJ: Maternal survival 1 – Maternal mortality: who, when, where, and why. Lancet 2006, 368:1189-1200.
10. Jocelyn DeJong, Chaza Akik, Faysal El Kak, Hibah Osman, and Fadi El-Jardali. The safety and quality of childbirth in the context of health systems: mapping maternal health provision in Lebanon. http://dx.crossref.org/10.1016/j.midw.2010.06.012 ; 2010. Accessed on November 05, 2011.
11. Van den Broek NR, Graham WJ. Quality of care for maternal and newborn health: the neglected agenda. BJOG 2009; 116: 18-21.
12. Frank Kagema, Jim Ricca, Barbara Rawlins. Maternal and child health integrated program.Quality of Care for Prevention and Management of Common Maternal and Newborn Complications in Kenya; 2010.
13. World Health Organization. proportion of births attended by a skilled health worker – 2008 updates. Geneva; 2008.

http://www.who.int/reproductive_health/global_monitoring/data.html. Accessed on November 21, 20011.

14. Federal Democratic Republic of Ethiopia ministry of health. Health sector development program III annual performance report for 2009/2010; 2010.

15. Azmeraw Tayelgn, Desalegn T Zegeye, Yigzaw Kebede. Mothers' satisfaction with referral hospital delivery service in Amhara Region, Ethiopia. BMC Pregnancy and Childbirth 2011, 11:78

16. Yalem Tsegay Assfaw, Miguel San Sebastian. Determinants of Antenatal Care, Institutional Delivery and Skilled Birth Attendant Utilization in Samre Saharti District, Tigray, Ethiopia. Master Thesis.Umea University Sweden; 2010

17. Christine Clar, Bilal Iqbal Avan. Evolution of the concept of quality of care with respect to clean delivery in health systems in high, middle and low income countries. Systematic Review in India, Malaysia and Ethiopia. 2010.

18. UNICEF. Assure quality care. Sharing knowledge for action on maternal,newborn and child health. University of Aberdeen; 2010.

19. Andre, B., Pembe, Davi, P., Urassa, U., Elisabeth Darj, E., Anders Carlstedt, A., Pia Olsson. Qualitative study on maternal referrals in rural Tanzania: Decision making and acceptance of referral advice, African Journal of Reproductive Health 2008, 12, 2.

20. Molla S. Dolandson. Measuring the quality of health care. National Academy Press, USA; 2009.

21. Nawal M. Nour (2008). An Introduction to Maternal Mortality. Reviews in obstetrics & gynecology1 (2):77-81.

22. Wendy J Graham, Jacqueline S Bell and Colin HW Bullough. Can Skilled Attendance at Delivery Reduce Maternal Mortality in Developing Countries? Department of Obstetrics and Gynaecology, Aberdeen Maternity Hospital; 2005.

23. Bouvier-Colle M, C Ouedraogo, A Dumont, C Vangeenderhuysen, B Salanave, C Decam. Maternal mortality in West Africa: Rates, causes and substandard care from a perspective survey. Acta Obstetricia et Gynecolica Scandinavia 2001;80(2):113-19

24. S.K.Lodhi, R.Sohail, F.Zaman, M.Tayyeb, T.Bashir, C.N.Hudson, R.L.Khan. FIGO save the mothers initiative: the Pakistan-Uk Collaboration. Int. J. Obs & Gyn 2004;87:79-87

25. Delvaux T G-KV, Bosso P, Collin S, and Ronsmans C: Quality of normal delivery care in Côte d'Ivoire. Rev Afr Santé Reprod 2007, 11(1):22-32.

26. S.K.Lodhi, R.Sohail, F.Zaman, M.Tayyeb, T.Bashir, C.N.Hudson, R.L.Khan. FIGO save the mothers initiative: the Pakistan-Uk Collaboration. Int. J. Obs & Gyn 2004;87:79-87

27. JHPIEGO Using Performance and Quality Improvement to strengthen skilled attendance: Maternal and Neonatal Health Program.: 2003.

28. Donabedian A: The quality of care. How can it be assessed? 1988. Archives of Pathology & Laboratory Medicine 1997, 121(11):1145-1150.

29. Castro, RL Campero, Hernnandez and A.Langer. A study of maternal mortality in Mexico. Journal of Women's health and Gender based Medicine; 2005

30. Griffith P, R Stephenson. Understanding users perspective of barriers to Maternal Health Care use in Maharashtra, India. Journal of Biosocial Medicine 2001;33(3):339-59

31. Donabedian A: Evaluating the Quality of Medical Care. Reprinted from The Milbank Memorial Fund Quarterly, The Milbank Quarterly, Vol. 83, No. 4, 2005 (pp. 691–729)

32. Therese A Wiegers. The quality of maternity care services as experienced by women in the Netherlands. BMC Pregnancy and Childbirth 2009:9-18

33. Amhara regional state. Bahir Dar special Zone annual report for 2011.

34. Bazant ES, Koenig MA: **Women's satisfaction with delivery care in Nairobi's informal settlements**. *International Journal for Quality in Health Care* 2009, **21**(2):79-86.

35. Senarath U, Fernando DN, Rodrigo I: **Factors determining client satisfaction with hospital-based perinatal care in Sri Lanka**. *Tropical Medicine & International Health: TM & IH* 2006, **11**(9):1442-1451.

36. Berhane Y. Women's health and reproductive outcome in rural Ethiopia. [Dissertations] Umeå University, 2000

37. Tsehainesh Abay. Assessment of utilization of skilled birth attendant at delivery in Mekelle town, northern Ethiopia. [MPH thesis] Addis Ababa university, 2009

38. Van Teijlingen ER, Hundley V, Rennie AM, Graham W, Fitzmaurice A. Maternity satisfaction studies and their limitations: "What is, must still be best". *Birth.* 2003; 30(2):75-82.

ANNEXES

ANNEX I: SUBJECT INFORMATION SHEET ENGLISH VERSION

Addis Ababa University

School of medicine, College of Health Science

Department of Nursing and Midwifery

The objective of this study To assess the quality of care in delivery services at public health institutions in Bahir Dar town, Amhara regional state, Ethiopia. Therefore, you are expected to know the advantage of the study and the following information before filling the questionnaire.

A. **Purpose of the study**: To assess the quality of care in delivery services at public health institutions in Bahir Dar town, Amhara regional state, Ethiopia
B. **Duration:** 45 Minutes
C. **Procedure to be carried out:** We will only interview you and there will not be any invasive procedure.
D. **Risks associated with the study:** Apart from the time you are going to spend filling the questionnaire, there will not be any risk acquired by participating in the study.
E. **Benefits of the study:** It contributes in identifying the current weaknesses of the health system in the area of delivery care services, the critical input in maternity care service. This can help program planners, policy makers and health care providers to improve the current level of performance in obstetric care and designing of new strategies for quality improvement. Through this, performance of care and utilization skilled birth attendants increases at the same time. As a result, reduction of maternal mortality and morbidity will occur.
F. **Compensation:** There will not be compensation.
A. **Confidentiality of the information:** All information you give will be kept confidential and won't be accessible to any third party. Personal information you are going to give during the data collection will be confidential. Your name will not be written in the questionnaire and once the data is entered into a computer, it will be coded and becomes unidentifiable. Information in the computer will be password protected. Hard copy (paper) documents such as consent and information forms will be kept in a secured locked cabinet at the name of university.

B. Termination of the study: You will be recruited based on your willingness and without obligation to participate in the study. You have the right to withdraw from participating in the study whenever you want to (before completing the study)

I would like to inform you that this study is approved by Institutional Review Board of FOM, AAU with the following address:

Addis Ababa University
Faculty of Medicine
P.O.Box: 8096
Tel: 011-553-87-34
Email: aauMFIRB@yahoo.com

If you have any question about the study you can ask the contact person by the following address.

Michael Tamene
Addis Ababa University
Mobile: +251 910 48 44 20

Email: michaeltamene@yahoo.com

ANNEX II: SUBJECT INFORMATION SHEET AMHARIC VERSION

አባሪ ፲፩: የተሳታፊዎች መረጃ ቅጽ

አዲስ አበባ ዩኒቨርስቲ

ህክምናና ጤና ሳይንስ ት/ቤት ነርስና ሚድዋይፈሪ ክፍል

የዚህ ጥናት ዓላማ በዚህ ጤና ተቋም ስር ለሚወልዱ ነፍሰጡር እናቶች ሲሆን፣ ይህም ጥናት የሚያተኩረው እነዚህ እናቶች እንዴት አይነት የእንክብካቤ ደረጃ ባለው የመንግስት ጤና ተቋም ውሰጥ አንደሚገላገሉ ለማወቅ የተዘጋጀ ነው፡፡ ስለዚህም ለዚህ ጥናት ይረዳን ዘንድ መረጃ ከመሰብሰባችን በፊት ከዚህ በታች የተዘረዘሩትን መረጃዎች ማወቅ ይጠበቅብዎታል፡፡

1. የጥናቱ ዓላማ

እናቶች እንዴት አይነት የእንክብካቤ ደረጃ ባለው የመንግስት ጤና ተቋም ውሰጥ አንደሚገላገሉ ለማወቅ የተዘጋጀ ነው፡፡

2. የሚፈጀው ጊዜ አርባአምስት ደቂቃ ነው፡፡
3. አሁን የምናደርገው ቃለ ምልልስ ሲሆን በአካልዎት ላይ የሚደረግ ምንም ዓይነት ነገር አይኖርም፡፡
4. በዚህ ጥናት በመሳተፍዎ ጊዜዎትን ከመሻማት ውጪ ምንም ዓይነት ጉዳት አይደርስብዎትም፡፡
5. የጥናቱ ጠቀሜታ

   የዚህን ጥናት ውጤትም ሌሎች ጤናን በተመለከተ መተዳደሪያ ደንብ ለሚያወጡ ግለሰቦች፣ አስተዳደሪዎች፣ ጥናትን ለሚያከናውኑ ግለሰቦችና ሆነ መረጃ ይሰጣል፡፡ በዚህም የእናቶችን ሞት ለመቀነስ የበኩሉን አስተዋጽኦ ያበረክታል፡፡

6. ይህ ጥናት ምንም ዓይነት የተሳታፊነት ካሣ አይሰጥም፡፡
7. የመረጃው ምስጢር አጠባበቅ

ይህ የሚሰጡን ግለሰባዊ መረጃ ምስጢራዊነቱ የተጠበቀ ሲሆን ይህም መረጃ በኮምፒዩተር በምስጢር ከተመዘገበ በኋላ በምንም ዓይነት መንገድ ሊታወቅ አይችልም፡፡

8. ከተሳታፊነት ስለመቋረጥ

ይህን መረጃ የሚሰጡት በሙሉ ፈቃደኝነትዎ ሲሆን ጥናቱ ከተጀመረ በኋላ በማንኛውም ጊዜ ተሳትፎዎን የማቋረጥ ሙሉ መብት ይኖርዎታል፡፡ በተጨማሪም ይህ ጥናት የአዲስ አበባ ዩኒቨርስቲ የጥናትና ምርምር ቦርድ አምኖበት የሚሠራ ሲሆን አድራሻውም እንደሚከተለው ይሆናል፡፡

አዲስ አበባ ዩኒቨርስቲ የህክምና ፋካልቲ ኢንስቲትዩሽናል ሪቪው ቦርድ የፖ.ሣ.ቁጥር 9086

የስልክ ቁጥር 011-553-87-34 ኢ.ሜይል aauMFIRB@yahoo.com

በጥናቱ ላይ ማንኛውም መብራራት የሚገባው ጥያቄ ካለዎት በሚከተለው አድራሻ ግለሰቡን ማግኘት ይችላሉ፡፡

ሚካኤል ታመነ

አዲስ አበባ ዩኒቨርስቲ

ስ.ቁ: +251 910 48 44 20 **ኢ.ሜይል: michaeltamene@yahoo.com**

ANNEX III: CONSENT FORM ENGLISH VERSION

Greeting! Good Morning / Good Afternoon?

My name is Sr/Ato---------- I am working as a member of this research team. I would like to tell you that you and I would have a short discussion concerning this study. Before we directly go to our discussion, I will request you to listen carefully to what I am going to read to you about the objective and general condition of the study and tell me your opinion whether you agree or disagree to participate in the study.

The objective of this study is to assess the quality of care in delivery services at public health institutions in Bahir Dar town, Amhara regional state, Ethiopia. The study will be conducted through interviews. We are asking you for a little of your time, about forty five minutes, to help in this study. In the future, it is hoped that the information you give us could help to design appropriate delivery services for pregnant mothers. We would like to assure you that this privacy should strictly be secured throughout. All your information will be numbered and your name will not be used. Your answers to any of the questions will not be given to anyone else and no reports of the study will ever identify you. The interview is voluntary. Your participation/ non-participation, or refusal to answer questions will have no effect now or in the future on services that you or any member of your family may receive from health service providers.

Are you willing to participate in this study?

1. Yes 2. No

If the answer is yes, Thank you! We will continue the interview.

If the answer is No, Thank you! Do not force them to participate in the study.

Name of interviewer ---------- Signature ----------

Date of interview ----------

Time of interview, Started at---------- Finished at----------

Name of supervisor---------- Signature----------

Date of checking----------

Remark: 1. Complete

2. Incomplete

ANNEX IV: CONSENT FORM AMHARIC VERSION

አባሪ IV: ፈቃደኝነትን የሚያረጋግጥ ቅጽ

አዲስ አበባ ዩኒቨርስቲ ህክምናና ጤና ሳይንስ ት/ቤት ነርስና ሚድዋይፈሪ ክፍል

እንደምን አደሩ / እንደምን አረፈዱ

ስሜ ሲ/ር/ አቶ_____ይባላል:: የምሰራውም የዚህ ጥናት ቡድን ውስጥ ነው::

የዚህ ጥናት ዓላማ ነፍሰጡር እናቶች እንዴት አይነት የእንክብካቤ ደረጃ ባለው የመንግስት ጤና ተቋም ውስጥ አንደሚገላገሉ ለማወቅ የተዘጋጀ ነው::

ይህም ጥናት የሚሰራው በአዲስ አበባ ዩኒቨርሲቲ ሜዲካል ፋካልቲ ነርስ ት/ቤት ጋር ነው:: ስለዚህ እርስዎም በዚህ ጥናት ላይ ተሳታፊ እንዲሆኑና ትክክለኛ መረጃ እንዲሰጡን በትህትና እንጠይቃለን::

በመቀጠልም የምጠይቅዎ ግለሰባዊ የሆኑ ጥያቄዎችን ሲሆን ስም አልጠይቅዎትም:: በተጨማሪም የሚነግሩኝ መረጃ ምስጢሩ የተጠበቀ እንደሚሆን ቃል እገባልዎታለሁ:: ለሚሰጡኝ መልስም ጊዜዎትን ስለሰጡኝ በጣም አመሰግናለሁ:: ቃለ መጠይቁ የሚፈጀው ጊዜ አርባአምስት ደቂቃ ነው::

በጥናቱ ላይ ለመሣተፍ ፈቃደኛ ነዎት

ፈቃደኛ ነኝ _____ ፈቃደኛ አይደለሁም _____

ፈቃደኛ ካልሆኑ፣ አመሰግናለሁ::

ፈቃደኛ ከሆኑ፣ ስለፈቃደኝነትዎ አመሰግናለሁ:: ቃለ መጠይቁን እንቀጥላለን::

መረጃውራ የሚሰበስበው ስም _____

ፊርማ _____

መረጃው የተሰበሰበበት ቀን _____

መረጃው የተሰበሰበበት ሰዓት _____

ያለቀበት ሰዓት _____

የተቆጣጣሪው ስም _____

ፊርማ _____

ያለቀ _____

ያላለቀ _____

ANNEX V: EXIT INTERVIEW QUESTIONNAIRE

PART 1: SOCIO – DEMOGRAPHIC CHARACTERISTICS

S. no	Questions	Response
101	Age (in years)	----------
102	Marital Status	1. Single 2. Married 3. Divorced 4. Widowed
103	Ethnicity	1. Amhara 2. Tigray 3. Oromo 4. Agew 5. Other specify
104	Religion	1. Orthodox 2. Muslim 3. protestant 4. Other specify
105	Educational Status	1. Not able to read and write 2. Able to read and write only 3. Primary education /1-8/ 4. Secondary education /9-12/ 5. Above grade 12
106	Occupation	1. Governmental employee 2. Private employee 3. Merchant 4. House wife 5. Farmer 6. Daily laborer 7. Student 8. Other specify
107	Economic status(monthly income)	---------- birr
108	Residence	1. Urban 2. Rural

PART 2: OBSTETRIC HISTORY

S. no	Questions	Response
201.	Parity(number)	----------
202.	Reason for visit	1. Normal delivery 2. Referral for delivery or obstetric complication treatment 3. obstetric complication treatment 4. Others(specify)
203	Wanted status of pregnancy	1. Wanted 2. Unwanted 3. Neutral
204	Mode of delivery	1. Spontaneous vaginal delivery 2. Assisted delivery 3. Caesarian section
205	Maternal outcome	1. Normal 2. With some complication 3. referred to another institution 4. other specify-------
206	Fetal outcome	1. Born living 2. still-born 3. died after birth
207	Do you have ANC follow up	1. Yes 2. No
208	Do you have previous health facility delivery use experience?	1. yes 2. No

PART 3: QUESTIONS ON RESPONDENTS' SATISFACTION

A) Health facility related:

S.no	Questions	Response	Skip
301	How much hrs do you traveled for service?	_____	
302	Are you comfortable with the distance over home to hospital?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
303	Do you feel that today you received the information & service that you wanted? (e.g., In locating the rooms for registration, exam. rooms, and drug dispensing and their respective service).	1. Yes 2. No 3. Some but not adequate information and service 4. I have received the service but not the	

		information. 5. I have received the information but not the service. 6.Other (specify)--------	
304	Are you referred from other health institution?	1. Yes 2. No	If no skip to Q 306
305	If referral, how much satisfied are you with the referral link? I.e. how much ready are they to receive referrals?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
306	How do you feel with the access of toilets?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
307	How do you feel with the cleanliness of toilets?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
308	How do you feel about your waiting time to get the delivery service?	1. Too long 2. Long 3. average 4. short 5. no waiting	
309	Service payment status (card)	1. Paid 2. Free 3. Paid only for card	If 2 or 3 skip to Q 312
310	How much birr do you pay for the direct cost of service including card?	----------	
311	What is your view with the direct cost you paid for service including card?	1. Very expensive 2. expensive 3. fair 4. cheap 5. Very cheap	
312	Any drugs and supplies ordered to you?	1. Yes 2. No	If no skip to Q 314
313	How do you feel with the availability of drugs and supplies?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	

314	Is there waiting area for the patients and relatives?	1. yes 2. No	If no skip to Q 316
315	How do you evaluate the overall cleanliness and comfort of the waiting area?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
316	How do you evaluate the overall cleanliness and comfort of the examination room?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
317	How do you evaluate the overall cleanliness and comfort of the hospital compound?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	

B) Care provider related:

S. no	**Questions**	**Response**
318	How do you feel about your waiting time to be seen by a health worker?	1. Too long 2. Long 3. average 4. short 5. no waiting
319	How do you feel about the courtesy and respect of the Doctor/Nurse during your visit?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied
320	During your visit at this health institution, how the provider treat you?	1. Very poorly 2. poorly 3. well 4. Very well
321	Who is the professional who attended the delivery for you?	1. Doctor 2. Nurse 3. student 4. Other specify------
322	What was the sex of the professional who attended the delivery for you?	1. Male 2. Female
323	How do you feel by the way the sex of the health professional examining you?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied

		5. Very satisfied
324	How do you rate measures taken to assure privacy during your examinations? For example, a private room, Curtained or screened area, etc…	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied
325	How do you feel with the completeness of the information given to you about your problem? (By the health providers)	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied
326	What do you think with the measures taken to assure confidentiality about your health problem?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied
327	Thinking about your experience, how likely would you be to deliver in this hospital?	1. Yes 2. No 3. I do not know
328	Thinking about your experience, how likely are you to recommend this hospital to family and friends?	1. Yes 2. No 3. I do not know
329	How do you rate your overall level of satisfaction regarding the care of the delivery service you received?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied

Thank you for your cooperation.

ANNEX VI: AMHARIC QUESTIONNAIRE FOR EXIT INTERVIEW

ክፍል ፡- ማህበራዊ መረጃወችን በተመለከተ የሚቀርብ መጠይቅ

ተ.ቁ	ጥያቄ	ምላሽ
101	እድሜ (በአመት)	----------
102	የጋብቻ ሁኔታ	1. ያላገባ 2. ያገባ 3. አግብታ የፈታች 4. ባሏ የሞተባት
103	ብሄር	1. አማራ 2. ትግሬ 3. ኦሮሞ 4. አገው 5. ሌላ /ይጠቀስ/
104	ሀይማኖት	1. ኦርቶዶክስ ክርስቲያን 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ /ይጠቀስ/
105	የትምህርት ደረጃ	1. ማንበብና መጻፍ የማይችሉ 2. ማንበብና መጻፍ ብቻ 3. አንደኛ ደረጃ የጨረሱ /1-8/ 4. ሁለተኛ ደረጃ የጨረሱ /9-12/ 5. 12 + 1 እና ከዛ በላይ
106	ስራ	1. የመንግት ተቀጣሪ 2. የግል መስሪያ ቤት ተቀጣሪ 3. ነጋዴ 4. የቤት እመቤት 5. ገበሬ 6. የቀን ሰራተኛ 7. ተማሪ 8. ሌላ /ይጠቀስ/
107	ወርሃዊ ገቢ	----------ብር
108	የመኖሪያ አካባቢ	1. ከተማ 2. ገጠር

ክፍል 2፡- የ ስነ - ወሊድ መረጃወችን በተመለከተ የሚቀርብ መጠይቅ

ተ.ቁ	ጥያቄ	ምላሽ
201.	የልጆች ብዛት /በቁጥር/	----------
202.	ወደ ጤና ተቋም የመጡበት ምክንያት	1. ለመደበኛው የወሊድ አገልግሎት 2. ከእርግዝናው ጋር ተያያዥ በሆኑ ችግሮች ምክንያት ለህክምና አገልግሎት

		3. ለወሊድ አገልግሎት ወይም በተያያዥ ችግሮች ምክንያት ከሌላ ተቋም ተመርተው 4. ሌላ /ይጠቀስ/
203	የወላድ እርግዝናውን የመፈለግ ሁኔታ	1. የተፈለገ 2. ያልተፈለገ 3. መልስ አልተሰጠበትም
204	የአወላለዱ ሁኔታ	1. በመደበኛው የማህጸን አወላለድ መንገድ 2. በታገዘ የማህጸን አወላለድ መንገድ 3. በቀዶ ጥገና አወላለድ መንገድ
205	የወላድ ጤና ሁኔታ ከወሊድ በኋላ	1. ጤናማ 2. ከተወሰኑ ተያያዥ ችግሮች ጋር 3. ወደ ሌላ ጤና ተቋም ተመርተዋል 4. ሌላ /ይጠቀስ/
206	የተወለደው /ችው ልጅ ጤና ሁኔታ	1. ጤናማ ልጅ 2. ያለጊዜው የተወለደ/ች 3. ከወሊድ በኋላ የሞተ/ች 4. ሌላ /ይጠቀስ/
207	የቅድመ ወሊድ ክትትል አገልግሎት ነበረዎት?	3. አዎን 4. የለም
208	ከዚህ ቀደም በጤና ተቋም ተገላግለው ያውቃሉ?	1. አዎን 2. የለም

ክፍል 3፡- እናቶች በአግልግሎቱ ላይ ላላቸው እርካታ የሚቀርብ ቃለ መጠይቅ

ሀ. ከጤና ተቋሙ ጋር በተገናኘ፡-

ተ.ቁ	**ጥያቄና ማጣሪያ**	**ምላሽ**	**ይዘለል**
301	አገልግሎቱን ለማገኘት ምን ያህል ርቀት ተጓዙ? /በኪ.ሜ/	----------	
302	ከመኖሪያ ቤት እስከ ጤና ተቋም ድረስ ባለው ርቀት ምን ያህል ደስተኛ ነዎት?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል	
303	የሚፈልጉቱን መረጃና አግልግሎት ዛሬ አገኝተዋል ? (ለምሳሌ ካርድ፣ መመርመርያ እና መድሃኒት መሸጫ ዐይነት ክፍሎችን በማመላከትና አገልግሎታቸውን በማገኘት፡፡)	1.አዎን 2.የለም 3.በመጠኑ 4. አግልግሎቱን ብቻ አግኝቻለው፡፡ 5. መረጃ ብቻ አግኝቻለው፡፡ 6. ሌላ /ይጠቀስ/	
304	የመጡት ከሌላ ጤና ተቋም ተመርተው ነው ?	3. አዎን 4. አይደለም	ካልሆነ ወደ ጥ. 306 ይዘለል

305	ከሌላ ጤና ተቋም ተመርተው ከሆነ የአመራሩን ግንኙነት እንዴት አገኙት ማለትም የተመራ ለመቀበል ምን ያህል ዝግጁነት አላቸው?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል	
306	ስለ መፀዳጃ ቤቶች አቅርቦት ማለትም በበቂ ሁኔታ ስለ መገኘት ምን ተሰማዎት?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል	
307	ስለ መፀዳጃ ቤቶች ጽዳት ምን ተሰማዎት?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል	
308	የወሊድ አገልግሎቱን ለማግኘት የመጠበቂያው ጊዜ እንዴት ነው ?	1. በጣም ረዥም 2. ረዥም 3. መካከለኛ 4. አጭር 5. በጣም አጭር	
309	የአገልግሎቱ ክፍያ ሁኔታ ካርድን ጨምሮ	1. በክፍያ 2. ነፃ 3. ለካርዱ ብቻ በክፍያ	መልሱ 2 ወይም 3 ከሆነ ወደ ጥ.ቁ 312 ይዘለል
310	ለወሊድ አገልግሎቱ ካርድን ጨምሮ ምን ያህል ብር ከፈሉ?	----------	
311	ለወሊድ አገልግሎቱ ካርድን ጨምሮ የተጠየቁትን ዋጋ እንዴት ያዩታል?	1. በጣም ውድ 2. ውድ 3. ተመጣጣኝ 4. ርካሽ 5. በጣም ርካሽ	
312	የታዘዘልዎት መድሃኒት ወይም ግልጋሎት አለ?	1. አዎን 2. የለም	ካልሆነ ወደ ጥ.ቁ 314 ይዘለል
313	ስለ መድሃኒትና ግልጋሎት አቅርቦቱ ምን ተሰማወት?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል	
314	ለወላድ እናቶችና ለቤተሰቦቻቸው የሚሆን መቆያ ቦታ አለ?	3. አዎን 4. የለም	ከሌለ ወደ ጥ. 316 ይዘለል
315	የመቆያ ቦታውን አጠቃላይ ጽዳትና ምቾት እንዴት አገኙት?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል	
316	የመመርመርያ ክፍሉን አጠቃላይ ጽዳትና ምቾት እንዴት አገኙት?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ	

		4. ተመችቶኛል 5. በጣም ተመችቶኛል	
317	የጤና ተቋሙን አጠቃላይ ጽዳትና ምቾት እንዴት አገኙት?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል	

ለ. ከጤና ባለሙያዎች ጋር በተገናኘ፡-

ተ.ቁ	**ጥያቄ**	**ምላሽ**
318	በጤና ተቋሙ ውስጥ በዶክተር ወይም ነርስ ለመታየት ምን ያህል ጊዜ ጠበቁ?	1. ከአንድ ሰዐት ያነሰ 2. 1 – 2 ሰዐት 3. ከሁለት ሰዐት በላይ
319	በጤና ባለሙያ ለመታየት የጠበቁትን ጊዜ እንዴት ይገመግሙታል?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል
320	በጤና ተቋሙ ቆይታዎ ወቅት የጤና ባለሙያውን/ዎን አክብሮትና ፀባይ እንዴት ገመገሙት?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል
321	በጤና ተቋሙ ቆይታዎ ወቅት የጤና ባለሙያውን/ዎን እንክብካቤ ክህሎት እንዴት ገመገሙት?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል
322	እርስወን ያዋለደዎት የጤና ባለሙያ ጾታ ምንድን ነው ?	1. ወንድ 2. ሴት
323	እርስወን ባዋለደው የጤና ባለሙያ ጾታ ምን ተሰማዎት?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. ምንም ለውጥ የለውም 4. ተመችቶኛል 5. በጣም ተመችቶኛል
324	የገል ነፃነትዎትን ለመጠበቅ በጤና ባለሙያው የተደረጉትን ነገሮች ምን ያህል አረከተወታል? ለምሳሌ የግል ክፍል፣መጋረጃ ወይም የተከለለ ቦታ ወዘተ. . .	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል
325	በጤና ባለሙያው ስለ ጤና ችግርዎ የተሰጠወት መረጃ ሙሉእነት ምን ያህል አርክቶዎታል?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል
326	የጤና ችግርዎ ሁኔታዎችና ተያያዥ የገል ጉዳዮችን በተመለከተ በጤና ባለሙያው ሚስጥር ጠባቂነት ምን ያህል ይተማመናሉ?	1. በጣም አልተማመንም 2. አልተማመንም 3. መካከለኛ

		4. እተማመናለው 5. በጣም እተማመናለው
327	በጤና ተቋሙ የማዎለጃ ክፍል ቆይታዎ ወቅት ባጋጠመዎት ሁኔታዎች ተመርኩዘው ለወደፊቱ እዚሁ ለመገላገል ያስባሉ?	1. አዎን 2. የለም 3. አላውቀውም
328	በጤና ተቋሙ የማዎለጃ ክፍል ቆይታዎ ወቅት ባጋጠመዎት ሁኔታዎች ተመርኩዘው ቤተሰብዎና ወዳጆችዎ እዚሁ እንዲገላገሉ ይመክራሉ?	1. አዎን 2. የለም 3. አላውቀውም
329	አጠቃላይ የጤና ተቋሙ የማዎለጃ ክፍል አገልግሎት አሰጣጥ ምን ያህል አርክቶዎታል?	1. በጣም አልተመቸኝም 2. አልተመቸኝም 3. መካከለኛ 4. ተመችቶኛል 5. በጣም ተመችቶኛል

ስለ ትብብርዎ በጣም አመሰግናለሁ::

ANNEX VII: OBSERVATION CHECKLIST

Observation Checklist for Quality of Care in Delivery Service Process Assessment

Observation Unit (General, Intrapartum Unit and Postpartum Unit)

I. GENERAL(patient-client interaction)

S.No	Task/activity	performed	Not performed	Comments
101	Before examination, was the exam area, equipment and Documents prepared for examination			
102	Throughout assessment provide woman-centered care			
	Greet the woman with kindness and respect			
	Introduce self			
	Encourage the woman (and support person) to ask Questions			
	Respond for questions			
	Explain all procedures before performing			
103	Was privacy maintained?			

II. INTRAPARTUM AND POST PARTUM

	Indicator	Response
201	FHR	1. yes 2. No
202	Maternal blood pressure	1. yes 2. No
203	Maternal pulse	1. yes 2. No
204	uterine contractions	1. yes 2. No
205	Vaginal exam	1. yes 2. No
206	Partograph use	1. yes 2. No
207	If yes to Q 6. is it filled according to the standard?	1. yes 2. No
	Intrapartum Phase	
301	Wash hands	1. yes 2. No
302	Use new or sterilized gloves	1. yes 2. No

303	Clean delivery bed(kotch)	1. yes 2. No
304	Sterilized delivery sets are used	1. yes 2. No
305	Protect perineum	1. yes 2. No
306	Suction newborn	1. yes 2. No
307	Clamp and cut umbilical cord	1. yes 2. No
308	Put baby skin-to-skin with mother	1. yes 2. No
309	Dry and cover newborn	1. yes 2. No
310	Give oxytocin after delivery	1. yes 2. No
311	Observe or manage placenta delivery	1. yes 2. No
312	Confirm uterus is well contracted	1. yes 2. No
313	Examine placenta	1. yes 2. No
314	Instruments disinfected and prepared for sterilization	1. yes 2. No

Y-yes **N-No**

Take two consecutive values and write the average time.

ANNEX VIII: FACILITY ASSESSMENT QUESTIONNAIRE

Date: _____/_____/_____

Name of person completing facility assessment form: _____

Name of facility: _____

FACILITY ASSESSMENT OF DELIVERY CARE: Find the manager or most senior health worker responsible for delivery service who is present at the facility. Introduce yourself and explain the survey objective as described in the training. Read the following:

This questionnaire is designed to gather information about Obstetric Care in your facility. We appreciate your providing us with this information, and hope that it is at the same time helpful in evaluating your facility. Questions in this packet address the type of services provided at your facility, and the equipment and supplies that are available. We are asking your help to ensure the information collected is accurate. If there are sections where someone else is the most appropriate person to provide information, we would appreciate your introducing us to that person or you may need to talk to other healthcare providers at your facility and gather information from facility registers, logbooks and other records. Can we proceed now?

I. SERVICE AVAILABILITY

Please indicate if the following services are available 24 hours/7 days a week. If the services **are not** available 24 hours/ 7 days a week, please list the days and hours that the services **are** available. Place a mark **"X"** in the appropriate column

No.	**Question**	**Response**		
	Service availability	**Yes**	**No**	**If NO, what days and hours are Services available?**
1.	Are labor and delivery services available at this facility 24 hours a day, every day?			
2.	Are services for **cesarean section** available at this facility 24 hours a day, every day?			
3.	Is there **blood supply** available for transfusions at this facility 24 hours a day, every day?			

4.	Are **anesthesia services** available at this facility 24 hours a day, everyday			
5.	Is there continuous supervision of the service?			
6.	Is there separate examination room for pregnant mothers?	1. Yes 2. No		
7.	How many beds are available in the postnatal clients' admission in this facility?	_____		
8.	How many delivery beds/couches are available?	----------		

II. INFRASTRUCTURE

No	Item	Is at least one and functional	
		Yes	No
1.	Delivery or labor room with bed and lighting		
2.	Partitions of the delivery room for privacy		
3.	Examination room or area providing client privacy (room for screening, counseling and examination)		
4.	Post-delivery room		
5.	Means of ventilation in delivery room		
6.	Sufficient light source to perform tasks during the day		
7.	Running water		
8.	Functioning toilet		
9.	Heating arrangements(Stove)		
10.	Curtains(for patient privacy)		
11.	Waiting area for visitors and family		
12.	Autoclave		
13.	Storage area or cupboard for drugs and other supplies		
14.	Refrigerator		
15.	Refuse disposal with cover		

III. PERSONNEL

List the number of personnel who work at the facility in each of the following positions

No	Cadre	Number at this facility	Is at least one person on duty and physically Present 24 hours a day, 7days a week?
1.	Registered midwives and nurse/midwives		____Yes ____No
2.	Obstetrician/gynecologist		____Yes ____No
3.	Generalist doctor		____Yes ____No
4.	Health officer		____Yes ____No

IV. ESSENTIAL DRUGS

No	Drugs	Available		Was there stock out in the last 12 months	
		yes	No	yes	No
1.	Does this ward has antibiotics				
2.	Does this ward have oxytocics or prostaglandins				
	Ergometrine				
	Oxytocin				
	Prostaglandin E2				
3.	Does the maternity ward have drugs used in Emergency?				
4.	Does the maternity ward have anesthetics?				
5.	Does the ward have IV fluids				
6.	Vitamin K for newborns				
7.	Tetracycline 1% or silver nitrate 1% or Erythromicin eye ointment				
8.	Gentain violet paint				

9.	Anti-tetanus serum				
10.	Tetanus toxoid				
11.	Anti Rho(D) immune Globulin				

V. EQUIPMENT AND SUPPLIES

No	Basic items	Is at least one available and functional	
		yes	No
1.	Filled oxygen cylinder		
2.	Ultrasound		
3.	BP cuff		
4.	Stethoscope		
5.	Fetal stethoscope		
6.	Examination table		
7.	Labour or Delivery table		
8.	Baby weighting scale		
9.	Partograph (WHO modified)		
10.	Neonatal resuscitation table		
11.	Incubator		
12.	Measuring tape		
13.	NG tube for oxygenation		

Any Comments ----------

Thank you for your collaboration!

ANNEX IX: DECLARATION

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

_____ _____ _____

Name of the Investigator Sign Date

This thesis has submitted with my approval as University advisor.

_____ _____ _____

Name Sign Date