COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF HEALTH SYSTEMS MANAGEMENT & POLICY

Quality of Intrapartum and New born care in public health care facilities of Wolkite town, Southern Ethiopia

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Thesis report Submission Form

Declaration

I declare that the research report entitled"Quality of intrapartum and new born care in public health care facilities of Wolkite town, Southern Ethiopia" is my original work and it has not been presented for a degree in Addis Ababa university or another university. I also declare that all the sources of material used for this study have been fully acknowledge.

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Date of submission: May 23,2023 **Place:** Addis Ababa, Ethiopia

Approval of the Advisor

This thesis report has been submitted for department with my approval as a university advisor

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Date: **Place:** Addis Ababa, Ethiopia

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List of Acronyms

ANC	Antenatal Care
BEMONC	Basic Emergency Obstetric and Newborn Care
CEMONC	Comprehensive Emergency Obstetric and Newborn Care
CS	Caesarean Section
CSA	Central Statistics Agency
DC	Data collector
EDHS	Ethiopian Demographic Health Survey
EmOC	Emergency Obstetric Care
FMoH	Federal Ministry of Health
HMIS	Health management information system
MNH	Maternal and new born health
NQS	National Quality Strategy
SBA	Skilled Birth Attendant
SDG	Sustainable development goal
TTC	Tetracycline
UHC	Universal health coverage
WHO	World Health Organization

Abstract

Background: Even though, the world has made significant progress in reducing maternal and newborn mortality today, there are still far too many preventable and treatable maternal and newborn deaths globally. It is estimated that about six out of ten newborn problems and fifty percent of maternal mortality in developing countries are due to poor quality of care. However, in Ethiopia study on quality of intrapartum and newborn care is limited. Thus, the purpose of this study was to assess the quality of intrapartum and newborn care in public health facilities of Wolkite town in terms of three quality dimensions.

Objectives: To assess the level of quality of intrapartum and newborn care in public health facilities of Welkite town, Southern Ethiopia, 2023.

Methods: A facility-based cross-sectional study design was employed from March to April 2023 in 5 public health facilities for facility audit, among 342 mothers for exit interview and 185 mothers for observation. Consecutive random sampling method was applied. Data were collected by using document review, observation, and exit interview. Data was entered, coded and cleaned using Epidata version 4 and exported to Stata version 14 and SPSS version 25 for analysis. Descriptive and summary statistics were computed. Binary logistic regression was performed and variables which had p-values of ≤0.25 were selected and included in multivariable logistic regression analysis. Finally adjusted odds ratios with 95% confidence intervals and p-values < 0.05 were considered significant independent predictors of quality of intrapartum care.

Result: The study revealed that the quality of intrapartum care in input and process components were 60% and 35.1% respectively. While, the quality of output as measured by maternal satisfaction was 42%, and 69.7% of newborns received good quality of care. Maternal education (AOR: 9.97, 95%CI: 1.52, 25.56), ANC visit (AOR: 6.32, 95%CI: 2.86, 14.00), transportation (AOR: 0.26, 95%CI: 0.15, 0.48) and process quality (AOR: 2.32, 95%CI: 1.27, 4.24) were independent predictors of maternal satisfaction with quality of intrapartum care.

Conclusion and Recommendations: The quality of intrapartum and newborn care in the study area was minimal. Thus, efforts should be made by the government for improving facilities capacity and performance of health care providers in order to improve the quality of intrapartum and newborn care.

Key Words: Quality, Intrapartum and newborn care, public health facilities, Southern Ethiopia

Chapter 1 Introduction

1.2 Background

Quality of care is the degree to which maternal health services for people and populations must raise the likelihood of prompt and acceptable treatment for the aim of achieving desired results that are both in line with current professional knowledge and uphold basic reproductive rights (1). The World Health Organization outlined quality of maternal and neonatal health care as "the extent to that maternal and neonatal health services increase the chance of timely, acceptable take care for the aim of attaining desired outcomes (2). Satisfactory quality of care needs acceptable use of competent clinical and non-clinical interventions, strengthened health care infrastructure and optimum skills and perspective of health care providers, leading to improved health outcomes and positive experience of women and providers (1, 3).

The period around childbirth is the most crucial for saving the high number of maternal and neonatal lives and averting stillbirths (4). Improvement of the standard of preventive and curative care, and take care for management of complications throughout this essential period could have the largest impact on maternal, fetal and newborn survival and well-being (5). The findings of evidence-based interventions study to mothers and their newborns in eighty one countries within the year 2020 indicate that if high-quality health systems might effectively deliver, there would be an estimated 28% decrease in maternal deaths, 28% decrease in infant deaths, and 22% fewer stillbirths compared to scenario without any amendment or improvement in quality of care (5).

Evidence clearly indicates that unless the quality of service is maintained, simply expanding the number of facilities will not be enough to reduce maternal and new-born mortality and morbidity (6). The result of care for women and neonates around the time of birth in health institution reflects the evidence-based practices used and the general quality of services provided. The quality of care depends on the physical infrastructure, human resources, knowledge, skills and capability to deal with both normal pregnancies and complications that need prompt life-saving interventions. Rising the standard of care in health institution is widely acknowledged as being of most importance in the effort to lower preventable mortality and morbidity among mothers and babies (7). Data from developing countries show massive variability in maternal mortality in

health-care facilities, suggesting inconsistent quality of care (8). Additionally, a strong relationship exists between inadequate intrapartum care and maternal and neonatal death (8).

The problem of ensuring consistent quality is greatest in sub-Saharan Africa and South Asia, where mortality is highest and health systems are least developed (9). Numerous studies have demonstrated that poor maternal and newborn care, particularly for marginalized groups, is prevalent in developing nations and contributes to the high rates of maternal and neonatal death (10, 11). In spite of the fact that access to basic and emergency obstetrical and infant care has improved in Ethiopia, efforts have also been made to reduce financial obstacles to care, including the provision of free health services and the formation of community-based health insurance. However, in many instances, the expansion of health services has not been matched by an improvement in quality at the point of care, and pregnancy and delivery care are still not used to their full potential (11). With half of women now getting delivery service in health facilities, significant progress has been made in lowering the chance of death from complications during child birth. However, care quality at institution remains a challenge and these problems are made worse by the health system struggles to both meet the demand for routine quality healthcare and the frequent need to respond to drought, conflict or disease outbreaks, including COVID-19 (12).

Maternal and neonatal mortality remains high in Ethiopia, with poor quality of intrapartum and newborn care limits further progress (11). In 2016, Ethiopia adapted World health organization standard for rising quality of maternity and newborn healthcare in health institution and developed a health sector quality transformation that aids in national quality strategy (NQS) implementation (16), (13). There are numerous methods for consistently measuring the process of various maternal and new born health (MNH) care (10). Since, the standard of care is the most powerful factor of facility based childbirth; Ethiopia's healthcare strategy gives attention to quality service(14). Hence, this study intends to assess the quality of intrapartum and new born care and their predictors in public health care facilities of Wolkite town.

1.2 Statement of problems

Even though, the world has made significant progress in reducing maternal and newborn mortality today, there are still far too many preventable and treatable maternal and newborn deaths globally (3). Each year, more than 295,000 women die of due to complications of pregnancy and delivery, and estimated 2.4 million children died within their first month of life (15), 94% of these deaths occur in developing nations and sub-Saharan Africa (3, 15). There is strong evidence showing that the high amount of maternal death is happened around childbirth and immediate postpartum period (16).

Over the past decade to scale back adverse outcomes for maternal and newborns an oversized effort are directed at increasing experienced birth attendance and resulted in higher rates of births in health facilities (6). However, with increasing utilization of health services, additional evitable maternal and perinatal mortality and morbidity have occurred at those health facilities. A skilled birth attendant and health facility delivery will improve maternal and newborn outcomes only if they encompass the implementation of proven effective interventions needed to prevent or manage major causes of mothers and newborn morbidity and mortality (6).

In spite of exceptional achievements in reductions of maternal and new born mortalities throughout the last decades, Ethiopia continues to have a high estimated rate of mothers and new born deaths as well as stillbirths. In Ethiopia about 12,000 mothers die every year, out of this 85% of the deaths are due to direct obstetric complications (17). Most of those losses are believed to be preventable with high-quality, evidence-based interventions delivered before and throughout pregnancy, during labour and birthing, and within the critical hours and days after birth (16, 18)).

Ethiopia has among the highest mortality rates in the world for both mothers and new born (401/100,000 live births and 33/1000 live births, respectively (19). In Ethiopia as FMoH report in 2017, 49% of reported maternal deaths occurred after women found at health facilities. 14% of those maternal mortality were from shortage of supplies and instrument, 11% t in patient management delay at the facility, 6% to care providers error and mismanagement, and 28% to referral delays from different facilities (20). Therefore, increasing access to, and utilization of, maternal care alone is insufficient to enhance maternal health outcomes (21). The level of care a woman receives across ANC, intrapartum care, and PNC affects the health of mother and her

child and her chance of seeking care in the future (21), (22). According to estimates, in less developed nations, about six out of ten neonatal problems and fifty percent of maternal deaths are due to inadequate quality of care (21). Hence, Achieving high-quality, effective, safe, people-centered, timely, equitable, integrated, and efficient care is crucial to advancing women's and neonates' health outcomes (23, 24).

Despite the Ethiopian FMoH tries to improve the health facility based labour and delivery care as a key priority the provision at health facilities limits pregnant women to access skilled birth attendance due to inadequate quality care in the facility (25, 26). More women globally give birth in health institution than ever before, however this has not always change into valuable gains in survival rates for mothers and babies (2). The lives of over 3 million mothers and babies may well be saved every year with high coverage of quality prenatal care and take care for small and unwell babies (27). According to a study that evaluated the standard care of maternal and new-born care in Ethiopia in 2021, the majority of health institutions failed to meet the national MNH quality of care requirements (21). Only 15.6%, 9.3%, and 10.7% of health facilities that met the standard care for MNH and satisfied the expected input, process, and output maternal and neonatal health care quality requirements, respectively (11)

Ethiopia needs to quickly enhance the quality of maternal and neonatal healthcare to meet the 2030 Sustainable Development Goals (SDGs) aim of reducing the global newborn mortality rates to less than 12/1,000 live births and the global maternal mortality ratio to less than 70/100,000 live births (28). There is a global push to encourage facility deliveries, but unless this is accompanied by parallel improvements in care quality, it may not result in a decrease in mothers and infant mortality (4). Inadequate quality of care in health facilities, specifically in low-resource nations, show a neglected agenda and is highly acknowledged as a major contributing factor to persistent high levels of preventable maternal and newborn morbidity and mortality (29). Closing the gaps in quality of care will be essential to the achievement of the worldwide commitment towards Universal Health Coverage (UHC) (28).

The lack of pertinent and reliable data is one of the biggest challenges facing initiatives to address the quality of care in low- and middle-income nations (29). There are few studies have been conducted in Ethiopia on quality of intrapartum and newborn care. Specifically, there is not

any study conducted at the study area. Some studies have tried to assess the quality of perinatal care in structural outcome, and client perspective components of standard of care in Ethiopia (30). Majority of the available studies mostly focused on client satisfaction (31), and a few studies tried to assess the quality of child birth care using the 3 aspects of quality measurement (32). However, the relationship between maternal satisfaction and the quality of the input and process of the intrapartum care was not evaluated in the previous studies. Additionally, there was no enough published studies on overall quality of intrapartum care in the study area since, maternal and newborn mortality are high in Ethiopia including the study setting. Therefore, the purpose of this study is to fill the above gap by assessing the quality of intrapartum and newborn care in terms of input, process and output quality measurements and their association based on WHO standard in line with Ethiopian NQS (2).

1.3 Significance of Study

In order to decrease maternal and newborn mortality and morbidity, it is essential to provide high-quality care during the intrapartum period. This study assess to the level of quality of intrapartum and newborn care and its associated factors in public health facilities of Wolkite town, Southern Ethiopia.

As a result, the finding of this study will add to the existing body of knowledge on general quality of intrapartum and new born care in Ethiopia. Furthermore, the results of this study will also give essential information and a comprehensive picture about the standard of care for mothers and newborns to interested parties (policymakers, FMoH and other corned bodies) for evidence-based decision-making in the implementation, improving standard of perinatal care provision and scale back maternal and new born death in Ethiopia. In addition, it also benefits future researchers, who will use this research as a reference for different or further studies.

Chapter 2 Literature review

2.1 Overview of concepts and definitions of quality of intrapartum and newborn Care

Quality is a complex notion that may be defined from a number of angles, thus there is no single definition that is agreed upon by everyone (1, 33). Quality is defined by the Institute of Medicine (IOM) as "the extent to which health services for individuals and populations increase the chance of desired health outcomes and are consistent with current professional knowledge." Quality is more clearly defined as "care that is measurably safe, of the highest standard, evidence-based, uniformly delivered, with appropriate utilization of resources and services" by Dlugacz, Restifo, and Greenwood (2004) within the same framework. According to the Donabedian model, quality is defined and described in terms of 3 major aspects the structure (materials, infrastructure, and human resources), process (adherence to standard care throughout intrapartum and postpartum periods), and outcome (maternal satisfaction with the service's accessibility and use of emergency obstetric and newborn care (34). Supported on this, to maximize the likelihood of desired health outcomes, quality care should be complete, safe, effective, timely, efficient, and acceptable by the user and it should also be congruent with current professional knowledge (1).

The procedure for enhancing the quality of care in a health institution involves two steps. First, the facility must have the necessary infrastructure, tools, medications, and staff members to provide care. Second, delivering high-quality treatment necessitates putting a number of quality-improvement strategies into practice (35, 36). The likelihood that the desired individual and facility results will be realized is increased by the framework of eight quality care domains for pregnant women and newborns in facilities (1). This framework can be used to assess the characteristics or dimensions of standard of care in numerous sectors of the health system (2).

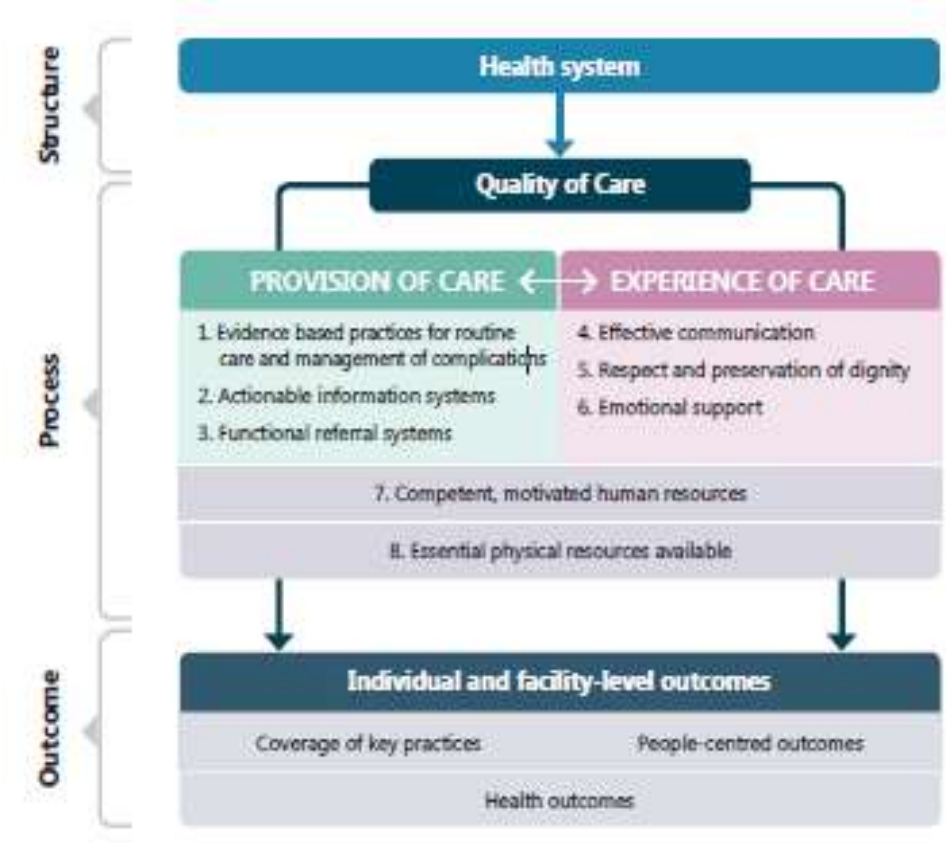


Figure 1 WHO framework for the quality of maternal and newborn care, 2016(2)

2.2 Empirical review of overall quality of intrapartum and new born care

To reduce preventable women's and infants death and improve their health outcome , all mothers and new born should have access to high-quality of childbirth care (37).The three aspects of quality care are important when only good structure enhance the chance of good process and good process improve the likelihood of good outcome (34). However, in most of the low and middle-income nations, the general quality of child birth care was low (38). Study in Bangladesh on quality of maternal and newborn care show that general quality of care scores was moderate for each district hospital (54.8%), and mother and child welfare center (56.1%)(39). Study conducted in Ethiopia on access to quality maternal healthcare services show that only 36% ,43% and 21% women received quality ANC, intrapartum, and PNC, respectively (21). According to other study conducted in Northern Ethiopia, the quality of intrapartum care was generally 6.3% and 54.06% (32, 40) and for input, process, and output, the mean value of quality of care for women and newborns was 62%, 43%, and 48%, respectively (11). In other way study

in Wolayta Zone, Southern Ethiopia show that the mean input, process, and output emergency obstetric and newborn care qualities were 74.2, 69.4, and 79.6%, respectively (41)

Study conducted in Tigray revealed that only 29.2% of mothers received good quality intrapartum care. More than half, 67.6% of newborns received good quality newborn care during delivery and the immediate postpartum period (30). The finding of study in North Achefer and Jabi Tehinan District, show that, only 27.3% and 13% of mothers received good quality of intrapartum care respectively (42, 43).

2.2.1 Input quality

Providing a standard of care for a woman during intrapartum period is essential intervention to reduce treatable and preventable mortality and morbidity among mothers and their infant's (33). A study done in low-income nations demonstrates that there is poor quality and limited ability of health facilities to offer routine care for women and newborns. The studies revealed that good quality of care in structure aspect in Ethiopia, Uttar Pradesh and Nigeria were 43%, 39% and 25% respectively (44). To provide quality health care in health institution infrastructure, equipment, drugs, and supplies, and human resources (skilled care providers) should be fulfilled (32, 45). In Bangladesh Quality of infrastructure of health facilities was poor and only 57.1% and 52.7% district hospitals, maternity and child welfare centers were met all items of infrastructure respectively (46).

According to study conducted in Zanzibar out of 5 hospitals only 3 are fulfilled the minimum standards of the skilled health care provider (47) and study in Ethiopia show quality of care in aspect of infrastructure, availability of equipment, and essential drugs of input component indicate that only 28% of the health facilities had all infrastructure inputs available (11). Study in Tanzania and Kenya show that only 7% and 18 % of facility had water assesibilty respectively (48). In Ethiopia only 66% of the facilities had water availability (11). Other study Jabi Tehinan district indicate that only 49% of mothers having asses to good quality of human and material resources (43).

Essential drugs and Medical materials are another important thing for quality childbirth care, as study in Nigeria some common medication including Azithromycin, Nifedipine, Dexamethasone and Misoprostol availability rate was low with 10.48, 25.20, 21.94 and 17.06%, respectively (49) and in Ethiopia 72, 31 and 97% had Magnesium sulphate (MgSO4), calcium gluconate, and

oxytocin in the delivery rooms respectively (11). Only 50% of the hospitals have incubators in Kenya (50) and other study in Nigeria reveals that 56.7% vacuum extractor, 53.3% partograph, 93.3% functional blood pressure measurement apparatuses and 23.3% have oxygen available in health institution respectively (51). Study in Ethiopia show that 38% and 44% of them health facilities had artificial manual breathing unit bags and face masks for neonatal (11). Study conducted in different regions of Ethiopia revealed that only 11.1% and 6.3% of health facilities had infection prevention material and supplies (40) (52)

2.2.2 Process quality

Developing detailed and written standards of care is crucial for good quality of care at the time of childbirth (1). As study in Malawi adherence to clinical standards was poor specifically to manage complication during pregnancy and child birth (53). Study conducted in limited-resource settings show that the compliance with essential practices was insufficient at all the four pause points (6). In Burkina Faso, only 7.96% of care providers involved the use of sterile gloves for vaginal examinations, while in Côte d'Ivoire; only 6.71% washing hands before the examination (6). Other study in Bangladesh show that the quality of care score was for infection prevention (64.3%), sick newborn care (54.1%) and spontaneous vaginal delivery (SVD) (52.6%) and postnatal care (PNC) (19.0%) (39).

Another study in Uganda shows that 45% and 55% of the facilities missed more than 1-2 signal function of basic obstetric care. Specifically, partograph use is the most frequently missed function (54). In Ghana 18% (55) and In Ethiopia only 31.25% health facilities met process quality care (32). Study in Ethiopia in Wolayta zone show that only 40.8% of mothers received the standard care (41). According to WHO recommendation proper Partograph utilization is very important throughout labour and delivery to prevent and manage obstetric complications that happen during labour (1). Various studies were conducted in different regions of Ethiopia revealed that partograph properly used with only 10.1%, 25%, 23.8% of the facilities respectively (52, 56, 57)

Appropriate pain management, the option of a companion throughout labour and childbirth, choice of birth position, friendly and respectful care, polite interaction among the mothers and care workers, skin to skin contact and breastfeeding, and the care for mother and newborn in a

health institution are all components of quality intrapartum care (1, 58). Study in Kenya, Bangladesh and Ethiopia showed that only 29%, 39% and 13.8% of mothers were allowed companionship during childbirth respectively (59), (60, 61). Other study in Jabi Tehinan district, indicate that only 45%, 31%, and 25% of women having assess to good quality of respect, dignity, and equity; emotional support; and cognition respectively (43). Only 6.3% of mothers in Malawi and 20% of mothers in Ethiopia in health institutions were offered options for the delivery position (62, 63). Another Study carried out in Tigray, revealed that only 47.2% of mothers and newborns experienced friendly care throughout in delivery care (30).

2.2.3 Outcome Quality in terms of maternal satisfaction

Satisfaction with intrapartum care is a various concept encompasses satisfaction with personal control, with the physical environment of the delivery ward, and with the standard of care (64) and is influenced by interactions between health care providers and their clients, care provision, the physical environment, accessibility of infrastructures (65). Maternal satisfaction is indicating the overall quality of care and the provision of good-quality maternal health care, leading to higher levels of client satisfaction (65). However, the level of satisfaction among laboring women in African nations is insufficient; in South Africa, only 51.9% of mothers expressed satisfaction with delivery care (66). In other hand a research conducted in Rwanda indicates that overall 88.75% of mothers were satisfied (67).

Study in Malaysia indicates that only 21.2% of mothers were satisfied with the intrapartum care (68). The interpersonal care part had the greatest level of satisfaction (36.1%), followed by the physical birth environment (34.3%), while the information and decision-making aspect had the minimum level of satisfaction (27.7%) (68) . Other studies on mothers satisfaction in Ethiopia, observed that the level of client satisfaction on intrapartum care were different from region to region; in Addis Ababa 19% (69), Gondar 31.3% (70), Hawasa 63% (71) and Gamo-Gofa zone 90.2% (72). Additionally, Only (28.2%) of women in a North Shoa Ethiopia reported being satisfied with their intrapartum care (73).

Generally, as the WHO recommendation, evaluating maternal satisfaction during intrapartum, period is essential to improve the quality and efficiency of the health care setting (74).

2.2.4 Quality of Newborn care

According to study conducted on newborn care right after birth in health institution across 6 sub-Saharan African countries indicate that only 45% of newborns were placed skin-to-skin right after birth (75). In Kenya 57% new born having received skin to-skin contact after delivery (76). Study in Ethiopia show that only 38% of newborns received vitamin K, and 35% of newborns had skin-to skin contact with their mothers and breastfed within 1 hr. after delivery, only 46% of babies were given Tetracycle (TTC) eye ointment (11). Other study conducted in West Guji, Ethiopia show that quality of newborn care was low area. As the study only 17.9% newborns received good quality care and in all components of essential newborn care with Preparedness for the birth (54.2%), infant assessment care (56.2%), neonatal resuscitation (55.15%), Initiation of breastfeeding (57.71%), routine procedures and prophylaxis (58.33%) (77).

2.3 Factors associated with quality of intrapartum care

Quality of intrapartum care and their determinants may vary in the availability of facilities structure and system (78). The level of health facilities, availability of infrastructure, human resource and clinical guideline for maternal and neonatal care are one of institutional structure factors affecting quality of intrapartum care (79, 80). Institution with good in structure, maternal and neonatal clinical guidelines, and having maternity waiting areas were more likely to give better quality than counterparts (78). Different study reveals that quality of care is affected by level of health institution. The study in Burkina Faso show that the overall mean quality scores were consistently higher in referral hospitals at all pause points than low level health facility (6). In Ethiopia hospital practice of basic emergency obstetric, newborn signal function and laboratory service are higher than in the health center (81).

Other study in Ethiopia also indicate that wealthier, Living in urban, educated women and ≥4 ANC visits were more likely to experienced good quality of intrapartum care. Younger mothers were more likely to get quality of intrapartum care, but were less likely to get quality of PNC than mothers aged 20-49 (21, 82). Care providers who had partograph, basic intrapartum care and infant care training are use partograph more properly than their counterparts (83).

Study conducted in Wolayta Zone, Ethiopia show that women's educational status and age were independent predictors of intrapartum quality care (41). On the other hand, shortage of provider, incompetency, lack of training, and experience of healthcare workers affect quality care**.** Other study conducted in Tigray revealed that the factors that affecting of quality of intrapartum and

newborn care were the appropriate use of partograph, friendly mothers and infant care and more than 2 years working experience (30, 42). Another research evaluated the quality of intrapartum care received by women at health centers in Ethiopia in Jabi Tehinan district indicate that Mothers from rural areas and mothers who did not use ANC care for recently born children were found more likely to experience good quality of intrapartum care (43).

2.4 Determinant of Maternal Satisfaction with quality of intrapartum care

Client satisfaction is multidimensional nature and associated with technical and interpersonal aspects of quality of care including accessibility, waiting time, environmental condition, provider skills, and equipment (65). According to a study conducted in Rwanda, great mother satisfaction was connected with clients' privacy and letting them participate in decision-making (67)**.** As study in West Gojjam, Ethiopia Maternal educational status was shown to be significantly and negatively correlated with the degree of women's satisfaction with intrapartum care, Participants with illiterate were more likely to be satisfied with intrapartum than those with a diploma or above (84), this study revealed that those who came to the hospital by ambulance, participants who thought that care providers were respectful were more likely to satisfy than counterpart(84). Study Kenya show that mothers who got encouragement and reassurance by care providers were more likely to be satisfied with intrapartum care (85).

According to a study conducted in Debre Markos and Wolayta, having a birth plan in health institution, rural in residence, waiting times, having a history of ANC contact, and eating enough food are all significantly related to mothers being satisfied with the childbirth care (31, 86). According to a study conducted in North Shoa Ethiopia, the number of antenatal care visits, intended pregnancy status, duration of labor, and intrapartum care were all related to women satisfaction (73). Mothers from rural residence and Mothers who had attended ANC visit four and above in their current pregnancy were more likely satisfied with the overall intrapartum care provided compared to their counterpart (73). As study in Gondar a chance of satisfaction for women who had chance to talk with care providers and women who had pain management were more likely to be satisfied with intrapartum care (87).

Generally, process aspect of quality care is the main dominant determinant of maternal satisfaction in developing nations (88).

Literature Summary

This chapter focused on a review of literature on the quality of intrapartum and newborn care based on the Donabedian framework quality assessment aspects. According to the model, information about the quality of care is drawn from three components: the three components of quality care are the input, process and outcome. Therefore, this chapter reviewed literature on the quality of intrapartum in terms of input, processes (client-provider interaction) during the service and output in terms of maternal satisfaction and finally describes the overall quality of intrapartum and newborn care. All three elements are interlinked to bring quality of intrapartum and new born care. Hence, this chapter assessed the quality intrapartum and newborn care at public health facilities including input, process and outcome components and factors that affect quality of care including the relationship of maternal satisfaction with input and process components of intrapartum care quality.

2.5 Conceptual Framework

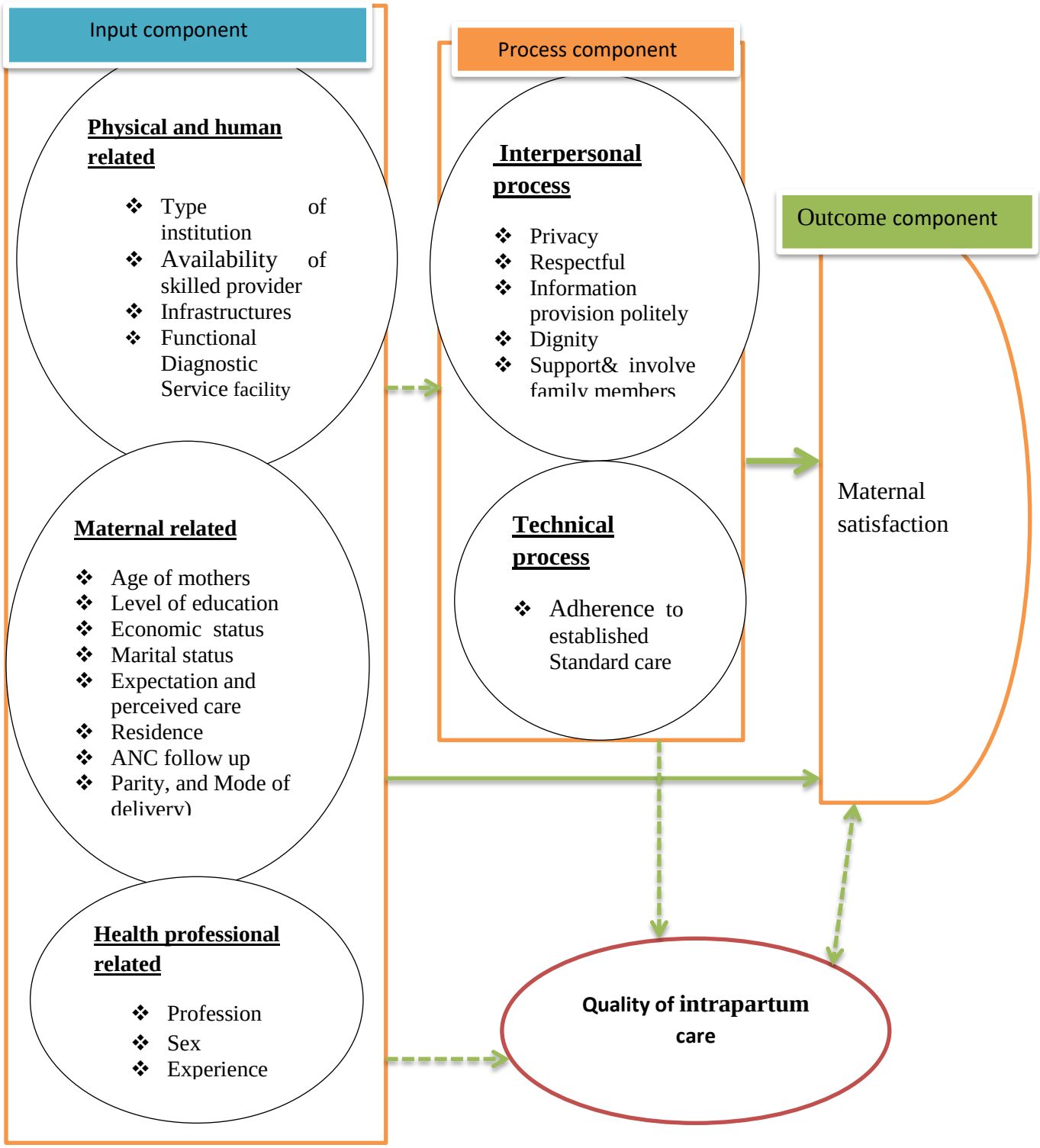


Figure 2 Conceptual Frame work adapted from WHO and other similar studies of study on Quality of intrapartum and new born care at public health facility Wolkite town, southern Ethiopia, 2023(2, 30)

Chapter 3 Objectives

3.1 General objective

To assess the level of quality of intrapartum and newborn care in public health facilities of Wolkite town, Southern Ethiopia, 2023

3.2 Specific objectives

- To describe level of quality of intrapartum care in perspective of the input in public health facilities of Wolkite town, Southern Ethiopia, 2023
- To determine prevalence of quality intrapartum care in process aspect in public health facilities of Wolkite town, Southern Ethiopia, 2023
- To measure the level of maternal satisfaction with quality of intrapartum care in public health facilities of Wolkite town, Southern Ethiopia, 2023
- To determine the level of quality newborn care in public health facilities of Wolkite town, Southern Ethiopia, 2023
- To identify factors associated with maternal satisfaction on quality of intrapartum care in public health facilities of Wolkite town, Southern Ethiopia, 2023

Chapter 4 Methodology

4.1 Study setting and period

Wolkite town is the administrative center of the Gurage zone and the town is located at latitude and longitude of 8o17′N37o47′E and an elevation between 1910 and 1935 m above sea). Wolkite town is located 155 km west of capital city of the country, Addis Ababa. The town has three sub-cities and six kebeles. According to Wolkite town administration health office, the total population expected to be 61,309. Out of the total population 31,268 (51%) are females and the rest 30,041 are males. The numbers of women who are in child bearing age group (15-49) are 13,568; from this 2128 are pregnant and expected deliveries. There are three government health centers, one specialized hospital, one primary hospital and 11 private clinics in the town.

The study was conducted from March to April 2023 in public health facilities of Wolkite town.

4.2 Study design: A facility-based cross-sectional study design was employed in public health facilities of Wolkite town to assess quality of intrapartum and new born care.

4.3 Populations

Source population

- For input component all public health facilities in Wolkite town data collection period were included.
- For process and output component all mothers who gave birth at public health facilities of Wolkite town during data collection period

Study population

- The study population for input dimension was all public health facilities which give delivery service in Wolkite town during data collection period
- For process and output component all mothers who gave birth at public health facilities of Wolkite town during the period of data collection

4.4 Eligible criteria

Inclusion Criteria

- Mothers who gave birth by spontaneous vaginal delivery for observational study during the period of data collection
- Mothers who gave birth at the selected health facilities of Wolkite town and admitted in the postnatal ward during the period of data collection.

Exclusion criteria

- Those mothers who gave birth with operative deliveries for observational study during the period of data collection.
- Mothers with complications during childbirth at the period of data collection

4.5 Sample size determinations

- ❖ For the quality of input dimension all 5 public health facilities were included in study area.
- ❖ The sample size for observation to address for process component was calculated using a single population proportion formula by using 95% CI and 5% degree of precision, P= 12.6% (89) Proportion of recent study on client–provider interaction observations during intrapartum care obtain respectful maternal care.

$$n = \frac{\left(z\alpha_{/2}\right)^2 p(1-p)}{d^2}$$

Where n desired sample size, $z\alpha_{/2}$ critical value at 95% CI (1.96), p Proportion of on client–provider interaction observations during intrapartum obtain respectful maternal care and d degree of precision. By considering 10% non-response rate 185 mothers and new born included for observation as dimension of process.

- ❖ For outcome component the sample size was calculated for overall maternal satisfaction by using single population proportion formula and for different factors by two population proportion formula with assumptions of 5% precision, 95% confidence level and 10% non-response rate. Sample size was calculated using EPI info version 7 and then the maximum calculated sample size was 342 (including 10% non-response rate).

Table 1 Sample size determination for outcome component objective of study on quality of intrapartum and new born care at public health facility Wolkite town, southern Ethiopia, 2023

Characteristics	Magnitude	Sample size	Considering 10% non-response	Final sample size	Reference
Overall Maternal sat. With quality of intrapartum	28.2%	311	31	342	(73)
Maternal satisfaction with delivery care	83.9%	208	21	229	(90)
Maternal satisfaction with delivery care	80%	246	25	271	(91)
Quality of newborn care	17.9%	226	23	249	(77)
Privacy	(p1=82.5% p2=64.3%)	206	21	227	(91)
Waiting time	(p1=72.7% p2=89.6%)	190	19	209	(91)

The sample size for this study was determined by comparing the five computations and choosing the one with the largest sample size. As a result, 342 mothers were recruited in the study. The number of study participants from each maternity ward was allocated proportionally using the formula, n1= (no/N) Where, no= sample size in the maternity room N = number of mothers at a maternity room in each selected health facilities.

4.6 Sampling technique and procedure

- For input component all public health facilities in the study setting were included.
- By considering assumption of delivery attendance is random, for process component (observation) consecutive random sampling method was applied in the selected health facilities and the study participant was allocated proportionally and then the data collector observed the client-provider interaction while they attended labour and delivery starting from active first stage labour up to immediate postpartum care in the selected public

health facilities. During the data collection, non-participatory observation takes place sequentially until the predetermined sample size was obtained. To minimize observation bias, the first three observations were excluded from the data.

- For quality of output component consecutive random sampling technique was used to select the study units.
- The calculated sample size was distributed to the health centers and hospitals using proportional to size upon the number of delivery service given 3 month before data collection. For observation as quality of process dimension sample size was proportionally allocated as Atat primary Hospital (ATPH) =86, Wolkite university specialized hospital (WKUSH) =46, Welkite health center (WKHC) =27, Edgetber health center (EBHC) =18 and Gubre health center (GHC) =7. For quality of outcome dimension sample size was allocated proportionally as the following figure.

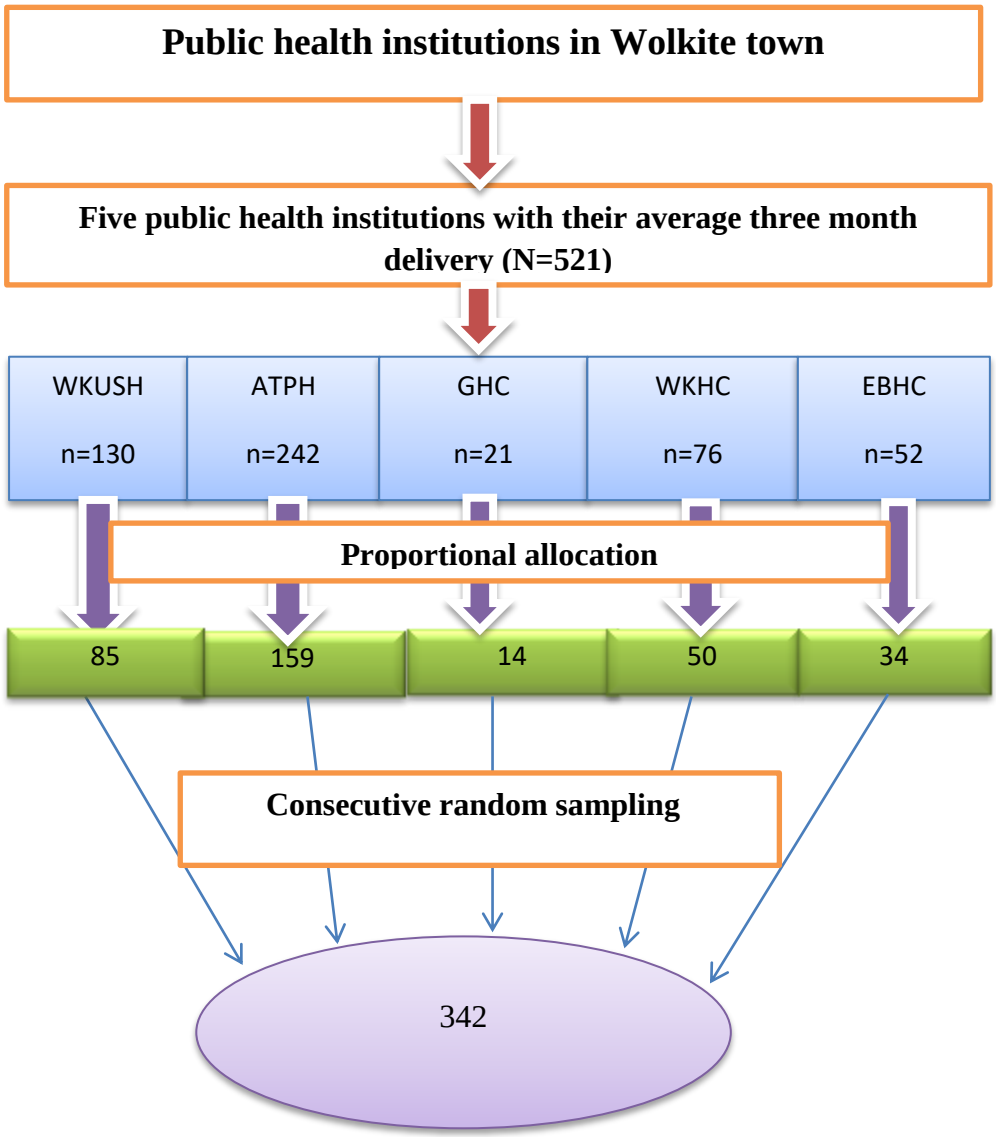


Figure 3 Schematic presentation of the sampling procedure for study on Quality of intrapartum and new born care at public health facility Wolkite town, southern Ethiopia, 2023

4. 7 Study Variables

Dependent Variables

- Maternal satisfaction with quality of intrapartum care

Independent Variables

Maternal related: Age of mothers**,** level of education**,** economic status, marital status, residence**,** ANC follow up, parity and mode of delivery

Physical and human related: Availability of skilled care provider**,** type of institution, infrastructures**,** functional Diagnostic service**,** availability of transportation and distance from HF

Interpersonal process related: Privacy**,** respectful, information provision politely**,** support & involve family members

Health professional related: Profession, sex and experience

Technical process related; Adherence to established standard care

4.8 Operational definition

Input quality: was measured using 40 items adopted from the WHO standards and other studies that similar to the national guidelines. Include availability of basic equipments, infrastructure and essential drugs. Thus, input quality was measured as good quality if scored ≥75% of the input quality score (30).

Process quality: Process quality is measured using 92 appropriate items taken from the WHO guidelines and other studies which are consistent to the national guideline items included activities during the examination of mothers at admission, care during the various stages of labour (first, second, third), and the immediate postpartum period and infection prevention practice. Then, process quality was measured as good process quality if they scored ≥75% of process criteria (30)

Output quality: was measured by satisfactions of mothers gained during intrapartum. It is the care level gained that increases the chance of future consumption of maternal healthcare service. 21 items were adapted from WHO service availability and readiness assessment for exit interview (1, 13). That who were satisfied in ≥ 75% of the items was categorized as satisfied those who are satisfied in less than 75% of the items was classified as unsatisfied (30).

Overall Quality of intrapartum care: Intrapartum leveled as good quality by combining input, process, and output if it scored at least ≥75% of the items in all three components attended to measure the respective quality components. The resulting quality indices, that were weighted averages of indicators, expected to fall within 0 to 100 percent. The final average score calculated as composite quality indices were used to describe the overall level of intrapartum quality (30, 40).

Quality of newborn care: was measured using 11 items adopted from the WHO standards similar to the national guidelines. This is part of the intrapartum quality care. If they scored ≥75% of the items considered as received good quality care (30).

Friendly mother and newborn care: was measured using 9 items. Good friendly care was measured if they scored ≥75% of friendly care criteria. This is part of the intrapartum quality care (30).

Completeness of partograph: measured using 14 items adopted from a WHO component of a partograph. Completeness was assessed if ≥80% of the 14 items were filled correctly in the partograph to be categorized as a complete partograph (30).

4.9 Data collection Instrument and procedure

To assess the quality of intrapartum and newborn care the data was collected by using Focal person interview, observation, document review and exit interview. A data collection tool adapted from a similar study and WHO standard was used to collect all the necessary variables (2, 11, 30, 42). The questioner was in line with the objective of the study and multiple data collection instruments were used during the data collection period. Facility inventory checklist is used for assessing the input component to interview the head of the facility and experienced maternity about the availability of equipment, drug, and supplies at the time of data collection period. Observation checklist was used for client–provider interaction during childbirth care starting from admission in labour ward till immediate post-partum period.

Women's exit interview was used for the outcome dimension by preparing a structured face-to-face interview questionnaire that are adopted from WHO service availability and readiness assessment (1, 13). There were two BSc public health professional as supervisors and seven BSc midwives as data collectors who were working in health facilities other than the study area.

The data collectors properly dressed and have an adequate number of the unfilled questionnaire and the consented/permission latter of the maternity ward should be at hand before starting the survey. The data collectors explained the purpose of the study for both the mother and healthcare professional who attended the labour and delivery. Verbal consent was obtained from both the mother and healthcare professionals before starting data collection. First, the data collector identified of availability of basic resource for the provision of intrapartum and new born care using observation and interviewing head of the institution, a focal person of labor and delivery at the facilities. Second, the data collector stayed in the delivery room without interfering with the care being provided to mothers and newborns and observed the entire labor; the way of history taking, physical examination, diagnosis, women-friendly care (interpersonal and technical aspects) through observation of the active phase of the first stage of labor, and then continuous observation of the second, third, newborn care and immediate postpartum period and the document about partographs usage was reviewed. Third, exit interview was conducted by using structured questionnaire after the mothers had completed their service in order to assess the overall satisfaction of women with intrapartum care who gave birth at the facility during the data collection period.

4. 10 Data processing and analysis plan

To assess quality of intrapartum and its predictors both descriptive and inferential statistic was used. Data were checked for completeness, then cleaned, edited, coded and entered into Epidata version 4 and exported to Stata version 14 and SPSS version 25 for analysis. Before the data analysis, the data was screened for missing and data entry errors using the frequency distribution of the variables and observation of the entered data. Suspected errors were validated against the raw data and the necessary corrections were made. Descriptive and summary statistics was computed. Binary logistic regression was performed to identify determinant of maternal satisfaction with quality of intrapartum care. Variables which had p-values of ≤ 0.25 in the bivariate analysis outcome were selected and include in multivariable regression analysis. Finally adjusted odds ratios with 95% confidence intervals and p-values < 0.05 was considered significant independent factors of maternal satisfaction with quality of intrapartum and newborn care. Model fitness was checked by Hosmer and Lemeshow (p-value = 0.772) by randomly inserting some of the variables whether the measured items correctly explained the dependent variable (maternal satisfaction with quality of intrapartum care).

4.11 Data Quality Assurance

To enhance the quality of the data, the data collectors and supervisor were trained for two days on the objective and methodology of the research and data collection approach. The data was collected at the time of the mother's facility exit in a silent room. The questionnaires were translated into the local languages Amharic in order to increase the response rate. Then a questioner developed in Amharic was back translated into English to insure the validity of the question. Regular supervision, meeting was made daily and any problems raised during data collection were solved immediately. Pre testing of the questioner was performed on 5% of the sample and in Agena primary hospital which was not be included in the actual study, and the questioner were modified based on the result of the pretest study. To check the internal consistency of the questionnaires Cronbach's alpha test was performed (α coefficients = 0.904). All the questionnaires and data were checked for completeness and accuracy before, during, and after data collection and double data entry were used to avoid data entry error.

4.12 Ethical Consideration

The ethical issues was considered throughout the study by considering the basic ethical research principles like (Informed consent, confidentiality, Beneficence/non malificence and justice) and summit to the ethical review committee of AAU for approval of this research. Ethical clearance was obtained from Addis Ababa University, College of Health Science, School of Public Health, and a permission letter to carry out the study was obtained from Gurage zone health bureau. All study participants has been given detailed information about the aims and methods of the study prior to the interview (which was attached as an information sheet) and informed verbal consent to participate in the current study was obtained.

The study was expected to have minimal risk as the patients share their personal information. Minimization and alleviation of such anticipated risks were seriously considered, and assessments and interviews were conducted in a private place to maintain the confidentiality and privacy of the participants. And most importantly, a close and harmonious relationship was established ahead of the interview between the respondent and the interviewer.

4.13 Dissemination plan

The finding of this study will submitted and presented to Addis Ababa University College of Health Science, School of Public Health, department of health system management and policy. The result will also, disseminated through publication in peer-reviewed, reputable journals and will be presented at local or international conferences. The results will also be submitted to respective health institutions: Gurage zone health bureau and town health office, regional and federal health bureaus, the Ethiopian National quality agency, FMOH and other concerned bodies working on Maternal and neonatal care.

Chapter 5 Result

5.1 Socio-demographic characteristics of mothers

In this study, 342 mothers who delivered in five selected health facilities were included making a response rate of 98.2%. More than half of the participants were within the age range of 25-34 years old with mean age of 27.1 (SD±4.4) years. The majority 282 (83.9%) of respondents were Gurage by their ethnicity, and almost all 317 (94.3%) were married, and 137 (40.8%) were housewife. Of the total interviewed, (48.2%) attended primary school of 1-8 grades (Table: 2).

Table 2 Socio-demographic characteristics of mothers for exit interview in public health facility Wolkite town Southern Ethiopia, 2023(N=336)

Variables	Frequency	Percentage
Age		
15-24	90	26.8
25-34	226	67.2
35-49	20	6.0
Residence		
Rural	146	43.5
Urban	190	56.5
Marital status		
Single	8	2.4
Married	317	94.3
Divorced	6	1.8
Widowed	5	1.5
Ethnicity		
Gurage	282	83.9
Amhara	18	5.4
Oromo	23	6.8
Other	13	3.9
Religion		
Orthodox	148	44
Muslim	139	41.4
Protestant	34	10.1
Others	15	4.0
Education Status		
Unable to read and write	34	10.1
Read and write	42	12.5
Primary 1-8	162	48.2
Secondary 9-12	70	20.8
College/University	28	8.3
Occupational Status		
Student	17	5.1

Daily labour	6	1.8
Private	69	20.5
Employer	47	14.0
Farmer	60	17.9
Housewife	137	40.8
Economic status		
500-1500	95	28.2
1501-5000	190	56.5
>5001	48	14.3
Family Members		
1-4	123	36.6
5-7	170	50.6
>7	43	12.8

5.2 Obstetric and ANC characteristics of mother participated in an exit interview

About 157 (46.7%) of mothers reported that their first birth was when they were older than 21 years. Twenty eight (8.3%) of mothers had a history of abortion. Majority 300 (89.3%) of respondents; current pregnancy was planned and 328 (97.6%) of mothers had ANC service for the current pregnancy. Among mothers attended ANC 128 (38.9%) of mothers had four ANC visits. Regarding mode of delivery, spontaneous vaginal delivery was the most common mode of delivery 256 (76.2%). Among all respondents almost most of the mothers 277 (82.4%) preferred this health institutions. Regarding transport, majority of mothers 164 (48.8%) was used self-transport to arrive at health facilities for childbirth services and a few mothers 21 (6.25%) arrived on foot (Table: 3)

Table 3 Obstetric, ANC and delivery characteristics of mother participated in an exit interview in public health facilities of Wolkite town, Southern Ethiopia, 2023 (N=336)

Variables	Frequency	Percentage
Age at first marriage		
<21 years	218	64.9
>=21 years	118	35.1
Age at first birth		
<21years	157	46.7
>=21 years	179	53.3
Number of pregnancy		
1-2 pregnancy	120	35.7

3-5 pregnancy	165	49.1
≥6 pregnancy	51	15.2
No of live birth including the newborn		
1-2	134	40.4
3-5	153	46.1
>=6	45	13.5
Number of under 5 children		
1	140	41.7
>=2	196	58.3
History of abortion		
Yes	28	8.3
No	308	91.7
If yes how many times abortion		
1 abortion	21	75.0
>=2 times abortion	7	25.0
Previous Institutional delivery		
Yes	280	83.3
No	56	16.7
Current pregnancy planned		
Yes	300	89.3
No	36	10.7
Current pregnancy ANC follow-up		
Yes	328	97.6
No	8	2.4
If yes number of visited		
Less than 4 times	115	35.0
Four times	128	38.9
More than 4 times	86	26.1
Place of ANC		
Health center	157	46.9
Hospital	44	13.1
Both HC and Hospital	128	38.2
private clinic	6	1.8
Mode of delivery		
SVD	256	76.2
CS	42	12.5
Instrumental assisted	38	11.3

5.3. Input quality

Among five health facility, twenty focal health professionals were interviewed and verification by observation was done to assess input quality. Accordingly, only three (60%) of health facility scored ≥75 % of input quality items and they had been considered as having a good input quality. All facilities have electric power whereas only 2 (40%) of health facility with a stand by back-up automatic generator which starts within 5 minutes. However, only 40% of the health facilities have an adequate water supply. Functional basic laboratory tests (blood group, Hct, WBC count and Rh test,) were available only in one (20%) health facility. Regarding human resource all skilled healthcare professionals working in the delivery room and included in this study did not receive refresher training on managing obstetric complication and only one facility have at least one Skill birth attendant trained to manage neonatal resuscitation. In addition, most of the health facilities lack towels to dry and wrap baby after delivery.

Oxytocin, TTC eye ointment and Vitamin K are available in all health facilities. Functional movable delivery light available in only 2 (40%) of health facilities and only one (20%) health facility have functional toilet with shower service. Among studied health facilities only one health center and two hospitals give all BEmONC and CEmONC signal function respectively.

Table 4:- Availability of Infrastructure, Human Resource, Drugs and Supplies for quality of input dimension in public health facilities of Wolkite town, 2023 (N=5)

Input quality variables	Available	
Infrastructures indicators	**Yes (%)**	
Clean water source and supply available	2	40%
Reliable electricity available	5	100%
Means of communication available all times even not locked	2	40%
24 hour service available	5	100%
Functioning transport facilities(Ambulance) available	4	80%
At least three rooms available for maternity service	5	100%
Functional refrigerator for storage of drugs and vaccines available	4	80%
Mother toilet with shower service available	1	20%
Basic equipments and supplies in the delivery room		
Functional Blood pressure apparatus available	5	100%

Functional Oral or axillary Thermometer available	3	60%
Functional Stethoscope available	2	40%
Functional Fetal stethoscope available	5	500%
Functional Baby weighing scales available	4	80%
Sterilizers (autoclave or dry oven) available	4	80%
Antiseptics (soap, chlorine solution, alcohol, iodine)	5	100%
Container for infection prevention (decontamination container, safety box, covered contaminated waste bin) available	5	100%
Functional movable delivery light available	2	40%
Functional Vacuum extractor available	4	80%
Essential obstetric equipments (absolute minimum equipments for delivery)		
Two sterilized delivery sets (cord scissors, cord tie, two artery forceps) available	3	60%
Episiotomy set (catgut, one tissue forceps, one needle holder, one scissor/blade)Available	2	40%
Consumable supplies		
IV set and Cannula available	5	100%
Folly catheter available	4	80%
Blank partograph available	5	100%
HIV test kit available	4	80%
IV fluid (normal saline) available	5	100%
Emergency drugs for maternal care available		
Oxytocin drug available	5	100%
Antibiotics (at least Ampicillin, Gentamicin and Metronidazole) available	4	80%
Anticonvulsant drugs (at least Magnesium sulfate(MgSo4)) available	4	80%
Antihypertensive drug (Hydralazine) available	4	80%
Essential Newborn care equipments and drugs		
Newborn resuscitation materials (at least Bag and mask, mucus extractors, mask) available	5	100%

At least two towel to dry and warp baby after delivery available	2	40%
Functional incubator (enough light or radiant warmer) available	2	40%
Vitamin K available	5	100%
Tetracycline (TTC) eye ointment available	5	100%
Functioning Laboratory service		
Basic blood test available (Hgb or Hct, WBC count, ABO blood group and Rh test)	1	20%
Malaria and HIV tests, Urine analysis like protein urea available	3	60%
Human resource for maternity service available		
At least three midwife available at Health Center or at least 13 midwives at hospital	5	100%
Skilled birth attendance(SBAs) readiness (available and properly dressed at delivery room)	3	60%
All SBAs in the facility trained to manage obstetric complication	0	0%
At least one SBA in the facility trained to manage neonatal resuscitation	1	20%

5.4. Process quality

In this study 185 deliveries were observed and overall only 35.1% (95% CI: 28.3%, 41.9%) of mothers received good (standard clinical care) during delivery process. During labour admission, first stage, second stage, third stage of labour and during immediate postpartum period 51(27.3%), 64(34.6%), 141 (76.2%), 153(82.7%) and 91 (49.2%) of mothers received good quality of care respectively. Regarding Friendly Maternal and newborn care overall 107 (57.8%) 95% CI (50.4%, 65%) of mothers and newborns received Friendly Maternal and newborn care during labour and delivery. Additionally, the finding of this study revealed that only 73 (39.5%) 95% CI (32.4%, 46.9%) of partographs were completely and properly recorded during progress of labour.

Table 5 Quality of process aspect in public health facilities of Wolkite town, Southern Ethiopia (N=185)

Indicators	Frequency (%)	
First stage of labour	**Yes (%)**	**No (%)**
Takes mother temperature	45(24.3)	140(75.7)
Takes mother pulse	83(44.9)	102(55.1)
Measures mother blood pressure	140(75.7)	45(24.3)
Determines mother respiratory rate	55(29.7)	130(70.3)
Measures mother fundal height	133(71.9)	52(28.1)
Evaluates uterine contractions (frequency and duration over a 10- minute period)	137(74.1)	48(25.9)
Auscultates fetal heart rate (FHR)	185(100)	0
Allow preferred birthing partner	54(29.2)	131(70.8)
Adopt preferred position to mother during labour	107(57.8)	78(42.20
Ensure privacy during labour	75(40.5)	110(59.5)
During physical examination		
Puts sterile gloves on both hands	86(46.5)	99(53.5
Gloves are removed after being immersed in 0.5% chlorine solution and placed in a leak- proof container	0	185(100)
Records all information on the clinical records	108(58.4)	77(41.6)
Start partograph to follow progress of labour	121(65.4)	64(34.6)
Infection prevention practice of providers		
Cleanse the vulva with antiseptic solution before performing vaginal examination	0	185(100)
Performs limited vaginal examination (e.g. every four hours or indicated)	119(64.3)	66(35.9)
Uses sterile gloves when performing vaginal examination or when in contact with body fluids	126(68.1)	59(31.9)
Rupture of membranes is not performed routinely	132(71.4)	53(28.6)
Preparation to assist the birth		
Prior to delivery, washes hands with running water and soap	31(16.8)	154(83.2)

for 10-15 seconds and dries an individual clean towel or allows hands to air dry		
Puts sterile double gloves on hands	151(81.6)	34(18.4)
At least once encourage woman to walk around	142(76.8)	43(23.1)
At least once encourage the woman to change position according to the desire and comfort	107(57.80)	78(42.2)
At least once encourage the woman to take light food or drink fluid in labour	137(74.1)	48(25.9)
Allow the woman to have her preference companion at labour room	91(49.2)	99(50.8)
Emotional support to woman during labour and delivery	144(77.8)	41(22.2)
At least once encourages her to empty her bladder	134(72.4)	51(27.6)
Immediate postpartum period		
Make sure that the woman is comfortable (clean, hydrated and warmly covered)	60(32.4)	125(67.6)
Monitor vaginal bleeding	177(95.7)	8(4.3)
Bladder distension	89(48.1)	96(51.9)
Monitor Uterine contraction	126(68.10	59(31.9)
Monitor Pulse	77(41.6)	108(58.4)
Monitor Consciousness	119(64.3)	66(35.7)
Assists the woman with breastfeeding	82(44.3)	103(55.7)
Records the information on the women's clinical record and reports any abnormalities	121(65.4)	64(34.6)

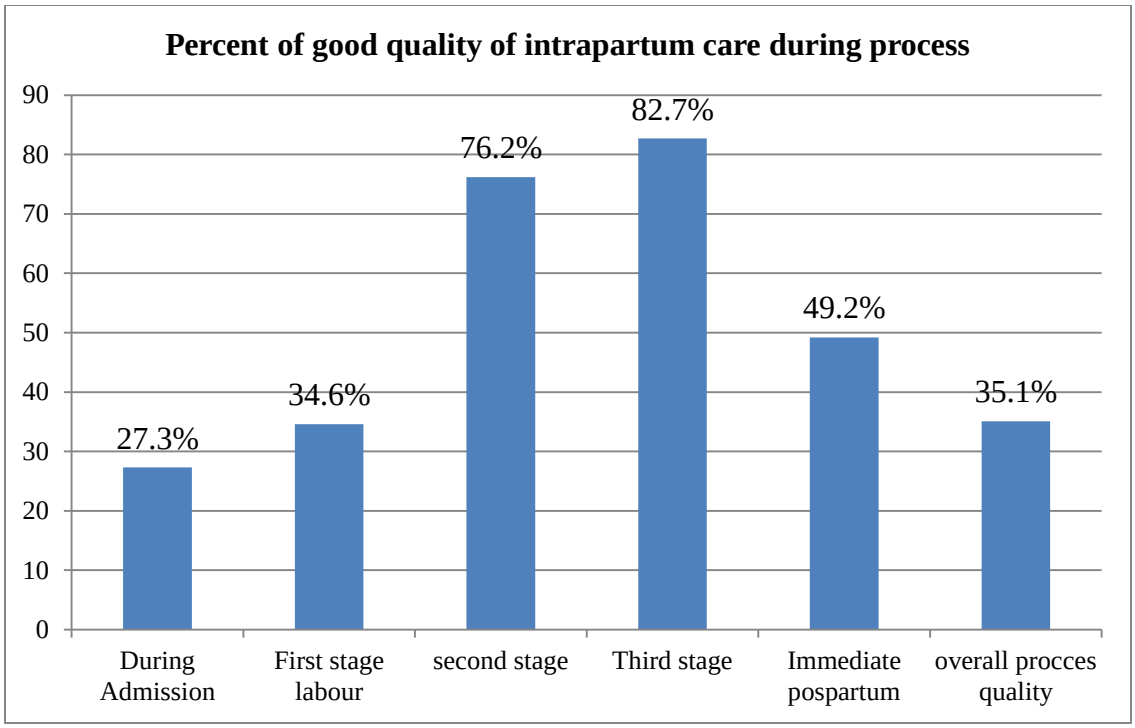


Figure 4 Percent of good quality care from Admission to immediate postpartum period in public health facility of Wolkite town, southern Ethiopia, 2023

5.4.1 Quality of Newborn care

According to the WHO quality standards, the experience of newborn care was assessed. The findings of this study show that overall quality of newborn care was 69.7% with 95% CI (62.6%, 76.3%). In this study almost all 172 (93%) of newborns started breastfeed within one 1 hour. Vitamin K and TTC were administered for 164 (88.6%) and 174 (94.1%) of newborns respectively. Additionally, only 71 (38.4%) of the newborns were passed to the mothers for skin-to-skin contact on the breast.

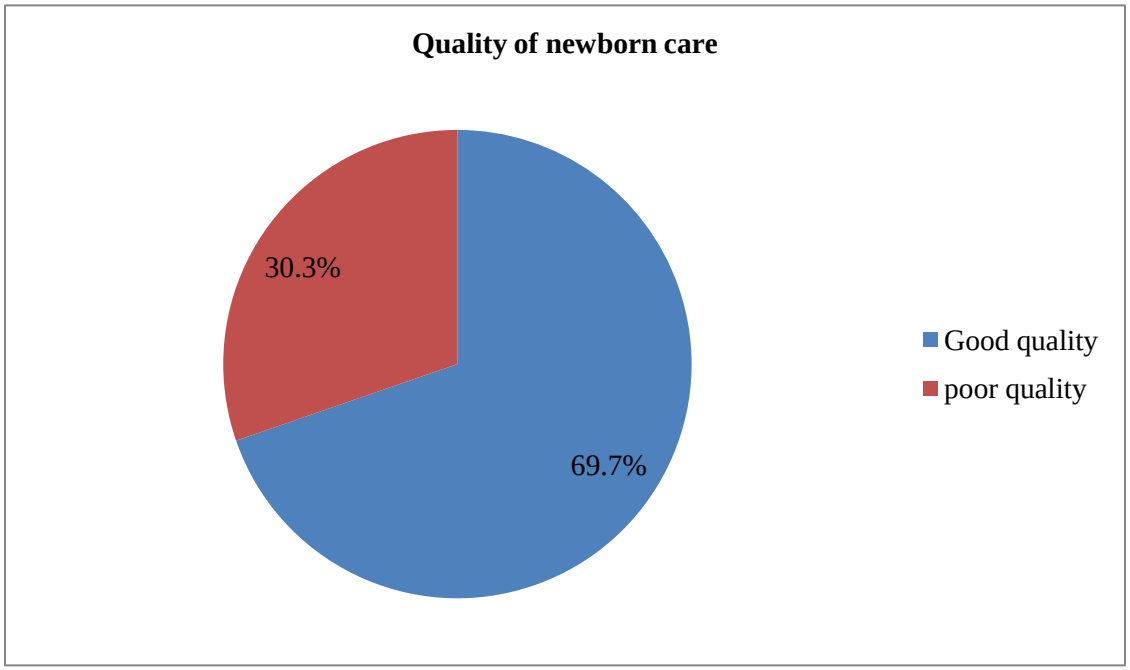


Figure 5 Quality of newborn care in public health facilities of Wolkite town, Southern Ethiopia, 2023

5.5 Output dimension (Maternal Satisfaction with intrapartum care)

The overall proportion of women who were satisfied with intrapartum care in this study was 141 (42%) with 95% CI:(36.6%-47.4%). The proportion of maternal satisfaction with institution structure aspect, informative aspect of care, interpersonal aspect of care and the technical aspect of care were 78.5%, 70.1%, 63% and 64.2% respectively (Table 6).

Table 6 Maternal satisfaction with quality of intrapartum care in public health facilities of Wolkite town, 2023 (N=336)

Output quality measurement items	Satisfied (%)		Dissatisfied (%)	
Maternal satisfaction with institution structure aspect				
There was functional triage system of the facility starting from the get	260	77.4%	76	22.6%
Get the card immediately while arriving the health facility without any difficulty and delay	298	88.7%	38	11.3%
Get the delivery room easily starting from the get	271	80.7%	65	19.3%
Get bed immediately while arriving at delivery room	318	94.6%	18	5.4%
waiting time is fair	249	74.1%	87	25.9%
Lab tests available in the health facility	274	81.5%	62	18.5%
All ordered/prescribed drugs and materials are available in the health facilities for labour and delivery purpose	294	87.5%	42	12.5%
Deliver room was clean	255	75.9%	81	24.1%
In the delivery room get toilet shower and hand wash sink	156	46.4%	180	53.6%
Maternal satisfaction on informative aspect of care				
Get appropriate counseling about breast feeding, immunization, family planning, danger sign and hygiene before discharged from health facilities	268	79.8%	68	20.2%
Mother gets proper answer for her question	290	86.3%	46	13.7%
Get informed consent before any procedure	149	44.3%	187	55.7%
Maternal satisfaction on interpersonal aspect of care				
Health care provides properly introduced their name, duties and responsibilities during labour and delivery	94	28.0%	242	72.0%
Immediately while arriving the health facility examined by healthcare professional	314	93.5%	22	6.5%
Get Privacy during labour and delivery in the delivery room	220	65.5%	116	34.5%
Mother gets respect and dignity through- out labour and	274	81.5%	62	18.5%

delivery services				
Get permission to be visited by my preference family members in the delivery room	157	46.7%	179	53.3%
Maternal satisfaction on the technical aspect of care				
Respect Delivery Position (got the permission of for my choice for labour and delivery)	192	57.1%	144	42.9%
Get anti pain during labour and after delivery to relive the pain	240	71.4%	96	28.6%
Recommend for other to come to the health facility for delivery service	277	82.4%	59	17.6%

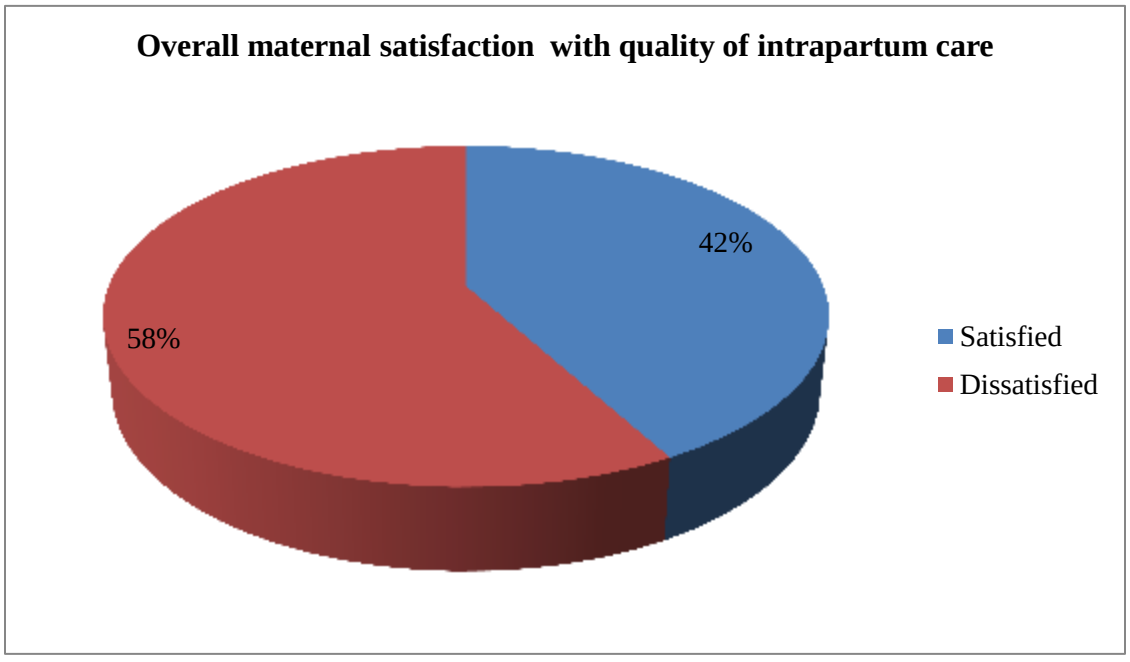


Figure: 6. Overall maternal satisfaction with quality of intrapartum and newborn care in public health facilities of Wolkite town, 2023

Generally, the quality of intrapartum care in input and process components were 60% and 35.1% respectively. Whereas, the quality of the output component as measured maternal by maternal satisfaction with intrapartum care was 42%. The overall quality of intrapartum in public health facilities of Wolkite town was 42.54%. This was calculated after assigning the relative weight of indicators for input (26%), for process (60%) and for outcome (14%) and the percent of those fulfilling the minimum requirement were considered and calculated.

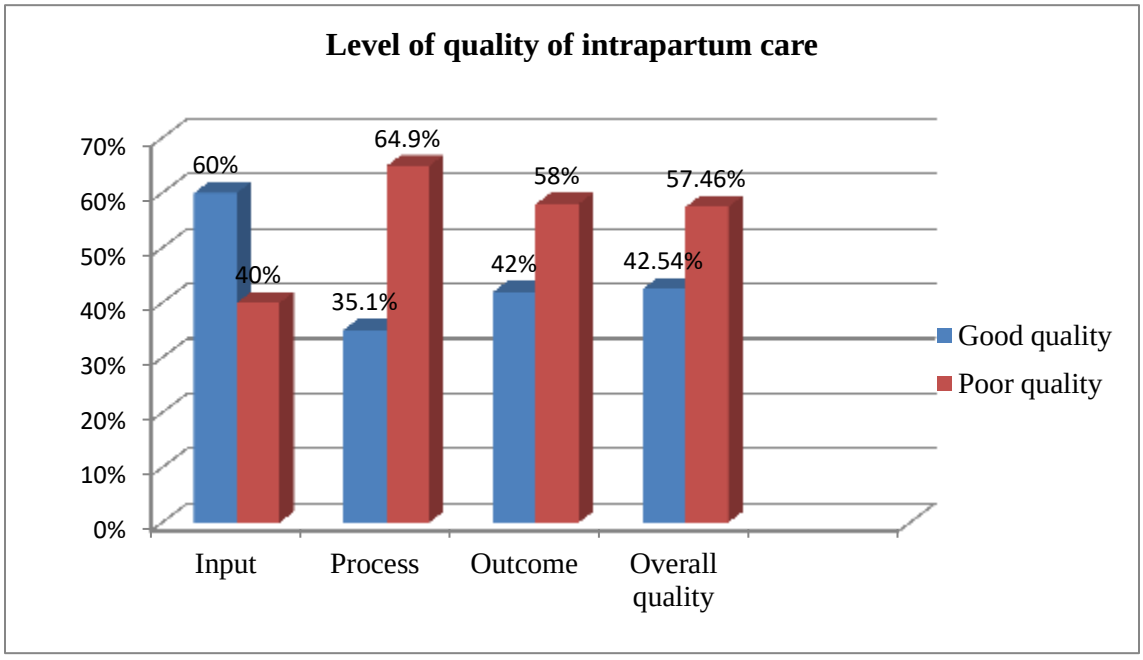


Figure 7 Quality of intrapartum care in input, process and output dimension in public health facilities of Wolkite town Southern Ethiopia, 2023

5.6 Predicors of maternal satisfaction with quality of intrapartum care

Bivariate regression analysis

The relationship between the independent variables and the outcome variables was analyzed using logistic regression model. In bivariate analysis respondent age, occupational status, number of family members and number of pregnancy were associated with maternal satisfaction on quality of intrapartum care at p value ≤0.25.Moreover variables such as residence, educational status income, number of ANC, transportation, type of health facilities, process quality and input

quality were associated with maternal satisfaction with quality of intrapartum care at p value ≤0.05 in bivariate analysis.

Multilevel regression analysis

Variables with p value ≤0.25 on bivariate analysis and meet model assumption were selected and sent for multivariable regression analysis. Therefore, respondent age, occupational status, number of family members, number of pregnancy, residence, educational status income, number of ANC, transportation, type of health facilities, process quality and input quality were fulfilled the above criteria and interred into multivariate model. From that socio-demographic (maternal education), obstetric (ANC visit) and institution related factors (transportation and process quality) were significantly associated with overall maternal satisfaction with quality of intrapartum care at p value ≤0.05. Accordingly, the odd of satisfaction for women who were unable to read and write, were ten times more likely to be satisfied than those who were attended college/University (AOR: 9.97, 95%CI: 1.52, 25.56).

Among the obstetric characteristic, the odds of satisfaction among mothers who had more than 4 ANC visits were 6 times more likely than those who were had less than 4 ANC visit (AOR: 6.32, 95%CI: 2.86, 14.00) and the odds of satisfaction among mother who had 4 ANC visit were four times more likely than those who were less than 4 ANC visit (AOR: 4.81 95% CI: 2.32, 9.96). Additionally, the odds of satisfaction among mothers who used public transport for reaching the health facilities was 74% less likely than those who used ambulance (AOR: 0.26, 95%CI: 0.15, 0.48) and the odds of satisfaction among mothers who were reaching the health facilities on foot were 95% less likely than those who used ambulance (AOR: 0.05, 95% CI: 0.004, 0.54). The odds of process quality (provider competence) were two times (AOR: 2.32, 95%CI: 1.27, 4.24) higher among those compared to counterparts (**Table 7).**

Table 7 Binary and Multilevel logistic regression model of maternal (Socio-demographic, obstetric) and Institutional related factors associated with Mothers Satisfaction with intrapartum care in public health facilities of Wolkite town, 2023(N=336)

Variables	Satisfied (%)	Dissatisfied (%)	COR (CI 95%)	AOR (95%CI)	P Value
Residence					
Rural	85(58%)	61(42%)	3.33(2.12,5.25)	0.14(0.82,4.02)	0.141
Urban	56(30%)	134(70%)	1*	1*	
Age					
15-24	28(31.1%)	62(68.9%)	1*		
25-34	104(46%)	122(54%)	1.888((1.22, 3.17)	1.39(0.66, 2.67)	0.426
35-49	9(45%)	11(55%)	1.81(0.68, 4.86)	2.80(0.71, 11.07)	0.142
Educational Status					
Unable to read & write	24(70.6%)	10(29.4%)	14.4(3.96,18.32)	9.97(1.52,25.56)**	**0.017**
Read and write	20(47.6%)	22(52.4%)	5.46(1.61, 18.7)	3.54 (0.59, 20.96)	0.164
Grade1-8	76(46.9%)	86(53.1%)	5.30 (1.76,15.97)	3.85 (0.86, 17.22)	0.078
Grade 9-12	17(24.3%)	53(75.7%)	1.93 (0.59,6.33)	2.22 (0.53,9.32)	0.277
College/University	5(14.3%)	23(85.7%)	1*	1*	
Occupation					
Student	6(17.6%)	14(82.4%)	1*	1*	
Private	15(20.8%)	57(79.2%)	1.19 (0.30,4.71)	0.88(0.16,4.76)	0.883
Employer	12(25.5%)	35(74.5%)	1.60(0.39,6.55)	2.17 (0.36,12.94)	0.395
Farmer	29(48.3%)	31(51.7%)	4.37 (1.14, 16.77)	1.12(0.19, 6.44)	0.895
Housewife	79(57.7%)	58(42.3%)	6.36 (1.75,23.14)	2.89 (0.56,14.77)	0.203
Income					
500-1500	28(29.55)	67(70.5%)	1*	1*	
1501-5000	87(45.8)	103(54.2)	2.02 (1.19,3.42)	1.810(0.920,3.559)	0.086
>5001	24(50%)	24(50%)	2.39 (1.17, 4.90)	2.88 (1.12, 7.40	0.062
Number of ANC Follow up					
<4 Visit	26(22.6%)	89(77.4%)	1*	1*	
=4 visit	61(47.7%)	67(52.3%)	3.17(1.78, 5.44)	4.81(2.32,9.96)**	**0.000**
>4 Visit	49(57%)	37(43%)	4.533(2.46,8.35)	6.32(2.86,14.00)**	**0.000**
No. of family members					
1-4	42(34.1%)	81(65.9%)	0.28 (0.13,0.58)	1.37(0.38, 5.00)	0.631

5-7	71(41.8%)	99(58.2%)	0.38 (0.19, 0.77)	0.96(0.300, 3.08)	0.946
>7	28(65.1%)	15(34.9%)	1*	1*	
No. of pregnancy					
1-2	41(34.2%)	79(65.8%)	0.39(0.20, 0.77)	0.44 (0.14, 1.35)	0.150
3-5	71(43%)	94(57%)	0.57 (0.30, 1.08)	0.61 (0.21, 1.74)	0.354
>=6	29(56.9%)	22(43.15)	1*	1*	
Transport					
Ambulance	91(65.5%)	48(34.5%)	1*	1*	
Public Transport	49(26.9%)	126(73.1%)	0.19(0.12, 0.31)	0.26(0.15, 0.48)**	**0.000**
On foot	7(33.3%)	14 (66.7%)	0.03(0.005,0.29)	0.05(0.004,0.54)**	**0.014**
Type of Health facility					
Health center	39(40.6%)	57(59.4%)	1*	1*	
Primary Hospital	84(53.5%)	73(46.5%)	1.68(1.01, 2.8)	0.290 (0.05, 1.72)	0.173
Referral Hospital	18(21.7%)	65(78.3%)	0.40 (0.21,0.79)	0.14 (0.05, 0.38)	0.080
Input quality					
Poor Quality	12(25%)	36 (75%)	1*	1*	
Good quality	129(45%)	158(55%)	2.45(1.22, 4.90)	2.29 (0.94, 5.65)	0.070
Process quality					
Poor Quality	51 (30.9%)	114(69.1%)	1*		
Good quality	90(52.6%)	81(47.9%)	2.48(1.59, 3.88)	2.32(1.27, 4.24)**	**0.004**

N.B. 1* (reference group), ** Significant at P<0.05, CI=confidence interval, COR (Crude Odd Ratio), AOR (Adjusted Odd Ratios)

Chapter 6 Discussion

The finding of this study indicates that some institutions met the requirements to give high-quality care based on the standards of care in one dimension but not in others. This study show that none of the skilled healthcare professionals have received the capacity building to manage obstetric complication training in all health institutions and only in one (20%) facility skilled birth attendant were trained to manage neonatal resustation to provide quality care, which is consistent with study conducted in Addis Ababa, none of skilled birth attendant had completed all components of CEMONC training (92). The similarity in the governing health system may be contributing factors.

In this study only 3(60%) of the health facilities met the necessary structure aspect standard that was comparable with a study conducted in Bangladesh only 57.1% and 52.7% district hospitals, maternity and child welfare centers were met all items of infrastructure respectively (46). This study also consistent with study done in Zanzibar out of 5 hospitals only 60% are fulfilled the minimum standards of the skilled health care provider (47). The argument is based on the fact that all of the above nations are African nations with comparable economic prospects to the region under investigation. This shows that infrastructure is influenced by the economy of the countries. Whereas, higher than study in Ethiopia Jabi Tehinan district indicate that only 49% of mothers having asses to good quality of human and material resources (43).

In this study, almost all facilities have electric power in the delivery ward but, only 40% of the facility did have water accessibility in delivery wards like study in Nigeria only 38% of facilities had running water near the delivery ward (51). But, higher than Study in Tanzania and Kenya show that only 7% and 18 % of facility had water accessibility respectively (48). Such variation may occur as a result of the system's strength and the focus on healthcare service. This study also indicate that 80% and all facilities are fulfilled Magnesium sulphate (MgSO4) and oxytocin like study in other part of Ethiopia 72% and 97% of health facilities had Magnesium sulphate (MgSO4) and oxytocin in the delivery rooms respectively (11). In this study only 40% and 80% of facilities had functional incubator and, a bag and mask for newborn resuscitation respectively, like study in Kenya only 50% and 80% of the hospitals had incubators and bag/mask for newborn resuscitation (50).

Concerning Antibiotic and anticonvulsant drugs 80% of health facilities have fulfilled medicine supplies, whereas a study in Arbaminch six (66.6%) facilities met drug for clients (93). The geographical location of the health institution may have an impact on their effectiveness, as well as an unequal distribution of equipment, supplies, supporting supervision, and clinical mentorship. In this study 4 (80%) health facilities had functional transport that is higher than study conducted in Arbaminch in which out of nine hospitals only two hospitals have ambulance (93). Studies conducted in Uganda and Nigeria reported only 46% and 31.2% of the facilities have a functional ambulance for delivery services respectively (49, 54). In this study, 2 (40%) of health facilities had towel for drying and covering the baby immediately after childbirth. This finding was in line with another study conducted in southern Ethiopia where 45.6% of mother dried their baby with prepared towel (94). A study conducted in six sub-Saharan African countries revealed that the largest gap to give newborn care were lack of towels for drying the baby (75).

Developing detailed and written standards of care is crucial for good quality of care at the time of childbirth and the process aspect is actual intrapartum care between provider and client interaction (32). In this study only 35.1% (95% CI:28.3%,41.9%) of mothers received good quality care during childbirth process which was consistent with study conducted in Northern part of Ethiopia in which only 31.25% health facilities met process quality care (32). The similarity in the governing health system, the low levels of health professional's skill and the comparably poor health infrastructure could all be contributing factors. On the other hand the finding is higher than study in Ghana in that only 18% of health facilities met process quality care (55) and lower than study in Ethiopia in Wolayta zone in which only 40.8% of mothers received the standard care (41). The incompetence of the health care experts and an insufficient quantity of health care professionals are two of the key causes of poor processes in a quality domain (33).

Lack of adherence to recommended infection prevention procedures puts healthcare professionals, clients and the general public at greater risk of contracting infection, illness and leads to low quality of care. In this study infection prevention practices such as hand washing before physical examination performed only for 8.1% of mothers and before delivery only for

31 (16.8%) of mothers like study in Côte d'Ivoire, only 6.71% caregivers washing hands before the examination (6). This study show that Proper gloving on both hands before vaginal examination was practiced only for 46.5% mothers which is higher than study in Burkina Faso where 7.96% of care providers used sterile gloves for vaginal examinations (6). This may be caused by the different types of facilities included and the lack of skilled care providers.

One of the issues found in this study was the improper use of partograph during labor and delivery. In this study proper partograph utilization was 39.5% (95% CI: 32.4%, 46.9%) which was higher than various studies conducted in different regions of Ethiopia where 10.1%, 25%, 23.8% of the facilities used partograph properly (52, 56, 57). Failing to use or improperly employing a partograph might postpone treatment in case of prolonged labor and result in complications such as obstructed labor, ruptured uterus, bleeding, fetal death, and infection of both mothers and infants. The result of this study show that only 29.2% of mothers were allowed companionship during delivery that was higher than a study in Arbaminch town (13.8%), Ethiopia and this finding is similar with study findings in Kenya and Bangladesh where only 29% and 39% of mothers respectively, were allowed companionship during childbirth (59-61). This finding's similarity may be attributable to the actual level of quality of delivery care.

In this study 57.8% of mothers were offered options for the delivery position which was higher than studies in other part of Ethiopia and Malawi in which only 20% and 6.3% of mothers in health institutions were offered options for the delivery position respectively (62, 63). The result of this study showed that only 57.8% (95% CI: 50.4%, 65%) of mothers and newborns experienced friendly care throughout delivery and the immediate postpartum period. This finding is higher than study carried out in Tigray, that revealed only 47.2% of mothers and newborns experienced friendly care throughout delivery (30). This may have an impact on future prenatal, delivery, and postpartum maternal health service consumption as well as the lowering of mother and infant mortality.

In this study the overall immediate postnatal care for the women and their newborns before discharge from the health facilities were only 49.2% (95%CI: 42.2%, 56.2%), that was higher than a study done in Wolaita Zone (34.9%) southern Ethiopia (93). The findings underline that women and newborns were receiving low-quality care. The reported discrepancy is related to the

scope of the studies, study sites, and the components of quality measurement indices. Since, postpartum hemorrhage is a danger that all new delivered mothers face, the WHO postnatal guidelines recommend that all postpartum women have a routine screening for vaginal bleeding, uterine contraction, temperature, and pulse rate during the first 24 hours (27). In this study only 68.1% of mothers were checked for uterine contraction. This suggests that care providers are missing procedures, underperforming, or neglecting to provide care for mothers within immediate postpartum period. However the finding was higher than other study conducted in Tigray region primary hospitals 45.5% (95). This variation could be attributed to the different study setting. Because, our study included referral hospitals, the care providers may have more experience and awareness to check most of the time.

The overall newborn quality of care in this study was 69.7% (95% CI; 62.6%, 76.3%). The finding is almost similar with a study in Tigray in that 67.6% of newborns received good quality of newborn care (30). It is higher than study conducted in West Guji which showed that the good quality of essential newborn care was only 17.9% (77). This discrepancy in the outcome may be caused by differences in the measuring criteria used to determine the quality of newborn care, the type of health institutions, the study sample employed, and the study setting.

According to this study ensured the baby in skin to skin contact with mother was 38.4% like study in other different regions in Ethiopia show that only 35% of newborns had skin-to skin contact with their mothers (11). Whereas, lower than study conducted in Kenya in that 57% new born received skin to-skin contact after childbirth (76). Even though they have received capacity-building training and are aware of the benefits of skin-to-skin contact, most healthcare professionals have not implemented behavioral changes to comply with the criteria, which could be the cause of this mismatch. The finding of this study show that start breastfeeding within 1 hour was good practice which was 93% that was higher than study in Nepal 65.5% (96) and in Nigeria 34.7 % (51) and in Kenya 76% (76). This discrepancy may be due to by the system support to provide quality of newborn care in the study area and level of awareness of the professionals on benefit of breastfeeding.

Maternal satisfaction is reflects the overall quality care and the provision of good-quality maternal health care leading to maximum levels of client satisfaction (65). An important factor in preventing the death of mothers and babies is providing high-quality of maternal and neonatal care. Therefore, if the lives of women and newborns are saved as a result of this issue, mothers are satisfied with the care provided by health institutions. In this study the overall good output quality care as measured by maternal satisfaction with quality of intrapartum care was only 42% with 95% CI: (36.6%,47.4%) that was higher than studies in different part of Ethiopia: Addis Ababa 19% (69), Gondar 31.3% (70), North Shoa Ethiopia (28.2%) (73) and in Malaysia 21.2% (68). This variation may be because of a real difference in quality of care provided, expectation of mothers or the type of health institutions. However, this finding is lower than studies in other different parts of Ethiopia: Hawasa 63% (71) and Gamo-Gofa zone 90.2% (72) and in South Africa (51.9%) (66). The difference in study settings could be the reason of this variance. Our study setting is only public health facilities whereas other included private health facilities. As a result, in contrast to private healthcare facilities and health centers, majority of the public health facilities, particularly referral hospitals are overburdened and struggling to give quality care.

In both bivariate and multilevel model analysis in this study transport to arrive health facilities, having antenatal care contact, maternal education and good process quality had a significant association with maternal satisfaction with intrapartum care. The findings of this study show that illiterate mothers have more satisfaction than the literate ones. The odd of satisfaction for women who were unable to read and write, were ten times more likely than those who were attended college/University (AOR: 9.97, 95%CI: 1.52, 25.56). Due to their high expectations for high-quality care, educated mothers may have been less satisfied with their intrapartum care. Since educational level increases awareness of the mother towards quality of child birth care increases their expectation becomes rise and unsatisfied with a minimum compromise to the care. This finding was comparable with a study conducted in West Gojjam, Ethiopia participants with no formal education were more likely to be satisfied with delivery care than those with a diploma or above (97)**.** This was also supported by a study in mid-western Nepal which showed that mothers who were non-educated was 2.71 times more likely satisfied than those who were educated (96)

Regarding obstetric characteristic, the odds of satisfaction among mothers who had more than 4 ANC visits were 6 times more likely than those who were had less than 4 ANC visit (AOR: 6.32,

95%CI: 2.86, 14.00), this is supported by study conducted in Debre Markos and Wolayta, having more a history of ANC follow-up are significantly related to mothers being satisfied with the intrapartum care (31, 86). Also, study conducted in North Shoa Ethiopia show that Mothers who had attended ANC visit four and above in their current pregnancy were more likely satisfied with the overall intrapartum care provided compared to their counterpart (73).

Additionally, the odds of satisfaction among mothers who used public transport to go to health facilities was 74% less likely than those who used ambulance (AOR: 0.26, 95%CI: 0.15, 0.48) and the odds of satisfaction among mothers who were reaching the health facility on foot were 95% less likely than those who used ambulance (AOR: 0.05, 95% CI: 0.004,0.54). This finding was in line with a study conducted in West Gojjam, Ethiopia those who came to the health facility by ambulance were more likely to satisfy than counterpart (84). This finding might be related to the cost services. Since, the greatest obstacle for maternal health service was transportation issue, especially for institutional delivery service in developing nations.

The finding of this study also, show that the odds of process quality (provider competence) were two times higher than among those compared to counterparts (AOR: 2.32, 95%CI: 1.27, 4.24). This finding is supported by a study in Kenya that showed mothers who got encouragement and reassurance by midwives and doctors were more likely to be satisfied with intrapartum care (85). Also A study in Gondar Ethiopia also indicated that satisfaction of women who had an opportunity to talk to health care providers and women who had pain management were more likely to be satisfied with intrapartum care (87). This is because providing standard care during childbirth is crucial for ensuring the pleasure of mothers, since processes encompass all aspects of intrapartum care.

Chapter 7 Strength and Limitation of the study

7.1 Strength of the study

- Conducting this quality of intrapartum and newborn care at public health facilities of Wolkite town Southern Ethiopia was a great learning curve for the researcher. It was a good learning opportunity for research methodology and the existing situation of quality intrapartum and newborn care in the study area.
- This study attempted to evaluate various aspects of quality; including availability of basic infrastructure, essential medications and instrument, competence of providers (process) and maternal satisfaction.
- In this study different approaches (Interview, observation, chart and register reviews) were used for specific purpose.
- The study included all of the public health facilities in Wolkite town; to make them representative of the findings.
- The use of the three aspects of quality (input, process, and outcome) and their association was the most advantageous aspect of this study.

7.2 Limitation of the study

- This study's limitation is the possibility of observer bias among data collectors and the Hawthorne effect. However, during the prolonged period of observation, it is challenging for the medical staff to uphold their artificial standards of behavior. As a result, any behavioral change is likely to last throughout childbirth, and to reduce this impact, the first observation was tried to exclude from each skilled attendant.
- The observation aspect of this study didn’t include caesarian section deliveries
- The majority of laboring women arrive at the facility after the first stage is completed at home, which necessitates extending the data collecting time in order to recruit enough participants to meet our sample size. Additionally, it can be challenging to observe the second stage of lobar when some laboring mothers elect to have a cesarean section.
- Another limitation of this study is the difficulty in avoiding the possibility of social desirability bias, particularly interviews of mothers who were admitted to the postnatal ward, which raises the chance of responding a more desirable response. To reduce these bias respondents had total anonymity and confidentiality throughout the study.

Chapter 8 Conclusion and Recommendations

8.1 Conclusion

The quality of intrapartum and newborn care in this study area was minimal. The study revealed that the quality of intrapartum care input and process component were 60% and 35.1% respectively. While, quality of the output as measured by maternal satisfaction with intrapartum care was 42%, and 69.7% of newborns were received good quality of care. However, only 57.8% of mothers and newborns were received a friendly care during childbirth. The finding indicated that there is lack of trained health care providers, inaccessibility of water in delivery ward, poor infection prevention practice and poor professional competence at the study area. Maternal education, process quality (provider competence), ANC visit and transportation had significant association with the maternal satisfaction on quality of intrapartum care.

8.2 Recommendations

- The local and national health system should improve the infrastructure of public health institutions including sustainable provision of medicines, basic supply and diagnostic service, water and sanitary facilities required for maternal and newborn care and, regular monitoring of health facility that contributes for the improvement of quality of intrapartum and newborn care provided.
- The care providers' adherence to the standard procedures and guidelines should be improved through training, supervision, and regular monitoring and evaluation.
- The challenge related to transportation issues need a sustainable solution. To ensure the continuity of care in the healthcare system, the government should continue and scale up its current efforts to create a functional referral system through the distribution of ambulance for health facilities.
- By providing accountability based in-service counseling and practical training healthcare professionals should improve their interpersonal skills and provide care in a way that is fair, ethical, respectful, and client-friendly care manner.
- It is preferable to implement the respectful maternity care to increase the women satisfaction by supporting during delivery, consented care and non-abandonment of care.

Recommendations for further studies

- Studying maternal satisfaction by using data collection at home after delivery is preferable for preventing the Hawthorne effect of data collection at the health institutions level.
- Studying childbirth outcomes is essential to evaluate quality of intrapartum and newborn care.
- Further study should be conducted to identify the care provider's knowledge and their perspective, community, referral related factors and health system factors that affect the utilization of quality intrapartum and newborn care.

References

1. World Health Organization. Contnuity and coordination of care: a practice brief to support implementation of the WHO Framework on integrated people-centred health services. Geneva: World Health Organizaton;. 2018;CC BY-NC-SA 3.0 IGO.
2. World Health Organization. Standards for improving quality of maternal and newborn care in health facilities. World Health Organization Lancet. 2016.
3. Wilson A, Spotswood N, Hayman G, Vogel J, Narasia J, Elijah A, et al. Improving the quality of maternal and newborn care in the Pacific region: a scoping review. The Lancet Regional Health-Western Pacific. 2020;3:100028.
4. Manu A, Arifeen S, Williams J, Mwasanya E, Zaka N, Plowman BA, et al. Assessment of facility readiness for implementing the WHO/UNICEF standards for improving quality of maternal and newborn care in health facilities - experiences from UNICEF's implementation in three countries of South Asia and sub-Saharan Africa. BMC Health Serv Res. 2018;18(1):531.
5. Chou VB, Walker N, Kanyangarara M. Estimating the global impact of poor quality of care on maternal and neonatal outcomes in 81 low-and middle-income countries: a modeling study. PLoS medicine. 2019;16(12):e1002990.
6. Millogo T, Agbre-Yace ML, Kourouma RK, Yameogo WME, Tano-Kamelan A, Sissoko FB, et al. Quality of maternal and newborn care in limited-resource settings: a facility-based cross-sectional study in Burkina Faso and Cote d'Ivoire. BMJ Open. 2020;10(6):e036121.
7. Tunçalp Ö, Were W, MacLennan C, Oladapo O, Gülmezoglu A, Bahl R, et al. Quality of care for pregnant women and newborns—the WHO vision. Bjog. 2015;122(8):1045.
8. Fink G, Ross R, Hill K. Institutional deliveries weakly associated with improved neonatal survival in developing countries: evidence from 192 Demographic and Health Surveys. International journal of epidemiology. 2015;44(6):1879-88.
9. Indicators K. Mini Demographic and Health Survey. EPHI and ICF. 2019.
10. National Academies of Sciences E, Medicine. Improving quality of care in low-and middle-income countries: workshop summary. 2015.
11. Biadgo A, Legesse A, Estifanos AS, Singh K, Mulissa Z, Kiflie A, et al. Quality of maternal and newborn health care in Ethiopia: a cross-sectional study. BMC health services research. 2021;21(1):1-10.
12. Abebe A. MATERNAL, NEONATAL AND CHILD HEALTH. USAID. 2022.

13. Health FMo. Federal Democratic Republic of Ethiopia Ministry of Health 2 Health Sector Transformation in Quality : a guide to transform the quality of healthcare in Ethiopia. 2016.

14. Tilahun B, Zeleke A, Kifle M, Fritz F. The Ethiopian national eHealth strategy and its alignment with the health informatics curriculum. Journal of Health Informatics in Africa. 2014;2(2).

15. Organization WH. Trends in maternal mortality 2000 to 2017: estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. 2019.

16. Blencowe H, Cousens S, Jassir FB, Say L, Chou D, Mathers C, et al. National, regional, and worldwide estimates of stillbirth rates in 2015, with trends from 2000: a systematic analysis. The Lancet Global Health. 2016;4(2):e98-e108.

17. FMOH. Overview of maternal health in Ethiopia. Maternal health. 2021.

18. You D, Hug L, Ejdemyr S, Idele P, Hogan D, Mathers C, et al. Global, regional, and national levels and trends in under-5 mortality between 1990 and 2015, with scenario-based projections to 2030: a systematic analysis by the UN Inter-agency Group for Child Mortality Estimation. The Lancet. 2015;386(10010):2275-86.

19. MOH. national antenatal care guidlines for Ensuring Positive Pregnancy Experience. . 2022. ;Vol. 80.

20. (PHEM): EPHI-PHEMC. Ethiopian National Maternal Death Surveillance and Response System Annual Report 2010 Ethiopian Fiscal Year.https://wwwafrowhoint/publications/ethiopia-national-maternal-death-surveillance-andresponse- system-annual-report-2010. 2019.

21. Negero MG, Sibbritt D, Dawson A. Access to quality maternal healthcare services in Ethiopia: A multilevel analysis. 2022.

22. Wehrmeister FC, Restrepo-Mendez M-C, Franca GV, Victora CG, Barros AJ. Summary indices for monitoring universal coverage in maternal and child health care. Bulletin of the World Health Organization. 2016;94(12):903.

23. Lindtjørn B, Mitiku D, Zidda Z, Yaya Y. Reducing maternal deaths in Ethiopia: results of an intervention Programme in Southwest Ethiopia. PLoS One. 2017;12(1):e0169304.

24. Brenner S, De Allegri M, Gabrysch S, Chinkhumba J, Sarker M, Muula AS. The quality of clinical maternal and neonatal healthcare–a strategy for identifying 'routine care signal functions'. PLoS One. 2015;10(4):e0123968.

25. Mehretie Adinew Y, Abera Assefa N, Mehretie Adinew Y. Why do some Ethiopian women give birth at home after receiving antenatal care? Phenomenological Study. BioMed research international. 2018;2018.
26. Yaya S, Bishwajit G, Uthman OA, Amouzou A. Why some women fail to give birth at health facilities: a comparative study between Ethiopia and Nigeria. PloS one. 2018;13(5):e0196896.
27. Organization WH. Department of maternal, newborn, child and adolescent health (MCA): progress report 2014–15. 2016.
28. Kruk ME GA, Arsenault C, Jordan K, Leslie HH, Roder-DeWan S, Adeyi O, Barker P, Daelmans B,, SV: D. High-quality health systems in the Sustainable Development Goals era: time for a revolution. The Lancet global health 2018;6(11):e1196-e1252.
29. Alyahya MS, Khader YS, Batieha A, Asad M. The quality of maternal-fetal and newborn care services in Jordan: a qualitative focus group study. BMC Health Serv Res. 2019;19(1):425.
30. Fisseha G, Berhane Y, Worku A. Quality of intrapartum and newborn care in Tigray, Northern Ethiopia. BMC Pregnancy Childbirth. 2019;19(1):37.
31. Bitew K, Ayichiluhm M, Yimam K. Maternal Satisfaction on Delivery Service and Its Associated Factors among Mothers Who Gave Birth in Public Health Facilities of Debre Markos Town, Northwest Ethiopia. Biomed Res Int. 2015;2015:460767.
32. Fisseha G, Berhane Y, Worku A, Terefe W. Quality of the delivery services in health facilities in Northern Ethiopia. BMC Health Serv Res. 2017;17(1):187.
33. Brizuela V, Leslie HH, Sharma J, Langer A, Tunçalp Ö. Measuring quality of care for all women and newborns: how do we know if we are doing it right? A review of facility assessment tools. Lancet Glob Health. 2019;7(5):e624-e32.
34. Donabedian A. Evaluating the quality of medical care. 1966. Milbank Q. 2005;83(4):691-729.
35. Andriantsimietry SH, Rakotomanga R, Rakotovao JP, Ramiandrison E, Razakariasy MER, Favero R, et al. Service Availability and Readiness Assessment of Maternal, Newborn and Child Health Services at Public Health Facilities in Madagascar. Afr J Reprod Health. 2016;20(3):149-58.

36. Kanyangarara M, Munos MK, Walker N. Quality of antenatal care service provision in health facilities across sub-Saharan Africa: Evidence from nationally representative health facility assessments. J Glob Health. 2017;7(2):021101.

37. Koblinsky M, Moyer CA, Calvert C, Campbell J, Campbell OM, Feigl AB, et al. Quality maternity care for every woman, everywhere: a call to action. Lancet. 2016;388(10057):2307-20.

38. Sharma J, Leslie HH, Kundu F, Kruk ME. Poor Quality for Poor Women? Inequities in the Quality of Antenatal and Delivery Care in Kenya. PLoS One. 2017;12(1):e0171236.

39. Biswas TK, Sujon H, Rahman MH, Perry HB, Chowdhury ME. Quality of maternal and newborn healthcare services in two public hospitals of Bangladesh: identifying gaps and provisions for improvement. BMC Pregnancy Childbirth. 2019;19(1):488.

40. Dewana Z, Gebremariam, A., Abdulahi, M., Fikadu, T. and Facha, W.,. Quality of delivery service at public health facilities in Arba Minch district, Gamo Gofa zone, Southern Ethiopia. Journal of Gynecology and Obstetrics. 2017; 5 (2), 31-6.

41. Alemayehu M, Yakob B, Khuzwayo N. Quality of emergency obstetric and newborn care services in Wolaita Zone, Southern Ethiopia. BMC Pregnancy Childbirth. 2022;22(1):686.

42. Asmare Y, Tilahun T, Debela Y, Eshetie Y, Minuye B, Yalew ZM, et al. Quality of intrapartum care at Public Health Institutions of North Achefer District, North West Ethiopia: a mixed method study. BMC Pregnancy Childbirth. 2022;22(1):626.

43. Asrese K. Quality of intrapartum care at health centers in Jabi Tehinan district, North West Ethiopia: clients' perspective. BMC Health Serv Res. 2020;20(1):439.

44. Tomlin K, Berhanu D, Gautham M, Umar N, Schellenberg J, Wickremasinghe D, et al. Assessing capacity of health facilities to provide routine maternal and newborn care in low-income settings: what proportions are ready to provide good-quality care, and what proportions of women receive it? BMC Pregnancy Childbirth. 2020;20(1):289.

45. Emiru AA, Alene GD, Debelew GT. Women's satisfaction with the quality of antenatal care services rendered at public health facilities in Northwest Ethiopia: the application of partial proportional odds model. BMJ Open. 2020;10(9):e037085.

46. Farzana Islam AR, Abdul Halim, Charli Eriksson, Fazlur Rahman, Koustuv Dalal. Assessment of quality of infrastructure and clinicalcare performance of HCPs during MNH services at district and sub-district level government hospitals, Bangladesh. HealthMED 2015;-Volume 9 / Number 12

47. Housseine N, Punt MC, Mohamed AG, Said SM, Maaløe N, Zuithoff NPA, et al. Quality of intrapartum care: direct observations in a low-resource tertiary hospital. Reprod Health. 2020;17(1):36.

48. Gon G, Restrepo-Méndez MC, Campbell OM, Barros AJ, Woodd S, Benova L, et al. Who Delivers without Water? A Multi Country Analysis of Water and Sanitation in the Childbirth Environment. PLoS One. 2016;11(8):e0160572.

49. Oyekale AS. Assessment of primary health care facilities' service readiness in Nigeria. BMC Health Serv Res. 2017;17(1):172.

50. Gao X, Kelley DW. Understanding how distance to facility and quality of care affect maternal health service utilization in Kenya and Haiti: A comparative geographic information system study. Geospat Health. 2019;14(1).

51. Ifeadike CO, Ezeama, N.N., Nnaji, G.A., Emelumadu, O.F., Ugwoke, U. and Ofoegbu,. An assessment of reproductive health services in selected health facilities, Anambra State, Nigeria. Res J Womens Health 2016;3(2),1-8.

52. Yigzaw T, Abebe F, Belay L, Assaye Y, Misganaw E, Kidane A, et al. Quality of Midwife-provided Intrapartum Care in Amhara Regional State, Ethiopia. BMC Pregnancy Childbirth. 2017;17(1):261.

53. Brenner S, De Allegri M, Gabrysch S, Chinkhumba J, Sarker M, Muula AS. The quality of clinical maternal and neonatal healthcare - a strategy for identifying 'routine care signal functions'. PLoS One. 2015;10(4):e0123968.

54. Wilunda C, Oyerinde K, Putoto G, Lochoro P, Dall'Oglio G, Manenti F, et al. Availability, utilisation and quality of maternal and neonatal health care services in Karamoja region, Uganda: a health facility-based survey. Reprod Health. 2015;12:30.

55. Nesbitt RC, Lohela TJ, Manu A, Vesel L, Okyere E, Edmond K, et al. Correction: Quality along the Continuum: A Health Facility Assessment of Intrapartum and Postnatal Care in Ghana. PLoS One. 2015;10(10):e0141517.

56. Fisseha G, Berhane, Y., Worku, A. and Terefe, W.,. Quality of the delivery services in health facilities in Northern Ethiopia. BMC health services research, . 2017;17(1), 1-7.

57. Zelellw DA, Tegegne TK. Level of partograph utilization and its associated factors among obstetric caregivers at public health facilities in East Gojam Zone, Northwest Ethiopia. PLoS One. 2018;13(7):e0200479.

58. UNICEF. WHO Guidelines Approved by the Guidelines Review Committee. Pregnancy, Childbirth, Postpartum and Newborn Care: A Guide for Essential Practice. Geneva: World Health Organization Copyright © World Health Organization 2015.; 2015.

59. Afulani P, Kusi C, Kirumbi L, Walker D. Companionship during facility-based childbirth: results from a mixed-methods study with recently delivered women and providers in Kenya. BMC Pregnancy Childbirth. 2018;18(1):150.

60. Perkins J, Rahman AE, Mhajabin S, Siddique AB, Mazumder T, Haider MR, et al. Humanised childbirth: the status of emotional support of women in rural Bangladesh. Sex Reprod Health Matters. 2019;27(1):1610277.
61. Beyene Getahun K, Ukke GG, Alemu BW. Utilization of companionship during delivery and associated factors among women who gave birth at Arba Minch town public health facilities, southern Ethiopia. PLoS One. 2020;15(10):e0240239.
62. Sethi R, Gupta S, Oseni L, Mtimuni A, Rashidi T, Kachale F. The prevalence of disrespect and abuse during facility-based maternity care in Malawi: evidence from direct observations of labor and delivery. Reprod Health. 2017;14(1):111.
63. Shiferaw S, Spigt M, Godefrooij M, Melkamu Y, Tekie M. Why do women prefer home births in Ethiopia? BMC Pregnancy Childbirth. 2013;13:5.
64. Mehata S, Paudel YR, Dariang M, Aryal KK, Paudel S, Mehta R, et al. Factors determining satisfaction among facility-based maternity clients in Nepal. BMC Pregnancy Childbirth. 2017;17(1):319.
65. Trimmer C, Målqvist M. Clinical communication and caregivers' satisfaction with child healthcare in Nepal; results from Nepal Health Facility Survey 2015. BMC Health Serv Res. 2019;19(1):17.
66. Lumadiand TG BE. Patients' satisfaction with midwifery services in a regional hospital and its referring clinics in the Limpopo Province of South Africa. . Afr J Nurs Midwifery. 2011;13: 14-28.
67. Habimana E, Nyirigira G, Sendegeya A, Minega JN, Mukamana F, Ngarambe C, et al. Clients' satisfaction of maternity care at a public referral teaching hospital, in Rwanda: case of University Teaching Hospital of Butare (CHUB). Pan Afr Med J. 2022;41:150.
68. Fadzilah Mohamad PYL, Maliza Mawardi. Maternal Satisfaction Towards Intrapartum Care of Designated Healthcare Facilities and Its Associated Factors Among Postnatal Women Attending Klinik Kesihatan Salak. Malaysian Journal of Medicine and Health Sciences 2020;(eISSN 2636-9346).
69. Demas T, Getinet T, Bekele D, Gishu T, Birara M, Abeje Y. Women's satisfaction with intrapartum care in St Paul's Hospital Millennium Medical College Addis Ababa Ethiopia: a cross sectional study. BMC Pregnancy Childbirth. 2017;17(1):253.
70. Gashaye KT, Tsegaye AT, Shiferaw G, Worku AG, Abebe SM. Client satisfaction with existing labor and delivery care and associated factors among mothers who gave birth in university of Gondar teaching hospital; Northwest Ethiopia: Institution based cross-sectional study. PLoS One. 2019;14(2):e0210693.
71. Temesgen Geta MM, Nebiyat Kasa. Satisfaction status and its associated factors on delivery service provided among women who gave birth at hawassa university comprehensive specialized hospital in southern Ethiopia International Journal of Pregnancy & Child Birth. 2022;Volume 8 Issue 4 - 2022.

72. Dewana Z, Fikadu T, A GM, Abdulahi M. Client perspective assessment of women's satisfaction towards labour and delivery care service in public health facilities at Arba Minch town and the surrounding district, Gamo Gofa zone, south Ethiopia. Reprod Health. 2016;13:11.
73. Silesh M, Lemma T. Maternal satisfaction with intrapartum care and associated factors among postpartum women at public hospitals of North Shoa Zone Ethiopia. PLoS One. 2021;16(12):e0260710.
74. Mohammed K. Maternal Satisfaction Regarding Quality of Nursing Care during Labor and Delivery in Sulaimani Teaching Hospital," , . Int J Nurs Midwifery,. 2016.;vol. 8, no. 3, pp. 18–27.

75. de Graft-Johnson J, Vesel L, Rosen HE, Rawlins B, Abwao S, Mazia G, et al. Cross-sectional observational assessment of quality of newborn care immediately after birth in health facilities across six sub-Saharan African countries. BMJ Open. 2017;7(3):e014680.
76. Shikuku DN, Milimo B, Ayebare E, Gisore P, Nalwadda G. Quality of Care during Neonatal Resuscitation in Kakamega County General Hospital, Kenya: A Direct Observation Study. Biomed Res Int. 2017;2017:2152487.
77. Divya Rani Rajan1 DJ, Teshite Gemechu, Pandiarajan Kasimayan, Anandapandian. KanapathyThangavel Kasirajan. Quality of Essential Newborn Care and its Associated Factors in Public Health Facilities of West Gujji, Oromia, Ethiopia: A Cross Sectional Study. Annals of the Romanian Society for Cell Biology. 2021;Vol. 25, Issue 4, 2021,.

78. Kassaw A, Debie A, Geberu DM. Quality of Prenatal Care and Associated Factors among Pregnant Women at Public Health Facilities of Wogera District, Northwest Ethiopia. J Pregnancy. 2020;2020:9592124.
79. Weldearegay HG, Kahsay AB, Medhanyie AA, Godefay H, Petrucka P. Quality of and barriers to routine childbirth care signal functions in primary level facilities of Tigray, Northern Ethiopia: Mixed method study. PLoS One. 2020;15(6):e0234318.
80. Owili PO, Muga MA, Mendez BR, Chen B. Quality of maternity care and its determinants along the continuum in Kenya: A structural equation modeling analysis. PLoS One. 2017;12(5):e0177756.

81. Lama TP, Munos MK, Katz J, Khatry SK, LeClerq SC, Mullany LC. Assessment of facility and health worker readiness to provide quality antenatal, intrapartum and postpartum care in rural Southern Nepal. BMC Health Serv Res. 2020;20(1):16.

82. Hailu T, Nigus K, Gidey G, Hailu B, Moges Y. Assessment of partograph utilization and associated factors among obstetric care givers at public health institutions in central zone, Tigray, Ethiopia. BMC Res Notes. 2018;11(1):710.

83. Hagos S, Shaweno D, Assegid M, Mekonnen A, Afework MF, Ahmed S. Utilization of institutional delivery service at Wukro and Butajera districts in the Northern and South Central Ethiopia. BMC Pregnancy Childbirth. 2014;14:178.

84. Asres GD. Satisfaction and Associated Factors among Mothers Delivered at Asrade Zewude Memorial Primary Hospital, Bure, West Gojjam, Amhara, Ethiopia: A Cross Sectional Study, Prim Health Care 2018,;8:2.

85. Chepkorir Emily KM, Wanyonyi Mable and Arudo John. MATERNAL SATISFACTION WITH INTRAPARTUM CARE IN HEALTHCARE FACILITIES IN KERICHO COUNTY, KENYA Journal of Health, Medicine and Nursing. 2021;Vol. 6, Issue 2,No. 5, pp 72-89.

86. Abrham Abeto Temamo AAaAAM. Mothers' Satisfaction with Institutional Delivery Service and Associated Factors among Women Attending Hospitals in Wolaita Zone Administration, SNNPR, Ethiopia. Journal of Nutrition and Dietetic Practice. 2018;Volume 2(2):.

87. Taddese AA, Gashaye KT, Dagne H, Andualem Z. Maternal and partner's level of satisfaction on the delivery room service in University of Gondar Referral Hospital, northwest, Ethiopia: a comparative cross-sectional study. BMC Health Serv Res. 2020;20(1):233.

88. Gitobu CM, Gichangi PB, Mwanda WO. Satisfaction with Delivery Services Offered under the Free Maternal Healthcare Policy in Kenyan Public Health Facilities. J Environ Public Health. 2018;2018:4902864.

89. Amsalu B, Aragaw A, Sintayehu Y, Sema A, Belay Y, Tadese G, et al. Respectful maternity care among laboring women in public hospitals of Benishangul Gumuz Region, Ethiopia: A mixed cross-sectional study with direct observations. SAGE Open Medicine. 2022;10:20503121221076995.

90. Gejea T, Abadiga M, Hasen T. Maternal Satisfaction with Delivery Services of Government Hospitals in Ambo Town, West Shoa Zone, Oromia Region, Ethiopia, 2020. Patient Prefer Adherence. 2020;14:1225-35.

91. Kidane A, Getachew T, Mesfin F, Eyeberu A, Dheresa M. Maternal satisfaction on delivery care services and associated factors at public hospitals in eastern Ethiopia. International Health. 2022.

92. Austin A, Gulema H, Belizan M, Colaci DS, Kendall T, Tebeka M, et al. Barriers to providing quality emergency obstetric care in Addis Ababa, Ethiopia: healthcare providers' perspectives on training, referrals and supervision, a mixed methods study. BMC pregnancy and childbirth. 2015;15(1):1-10.

93. Dewana Z, Gebremariam A, Abdulahi M, Fikadu T, Facha W. Quality of delivery service at public health facilities in Arba Minch district, Gamo Gofa zone, Southern Ethiopia. Journal of Gynecology and Obstetrics. 2017;5(2):31-6.

94. Chichiabellu TY, Mekonnen B, Astawesegn FH, Demissie BW, Anjulo AA. Essential newborn care practices and associated factors among home delivered mothers in Damot pulasa Woreda, southern Ethiopia. Reproductive health. 2018;15(1):1-11.

95. Berhe A, Araya T, Tesfay K, Bayray A, Etsay N, Gidey G, et al. Assessment of quality of postnatal care services offered to mothers in hospitals, of Tigray Ethiopia 2016. Res Rev. 2017;6(1):11-9.

96. Sanjel K, Amatya A. Determinants of timely initiation of breastfeeding among disadvantaged ethnic groups in midwest Nepal. Journal of Nepal Health Research Council. 2018;16(41):385-91.

97. GD. A. Satisfaction and Associated Factors among Mothers Delivered at Asrade Zewude Memorial Primary Hospital, Bure, West Gojjam, Amhara, Ethiopia: A Cross Sectional Study. Prim Health Care. 2018;8:2.

Annex

Annex 1: Study information sheet

[Greetings] My name is_____ I am here on behalf of Berhanu Semra, a postgraduate student at Addis Ababa University, College of Health Science, and department of Health system management for partial fulfillment of his master's degree, he is here to conduct a study on the “Quality of intrapartum and new born care in public health facility Wolkite town Southern Ethiopia".

You are kindly invited to participate in this important study that aims to generate crucial evidence on quality of maternal and new born service provision during child birth and measure adherence of healthcare provider to standard care during child birth process for those who are working at maternity unit. The output of the study will have both direct and indirect benefit to you, as you and your families will use the services in the future

This study requires your full cooperation and active involvement. Participation in this study is entirely voluntary and you are free not to participate in the study and free to withdraw from the study at any time without explaining your reason. You are free to answer any question you feel comfortable with and you can avoid or skip questions that are too personal or of no interest to you. There is no penalty, reprisal, or loss of benefit for not participating or for withdrawing from study.

There will be minimal risk if you engage in this study as you will be providing us your personal information. However, any personal information you offer will be kept anonymous and confidential. In addition, all replies will be stored on a password-protected device. If you agree to participate, I will conduct a 20-30- minute interview with you and observation is unlimited.

There will be no direct benefit or compensation to you at the end of the interview, but your response will be critical for this study. At the end of the study, the aggregated findings will be communicated with the participants and key stakeholders. The reports will also be published in scientific journals. Nonetheless, confidentiality will be maintained in all published and written materials emerging from the study.

Do you have any questions? If you have any questions or concerns about the study, contact Berhanu Semra, the Principal Investigator (mobile number: +251926943642 email: brishsem@gmail.com).

Annex 2: Oral Consent form

I have heard all the information stated above about the study as it was read to me by the data collector. I fully understand the purpose, benefit, and risk of the study, and I have freely decided to participate or not to participate in this study.

Tic "X" on Agree if patient decided to participate or on disagree if not.

Agree _____ I disagree _____ STOP

Thank You for willingness to participate

Questionnaires

Annex 3 Questionnaires for input component

Tools for Facility Based Survey

	Zone	Wereda	Kebele	Health facility
Name				
Code				

PART I: Background information:

Instructions: Please complete the following questions based on discussions with facility manager

101	Sex of provider	1. Male 2. Female
102	How old are you?	..... years
103.	What is your profession	……..
	What is your position?	1. Medical director Qualification? 2. Head of the facility Qualification? 3. Maternity department head Qualification? 4. Maternity staff member Qualification? 5. Other (specify):
105.	For how long you have been working as a manager (head of maternity) at this Facility	……Months…… years

Table 1: Checklist used in measuring input quality of intrapartum and new born in public health facility Wolkite town in the southern Ethiopia

Input variables(yes/no question)	Response(Verify by observation)	
Infrastructures indicators		
1. Clean water source available	1. Yes	2. No
2. Reliable electricity available	1. Yes	2. No
3. Means of communication available all times even not locked	1. Yes	2. No
4. 24 hour service available	1. Yes	2. No
5. Functioning transport facilities (Ambulance) available	1. Yes	2. No
6. At least three rooms available for maternity service	1. Yes	2. No
7. Functional refrigerator for storage of drugs and vaccines available	1. Yes	2. No
8. Mother toilet with shower service available	1. Yes	2. No
Basic equipments and supplies in the delivery room		
1. Functional Blood pressure apparatus available	1. Yes	2. No
2. Functional Oral or axillary Thermometer available	1. Yes	2. No
3. Functional Stethoscope available	1. Yes	2. No
4. Functional Fetal stethoscope available	1. Yes	2. No
5. Functional Baby weighing scales available	1. Yes	2. No
6. Sterilizers (autoclave or dry oven) available	1. Yes	2. No
7. Personal protective equipments (at least mouth mask, boots, delivery gown, apron, sterile glove) available	1. Yes	2. No
8. Antiseptics (soap, chlorine solution, alcohol, iodine)	1. Yes	2. No
9. Container for infection prevention (decontamination container, safety box, covered contaminated waste bin) available	1. Yes	2. No
10. Functional movable delivery light available	1. Yes	2. No
11. Functional Vacuum extractor available	1. Yes	2. No
Essential obstetric equipments (absolute minimum equipments for delivery)		
1. Two sterilized delivery sets (cord scissors, cord tie, two artery forceps) available	1. Yes	2. No
2. Episiotomy set (catgut, one tissue forceps, one needle holder, one scissor/blade) Available	1. Yes	2. No
Consumable supplies		

1. IV set and Cannula available	1. Yes	2. No
2. Folly catheter available	1. Yes	2. No
3. Blank partograph available	1. Yes	2. No
4. HIV test kit available	1. Yes	2. No
5. IV fluid (normal saline) available	1. Yes	2. No
Emergency drugs for maternal care available		
1. Oxytocin drug available	1. Yes	2. No
2. Antibiotics (at least Ampicillin, Gentamicin and Metronidazole) available	1. Yes	2. No
3. Anticonvulsant drugs (at least Magnesium sulfate(MgSo4)) available	1. Yes	2. No
4. Antihypertensive drug (Hydralazine) available	1. Yes	2. No
Essential Newborn care equipments and drugs		
1. Newborn resuscitation materials (at least Bag and mask, mucus extractors, mask) available	1. Yes	2. No
2. At least two towel to dry and warp baby after delivery available	1. Yes	2. No
3. Functional incubator (enough light or radiant warmer) available	1. Yes	2. No
4. Vitamin K available	1. Yes	2. No
5. Tetracycline (TTC) eye ointment available	1. Yes	2. No
Functioning Laboratory service		
1. Basic blood and Urine analysis test available (Hgb or Hct, WBC count, ABO blood group and Rh test, malaria and HIV tests, Urine analysis like protein urea,	1. Yes	2. No
Human resource for maternity service available		
2. At least three midwife available at Health Center or at least 13 midwives at hospital (adequacy of SBAs)	1. Yes	2. No
3. Skilled birth attendance(SBAs) readiness (available and properly dressed at delivery room)	1. Yes	2. No
4. All SBAs in the facility trained to manage obstetric complication	1. Yes	2. No
5. At least one SBA in the facility trained to manage neonatal resuscitation	1. Yes	2. No

Facility Case Summary Form for EmONC practice (Data extraction)

	B. Emergency Obstetric utilization past 3 months prior to study periods: using record review Yes/noquestions using record review at health facility (n=5); total 9 items		
1	Parenteral antibiotics administered	1. Yes	2. No
2	Parenteral oxytocin administered	1. Yes	2. No
3	Parenteral anticonvulsants administered	1. Yes	2. No
4	Manual removal of placenta done	1. Yes	2. No
5	Removal of retained products (e.g., manual vacuum aspiration) done	1. Yes	2. No
6	Assisted vaginal delivery (e.g., vacuum extraction, breech delivery) done	1. Yes	2. No
7	Newborn resuscitation done	1. Yes	2. No
8	Blood transfusion done	1. Yes	2. No
9	Caesarian delivery (operative delivery) conducted	1. Yes	2. No

Current EmOC Status: (If yes to all questions 1-9, the facility provides Comprehensive EmOC. If yes to Q1-7, but no to Q8 and/or Q9, the facility provides Basic EmOC. If NO to any of questions Q1- 9, the facility is Non-EmOC.)	1. Comprehensive EmOC 2. Basic EmOC 3. Non-EmOC	
In the 12 months, how many obstetric caseswere referred: (2014E.C)	To this facility & treated? _____	
	From this facility referred?	

Thank you very much for your Cooperation!

Annex 4: Questionnaires for process Component

Instructions: Observe provider giving care to women in labour and/or delivery room in a given facility			
Part I. Characteristic of healthcare professional			
101	Health care provider proffession to be observed	1. Midwife BSc 2. Midwife diploma 3. Nurse BSc 4. Nurse diploma	5. Health Officer 6. Doctor 7. Student (MSc, MD) 8. Other_____
102	Sex of healthcare professional	1. Male	2. Female
103	Working experience (if student fill '0')	_____Year	
104	Maritat status	…….	
105	Observation takes place during	1. Day time 2. Night time	1. Working day (Monday - Friday) 2. Weekend (Saturday & Sunday)

Table 1: Lists of variables used in measuring stages in Intrapartum and immediate postpartum quality in public health facility Wolkite town southern Ethiopia

Variables used to measure stage of quality intrapartum care:	**Observed**	
A. During Admission:		
Provider greets the woman and her companion (if present) in a cordial manner	Yes	No
Provider responds to mother immediate needs (thirst, hunger, cold/hot, need to urinate,	Yes	No
Provider ask mothers name	Yes	No
Provider ask her age	Yes	No
Provider ask about number of previous pregnancies/births	Yes	No
Provider ask any complications during labour and postpartum period	Yes	No
Provider ask other general medical problems	Yes	No
Provider ask use of medications	Yes	No
Provider ask about her HIV status	Yes	No
Provider estimate gestational age using last menstrual period	Yes	No
Provider ask mothers how frequently labour are occurring	Yes	No
Provider ask if her membranes ruptured: when, what color and what smell it had	Yes	No
Provider ask mothers whether she feels the baby's movements	Yes	No
Provider ask mothers when the painful regular contractions began	Yes	No
Provider ask mothers whether she has experienced vaginal bleeding, fever, severe headaches, blurred vision, convulsion, or if any other problems the client is concerned	Yes	No
Provider performs HIV test if status unknown	Yes	No
Provider records the information on clinical history chart	Yes	No
Ensures privacy with screen or curtain to separate the women from others at least during Examination	Yes	No
Washes hands with running water and soap for 10-15 seconds and dries with an individual clean towel or allows hands to air dry	Yes	No
Explain each step	Yes	No
At least one encourage the woman to ask questions	Yes	No
Respond to the woman/ companion questions politely and in respectful manner	Yes	No
B. First stage of labour:		
Providers takes mother temperature	Yes	No
Provider takes mother pulse	Yes	No
Provider measures mother blood pressure	Yes	No
Provider determines mother respiratory rate	Yes	No
Provider measures mother fundal height	Yes	No
Provider determines fetal lie and presentation	Yes	No

Provider identifies degree of decent by abdominal palpation (from five to zero fingers above the pubis)	Yes	No
Provider evaluates uterine contractions (frequency and duration over a 10- minute period)	Yes	No
Provider Auscultates foetal heart rate (FHR)	Yes	No
During physical examination, providers:		
Puts sterile gloves on both hands	Yes	No
Carefully inserts two fingers of the exam hand	Yes	No
Assess cervical examination	Yes	No
Gloves are removed after being immersed in 0.5% chlorine solution and placed in a leak-proof container	Yes	No
Records all information on the clinical records	Yes	No
Provider start partograph to follow progress of labour	Yes	No
Infection prevention practice of providers:		
Cleanse the vulva with antiseptic solution before performing vaginal examination	Yes	No
Performs limited vaginal examination (e.g, every four hours or indicated)	Yes	No
Uses sterile gloves when performing vaginal examination or when in contact with body fluids	Yes	No
Rupture of membranes is not performed routinely	Yes	No
Provider prepares to assist the birth:		
Has the delivery pack and other essential material and ready to assist the delivery (delivery set, episiotomy set, newborn resuscitation set, glove, delivery gown, apron, mask)	Yes	No
Prior to delivery, washes hands with running water and soap for 10-15 seconds and dries an individual clean towel or allows hands to air dry	Yes	No
Puts sterile double gloves on hands	Yes	No
Provider:		
At least once encourage woman to walk around	Yes	No
At least once encourage the woman to change position according to the desire and comfort	Yes	No
At least once encourage the woman to take light food or drink fluid in labour	Yes	No
Allow the woman to have her preference companion at labour room	Yes	No
Provide emotional support to woman during labour and delivery	Yes	No
At least once encourages her to empty her bladder	Yes	No
C. Second stage of labour: provider		
Holds the baby by the trunk and places the baby on a clean dry towel on the mother's Abdomen	Yes	No

Dries baby vigorously and changes wet towel for a clean dry one	Yes	No
Ties or clamps cord when pulsations stop, or by 2-3 minutes after birth (no immediately after birth)	Yes	No
Cuts/clamps the umbilical cord using sterile scissors under gauze to prevent blood spurting	Yes	No
If the baby is breathing normally, passes the baby to mother for skin-to-skin contact on breast	Yes	No
Note the time of birth and records on partograph or in other records	Yes	No
D. Third stage of labour: provider,		
Palpate the mother's abdomen to rule-out the presence of a second baby	Yes	No
Tells the woman that she will receive an injection and administers 10 IU of oxytocin IM or 600 mcg misoprostol orally within 1 minute of delivery	Yes	No
Place the other hand on the women's symphysis pubis (over the sterile towel)	Yes	No
Maintain firm traction on the cord and waits for the uterus to contract	Yes	No
Upon contraction, applies firm and sustained downward traction on the cord with counter traction above the pubis to guard the uterus, until the placenta is expelled	Yes	No
If this maneuver does not provide immediate results, stops applying traction, holding the cord and clamp until the next contraction	Yes	No
Repeats control cord traction during contraction while simultaneously applying counter traction above pubis to guard uterus	Yes	No
With both hands, assists in the expulsion of the placenta by turning it over in the hands without applying traction twisting the membranes	Yes	No
Massage the uterus with one hand one sterile cloth over the abdomen until it contracts firmly	Yes	No
Checks to see whether the placenta is complete (maternal and foetal sides, plus membranes, lobs)	Yes	No
E. Immediate postpartum periods: provider,		
Make sure that the woman is comfortable (clean, hydrated and warmly covered)	Yes	No
Ensures that the baby is well covered	Yes	No
Administer vitamin K to newborn	Yes	No
Provides tetracycline eye ointment 1% prophylaxis to newborn	Yes	No
Observe breast feeding initiated within the first hour after birth	Yes	No
Weight the baby	Yes	No
Discards the placenta in a leak-proof container with a plastic liner	Yes	No
Disposes of medical waste (gauze, etc) in a plastic container with a plastic liner	Yes	No
Puts the soiled linen in a leak-proof container	Yes	No
Places all reusable instruments in a 0.5% chlorine solution for 10 minutes	Yes	No
Disposes needle and siring in a puncture-resistance container, without removing,	Yes	No

recapping or breaking the needle		
Gloves are removed after being immersed in 0.5% chlorine solution and placed in a leak-proof Container	Yes	No
Washes hands with running water and soap for 10-15seconds and dries with an individual clean towel or allows hands to air dry	Yes	No
Provider monitors the mother and newborn after birth:		
Baby's breathing condition and breastfeeding	Yes	No
Vaginal bleeding	Yes	No
Bladder distension	Yes	No
Blood pressure	Yes	No
Uterine contraction	Yes	No
Pulse	Yes	No
Consciousness	Yes	No
Assists the woman with breastfeeding	Yes	No
Asks the woman if she has urinated and encourages her to do so whenever she wishes	Yes	No
Records the information on the women's clinical record and reports any abnormalities	Yes	No

Table 2: Lists of variables used in measuring quality of newborn care during immediate postpartum quality in Wolkite public health facility southern Ethiopia

Qno.	Observe whether skilled birth attendant do the following after birth for the newborns	Response (observed)	Remark
	Skilled personnel:		
1	Dries newborn baby vigorously and change wet towel immediately after birth	1. Yes 2. No	
2	Evaluate breathing of newborn	1. Yes 2. No	
3	Tie or clamp cord after 2-3 minute of birth	1. Yes 2. No	
4	Ensure the baby is covered	1. Yes 2. No	
5	Ensure the baby is in skin to skin contact with mother	1. Yes 2. No	

6	keep newborn in the same room with mother	1. Yes 2. No	
7	Ensure baby is start breastfeeding within 1 hour	1. Yes 2. No	
8	Administered TTC eye ointment	1. Yes 2. No	
9	Administered vitamin K	1. Yes 2. No	
10	Weight the newborn baby	1. Yes 2. No	
11	Check newborn breathing and breast feeding status every 15 minutes	1. Yes 2. No	

Table 3: Lists of variables used in measuring friendly mother and newborn care in public health facility Wolkite town southern Ethiopia

Qno	**Observe whether skilled birth attendant do the following after birth to mother and newborns**	**Response (observed)**	**Remark**
1	Ensure privacy during labour	1. Yes 2. No	
2	No physical emotionally and verbally abused		
3	Evidence based practice (eg. Limited vaginal examination and no rupture of member routinely)	1. Yes 2. No	
4	Adopt preferred position to mother during labour		
5	Allow fluid or light food during labour	1. Yes 2. No	
6	Allow preferred birthing partner	1. Yes 2. No	
7	Skin to skin mother baby care	1. Yes 2. No	
8	Early breast feeding with in 1 hr	1. Yes 2. No	
9	Affordable or free maternity care	1. Yes 2. No	

Table 4: List of questions used to measure completeness of partograph during the progress oflabour

s.no	The provider uses the partograph to monitor labour: observe, whether the provider completes partographconsistently	Response		Remark
A	**Records partograph information consistently**			
1	Records fetal heart rate every half hour	1. Yes	2. No	
2	Records maternal pulse rate every half hour	1. Yes	2. No	
3	Records strength and frequency of uterine contraction every 30min	1. Yes	2. No	
4	Records Blood pressure every four hours	1. Yes	2. No	
5	Records temperature every four hours	1. Yes	2. No	
6	Records vaginal examination every four hours	1. Yes	2. No	
7	Records fetal descent/station every four hours	1. Yes	2. No	
8	Records cervical dilatation and position every four hours	1. Yes	2. No	
9	At every vaginal examination checks amniotic fluids and status of membrane	1. Yes	2. No	
10	At every vaginal examination checks the degree of Molding	1. Yes	2. No	
B	**Records partograph information completely**			
11	Records client name, gravid and parity	1. Yes	2. No	
12	Date and time of admission	1. Yes	2. No	
13	Records time of rupture of membrane	1. Yes	2. No	
14	Records all drugs, IV fluids she is taking	1. Yes	2. No	

Thank you very much for your cooperation!!!

Annex: 5 Questionnaires for outcome component

Tools for Facility based survey to measure maternal satisfaction exit interview

Part I: socio demographic characteristics

	Zone	Woreda	Kebele	Name of health facility	
Name					
Identification					

Q101	Age	--------yrs	
Q102	Residence	1. rural 2. Urban	
Q103	Religion	1. Orthodox 2. Muslim 3. Protestant 4. Catholic other 5. 5.other	
Q104	Ethnicity	1. Gurage 2. Amhara 3. Oromo 4. Other	
Q105	Marital status	1. Single 2. Married 3. Divorced 4. Widowed 5. other	
Q106	Educational status	1. reading and writing 2. 2. Primary 1-8 3. Secondary 9-12 4. College/university	
Q107	Occupational status	1. Student 2. Daily labour 3. Private 4. Employer 5. Farmer 6. House wife	
Q108	Economic status(monthly)	……birr	
Q109	Family economic status(monthly)		

Part II Reproductive related

Q201	First marriage age		
Q202	Number of pregnancy		
Q203	First child birth age		
Q204	Alive child birth		
Q205	Current alive children		
Q206	Children less than 5 years		
Q207	Number of family members		
Q208	Abortion history	1. Yes 2. No if yes	
Q209	How many times		
Q210	Will you have additional children in the future	1. Yes 2. No	
Q211	If yes how many		
Q212	Does deliver in health facility previously		
Q213	If yes how many pregnancy		

Part III current pregnancy related

SB23	For how many time Current pregnancy		
SB24	Does pregnancy is planned		
SB25	Do have ANC follow up for current birth		
SB25	If yes for how many times		
SB27	Type of health facility for ANC follow up	1. Health center 2. Hospital 3. Both 4. private clinic	
SB28	Mode of current delivery	1. SVD 2. 2. CS 3. Instrumental assisted delivery	
SB29	How come to this health facilities	1. I heard from other mothers 2. Self 3. Refer from HC 4. Refer from other Hospital 5. Refer from private clinic	
SB30	Transportation	1. Ambulance 2. Self-transport	

		3. On foot	
	Part IV. maternal satisfaction with current service		
SQ1	There was functional triage system of the facility starting from the get (Labouring mothers go directly to labour ward before any administrative procedure)	1. Strongly disagree 2. Disagree 3. Neither agree/disagree 4. Agree 5. strongly agree	
SQ2	Mother gets proper answer for her question (give appropriate answer for her question after listening)	1. Strongly disagree 2. Disagree 3. Neither agree/disagree 4. Agree 5 . strongly agree	
SQ3	Get informed consent before any procedure (about the advantage and disadvantage)	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ4	Mother gets respect and dignity through- out labour and delivery services	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ5	Get appropriate counseling about breast feeding, immunization, family planning, danger sign and hygiene before discharged from hospital	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ6	Health care provides properly introduced their name, duties and responsibilities during labour and delivery	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ7	waiting time is fair	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ8	Get the delivery room easily without difficulty starting from the get	1. Strongly disagree 2. Disagree 3. Neither agree/disagree	

		4. Agree 5. strongly agree	
SQ9	In the delivery room I get toilet shower and hand wash sink	1. Strongly disagree 2. Disagree 3. Neither agree/disagree 4. Agree 5. strongly agree	
SQ10	Deliver room was clean	1. Strongly disagree 2. Disagree 3. Neither agree/disagree 4. Agree 5.strongly agree	
SQ11	Get Privacy during labour and delivery in the delivery room (during examination and child birth)	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ12	Respect Delivery Position(I got the permission of for my choice for labour and delivery)	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ13	I get permission to be visited by my preference family members in the delivery room (Accompany)	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ14	Get anti pain during labour and after delivery to relive the pain	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ15	Get the card immediately while arriving the hospital without any difficulty and delay	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ16	Immediately while arriving the hospital examined by healthcare professional (Full Hx is taken and All the necessary examination/procedure is performed)	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	

SQ17	Get bed immediately while arriving at delivery room	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ18	Lab tests available in the hospital (during pregnancy or labour)	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ19	All ordered/prescribed drugs and materials are available in the hospital for labour and delivery purpose (glove ,fluid)	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ20	Recommend for other to come to the hospital for delivery service	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	
SQ21	I satisfied on overall service given in this health facility	1. Strongly disagree 2. Disagree 3.Neither agree/disagree 4. Agree 5. strongly agree	

Thank you very much for your Cooperation!

Annex 6: Amharic Version Questionnaires

የወለዱእናቶችከሆስፒታልከመውጣታቸውበፊትሊነ

በብላቸውይገባልእደምንአደሩ/እደምንዋሉ. ስሜ

የዚህጥናትአላማ፡- ይህጥናት
በሆስፒታሎችየሚሰጠውንየወሊድአገልግሎትጥራትለመዳሰስሲሆ
ን፤፤የዘህመ
ወያያመምሪያዋነኛአላማውደግሞእናቶችበሆስፒታልስለሚሰጠውየወሊድአገልግሎትጥራትያላቸውንል
ምድ፣ግንዛቤእናተሞክሮለመዳሰስይሆንል

. አካሄድ፡-
ይህንመረጃለመሰብሰብእርሰዋንየጥናቱአካልበማድረግጠርተናል
ፈቃደኛከሆኑ
መጀመራያሀሳቡንልትረዱትእናየስምምነትውልልትሰጡኝይገባል፤፤ፈቃደ
ኛከሆኑበዚህሆስፒታልስላገኙ
ትየወሊድአገልግሎትአንጠይቃቸሆለን፤፤ለዚህጥናትመረጃበመስጠትበ
መሳተፈዋትየሚደርስበዋጉዳትሰ አተወንከመሻማት(10-20 ደቂቃ)
በስተቀርምንምጉዳትየለም

.ጥቅምንበተመለከተበዚህጥናትበመሳተፈወትመንምአይነትክፈያየለውምይሁንእንጂለወደፊትበቀትታም
ሆነበተዘዋዋሪእርሰዋምሆነ፣ቤተሰበዋትአልፎምማህበረሰቡየወሊድአገልግሎትተጠቃሚእደመሆናችሁ
መጠንተጠቃምትሆናላችሁ

.ሚስጥርነቱየተጠበቀነው፡-
ለዚህጥናትየሚሰጡንመረጃሚስጥርነቱበአስተማማኝሁኔታየተጠበቀነው፤፤ይህምመረጃመስጫውቅጽስ
መወትአይገለጽምበፈንታውመለያምልክትበመስጠትነውየምንጠቀመውእንዲሁምየተሰበሰበውመረጃበቁ
ልፍታሽጎበመቀመጥከዋንውተመራማሪበስተቀርማንምሊጠቀምበት/ ሊያየውአይችልም፤፤

የተሳታፊውመብት፡-
እርሰዋበማንኛውምሰአትመረጃለመስጠትየማቆረጥመብተወትየተጠበቀነው፤በማቆረጠወትምማንምሊ
ጎ
ዳዋትአይችልም፤፤እንዲሁምሁሉንመጠይቅየመመለስግዶታየለበወትምበሙልእረፍትእ
ወሰዱየመመለስ መብተወምየተጠበቀነው

ተጠሪ፡-
ማንኘማውንምተጨማሪስለምርምሩመረጃቢያስፈልገወትከዚሁበታች
ስማቸውየተጠቀሰውንሰውማንገር ይችላሉ
Berhanu Semre 0926943642
, E-mail: brishsem@gmail.com

መመሪያ:ለተጠየቁትጥያቄዎችየተመለሱትንአማራጭክበብእንዲሁምበጽሁፍየሚመለ
ስትንበተቀመጠ ውቦታበመጻፍአስቀምጡ

የስምምነትቅጽ
አሁንእሚጠይቁኝነገ
ርአለዋትስለጥንቱ
መጀመርእችላለ
ሁ

2. ተስማምቻለሁ ---------- መቀጠልይቻላልአልስማማም

- አቁም

መረጃሰብሳቢስም : _____ ፊርማ_____ቀን
የተቆጣጣሪስም_____ፊርማ_____ቀን

ዞን	ቀረዳ	ቀበሌ	የሆስፒታሉስም	
ስም				
መለያ	ማዋለጃ_____	ድሁረወሊድ_____ _____		

ክፍልአንድI: ማሁበራዊናስነ- ህዝብመረጃ.			
መለያ	መጠይቅ	መልስ	
Q101	እድሚሽ/ዎትበዓመትስንትነው?	_____ዓመት	
Q102	የመኖሪያቦታ	1. ገጠር 2. ከተማ	
Q103	ሀይማኖት	1. ዖርቶዶክስ 4. ካቶሊክ 2. ሙስሊም 5. ሌላካለይገለጽ_____ 3. ፕሮቴስታንት	
Q104	ብሔር	1. አማራ 2.አገው 3. ትግሬ 4. ሌላካለይገለጽ_____	
Q105	የጋብቻሁኔታ	1. ያላገባች 4. የፈታች 2. ያገባች 5. ሌላካለይገለጽ_____ 3. የሞተባት	
Q106	የትምህርትሁኔታ	1. ማንበብእናመጻፍየማይችሉ4. 9-12ክፍል 2. ማንበብእናመጻፍየሚችሉ 5. ኮሌጂ/ዩኒቨርስቲየደረሱ. 3. 1-8 ክፍል	

Q107	የስራሁኔታ	1. ተማሪ6. የቀንሰራተኛ 2. የግልስራ7. ገበሬ 3. የመንግስትተቀጣሪ8. ሌላካለይገለጽ_____ 4. መንግስታዊያልሆነተቀጣሪ 5. የቤትእመቤት	
Q108	ያንች/የርሰዎየወርገቢበአማካኝስንትነው	_____የኢትዩጵያብር	
Q109	የቤተሰቡየወርገቢበአማካኝስንትነው	_____የኢትዩጵያብር	
ክፍል -ሁለት: ስነተዋልዶንየተመለከተመረጃ			
Q201	ለመጀመሪያጊዜባልሲያገቡእድሜዎስንትነበር	_____ዓመት	
Q202	ምንያክልእርግዚናነበረዎ	----------	
Q203	የመጀመሪያልጂዎንሲወልዱእድሜዎስንትነበር	_____ዓመት	
Q204	በሂወትየወለዶቸውልጆችቁጥርስንትነው		
Q205	አሁንበሂዎትስንትልጆችአሉዎት		
Q206	ከአምስትዓመትበታችያሉልጆችቁጥርስንትነው		

Q207	የቤተሰብቁትር		
Q208	ውርጃኑሮዎያውቃል	1. አዎ 2. የለም...መልሱየለምከሆነወደ	
Q209	አዎካሉምንያክልጊዜ	_____	
Q210	ወደፍትተጨማሪልጂእዲኖረዎትይፈልጋሉ	1. አዎ 2. የለም...መልሱየለምከሆነወደ	
Q211	አዎካሉምንያክል	_____	
Q212	በሂዎተወልጂሞቶበወትያውቃል	1. አዎ 2. የለም...መልሱየለምከሆነወደ	
Q213	አዎካሉምንያክል	_____	
Q214	በጤናተቆምክዚህልጂበፊትወልደውያውቃሉ	1. አዎ2. የለም 3. የመጀመሪያእርግዚና	
Q215	አዎካሉስንትእረገዝና	_____	
	ክፍልሦስት. የአሁኑንእርግዚናየተመለከተመጠይቅ		
Q301	ይህስንተኛዕርግዝናዎነወ?	1. አዎ *2.* የለም	

Q302	እርግዚናውየታቀደነበር?		
Q303	አሁንለተወለደውልጂየእርግዚናክትትልነበረዎ?	1. አዎ 2. የለም	
Q304	አዎካሉምንያክልጊዜተከታትለውነበር?	_____	
Q305	የእርግዝናክትትልያደረጉትየትኛውጤናተቆምነበር	1. ጤናጣቢያ 2. ሆስፒታል	
Q306	በየተኛውመንገድነውልጅየተገላገሉት	1በተፈጥሮአዊመንገድ 2.በመሳሪያየተደገፈበተፈጥሮአዊመንገድ 3. በቀዶሕክምና	
307	ወደእዚህጤናተቋምእንዴትመጡ	1.ከዚህበፊትበዚህተቋምአገልግሎትካገኙእናቶችበመስ ማት 2. በራሴምርጫ 3. ከጤናጣቢያሪፈርተደርጌ 4. ከሌላየመንግስትሆስፒታልሪፈርተደርጌ 5. ከግልየህክምናተቋምሪፈርተደርጌ	

308	ወደእዚህጤናተቋምበምንአይነትትራንስፖርትመጡ?	**1**.በአንቡላንስ 2.በግልትራንስፖርት	

	ክፍል ***4*** እንቶችን በሆስፒታሉ ስላገኙት የወሊድ አገልግሎት ያላቸውን እርካታ የሚዳስስ መተይቅ		
	የሠራተኞችአቀባበልእናአግባቦት**/**ኮሚኒኬሽን		
Q401	የጤናተቋሙየአቀባበልሥርዐትከመግቢያውጀምሮ መ ልካምነበር?	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
Q402	በወሊድወቅትለነበሩኝጥያቄዎችባለሞያዎቹአዳምጠው በቂማብራሪያሰተውኛል	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ	

		4. እስማማለሁ 5. በጣምእስማማለሁ	
Q403	በምጥእናበወሊድወቅትለሚደረግልኝሕክምናጥቅምና ጉዳትየጤናባለሞያዎቹማብራሪያሰጥተውኝፈቅጄናተስማምቼግልጋሎቱንአግኝቻለሁ	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
Q404	በወሊድጊዜየጤናባለሞያዎቹበአክብሮትአስተናግደው ኛል	1. 1በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
Q405	ከወሊድበኋላስለጡትአጠባብ፣ክትባት፣የወሊድመከላከ ያእናሌሎችምክሮችንከጤናባለሞያዎቹተነግሮኛል	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	

Q406	በወሊድወቅትጤናባለሙያዎቹእራሳቸውንበአግባቡአስተዋውቀውኛል	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
	<u>የክፍሎችእናየአገልግሎትአሰጣጥምቹነት</u>		
Q501	ከመግቢያውጀምሮየማዋለጃክፍልንለማግኘትእናወደክፍሉለመጓጓዝአልተቸገርኩም	1. 1በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
Q502	በማዋለጃክፍሉየዕጅ፣የገላመታጠቢያናየመፀዳጃአገልግሎቶችማግኘትችያለሁ	1. 1በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ	

		5. በጣምእስማማለሁ	
Q503	የማዋለጃክፍሉአጠቃላይየንጽህናሁኔታጥሩነበር	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
Q504	በምጥናበወሊድምርመራወቅትአገልግሎትሳገኝየነበረ ውከፈቀድኩትሰውውጪሳይገባናበተከለለቦታነበር	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
Q505	በምጥእናበወሊድወቅትእንድንቀሳቀስናበተመቸኝእናበ ፈለኩትየወሊድአኳኋን (ተኝቼ፣ቆሜ፣ተቀምጬ፣ወዘተ…) እንድሆንተፈቅዶልኝነበር	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
Q506	በምጥ እና በወሊድ ወቅት የቤተሰብ አባል ከጎኔ እንዲሆን ተፈቅዶልኛል	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	

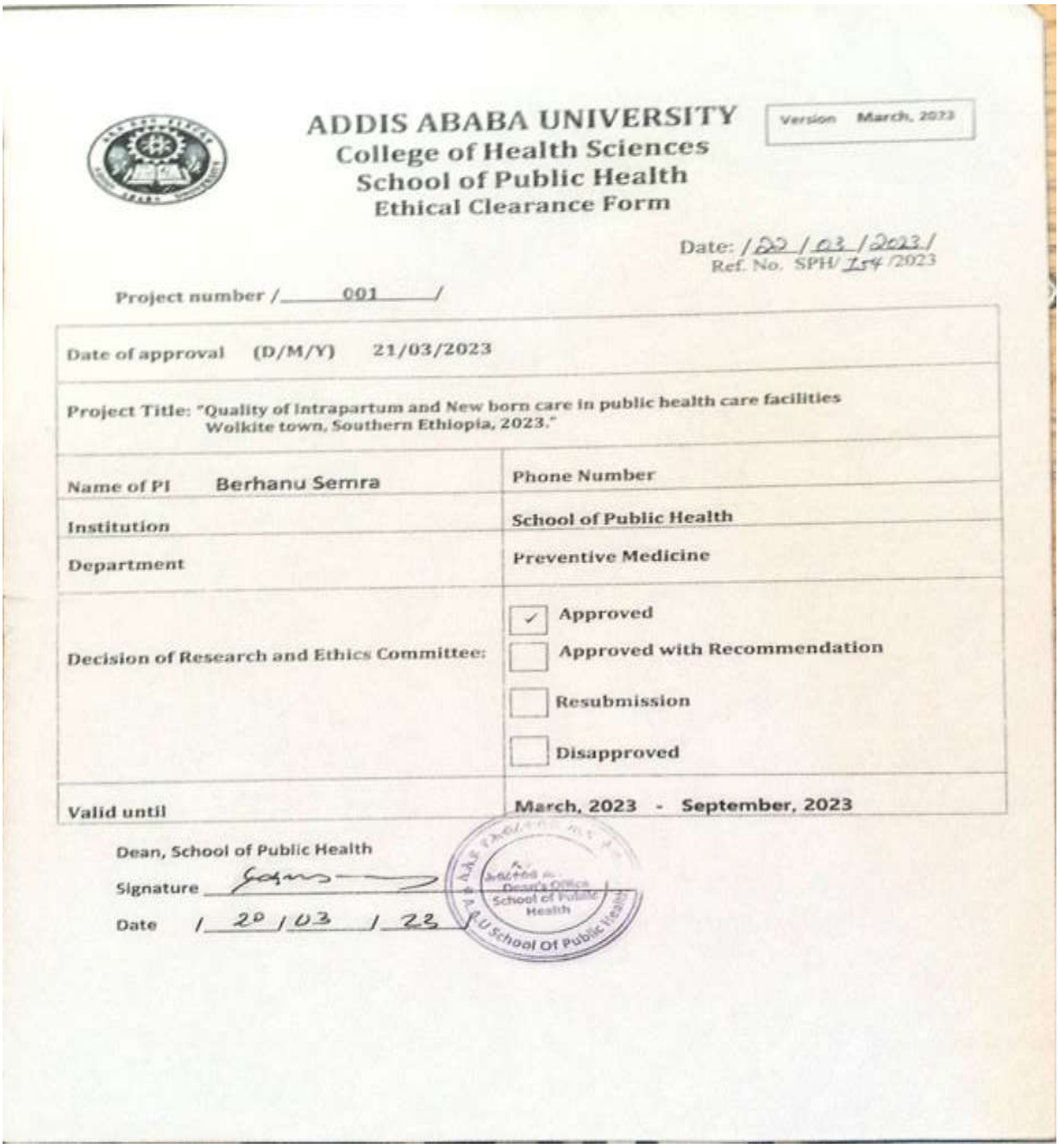
Q507	በወሊድ እና ከወሊድ በኋላ ህመም በሚሰማኝ ወቅት የሕመም ማስታገሻ እርዳታ ተሰጥቶኛል	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
	አገልግሎት አሰጣጥ		
Q601	ሆስፒታል ገብቼ ካርድ እንዳወጣ ሳልጠየቅ ቀጥታ ወደ ማዋለጃ ክፍል በመሄድ አገልግሎት አግኝቻለሁ	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	

Q602	ጤና ተቋሙ ቅጥር ግቢ ለወሊድ ከገባሁ በኋላ በባለሙያ በፍጥነት ታይቻለሁ	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
Q603	ጤና ተቋም ቅጥር ግቢ ከገባሁ በኋላ አልጋ በፍጥነት አግኝቻለሁ	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
Q604	በጤና ተቋሙ ቆይታዪ የታዘዘልኝን የላቦራቶሪ፣ የራጅ እና አልትራ ሳውንድ ምርመራዎች በተቋሙ	1. በጣምአልስማማም 2. አልስማማም	
	አግኝቻለሁ	3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
Q605	በጤና ተቋሙ ቆይታዪ የታዘዘልኝን መድሀኒት እና ሌሎች የህክምና መገልገያ ግበአቶች (ጓንት፣...) በተቋሙ አግኝቻለሁ	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
	የአገልግሎት ወጪ		
Q701	በጤና ተቋሙ ቆይታዎ ወቅት የአገልግሎት ክፍያ ተጠይቀው ነበር	1. አዎ 2. አልተጠየኩም	

Q702	ክፍያው ተመጣጣኝ ነው	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	
Q703	ክፍያ ከፈፀሙ ክፍያው የፈጸሙበት ምክንያት ይግለፁ	----------	
	<u>ማጠቃለያ መጠይቅ</u>		
Q704	በዚህ ጤና ተቋም ቤተሰቤ ወይም ጓደኛዪ መጥተው የወሊድ አገልግሎት እንዲያገኙ እመክራሉ	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ	

		4. እስማማለሁ 5. በጣምእስማማለሁ	
Q705	በዚህ ጤና ተቋም አገልግሎት አሰጣጥ በአጠቃላይ ረክቻለሁ	1. በጣምአልስማማም 2. አልስማማም 3. ገለልተኛ 4. እስማማለሁ 5. በጣምእስማማለሁ	

Ethical Clearance and Supportive Letters



ADDIS ABABA UNIVERSITY
College of Health Sciences
School of Public Health
Ethical Clearance Form

Version March, 2023

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Ref. No. SPH/ 154 /2023

Project number / 001 /

Date of approval (D/M/Y) 21/03/2023	
Project Title: "Quality of Intrapartum and New born care in public health care facilities Wolkite town, Southern Ethiopia, 2023."	
Name of PI Berhanu Semra	Phone Number
Institution	School of Public Health
Department	Preventive Medicine
Decision of Research and Ethics Committee:	✓ Approved ☐ Approved with Recommendation ☐ Resubmission ☐ Disapproved
Valid until	March, 2023 - September, 2023

Dean, School of Public Health
Signature
Date / 20 / 03 / 23 /

Dean's Office School of Public Health
AAU School Of Public Health

ADDIS ABABA UNIVERITY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF PUBLIC HEALTH
DEPARTMENT OF HEALTH SYSTEMS
MANAGEMENT AND HEALTH POLICY

አዲስ አበባ ዩኒቨርሲቲ
ጤናሳይንስ ኮሌጅ
የሕብረተሰብ ጤና ትምህርት ቤት
የጤና ስርዓት አስተዳደርና
የጤና ፖሊሲ ትምህርት ክፍል

ቀን14/7/2015 ዓ.ም
ቁጥር/ 535/15

ለ ወልቂጤ ከተማ ጤና ፅ/ቤት

ወልቂጤ

ጉዳዩ፡ ትብብር ስለመጠየቅ

በአዲስ አበባ ዩኒቨርሲቲ የሕብረተሰብ ጤና ት/ቤት Health service management ትምህርት ክፍል የድህረ ምረቃ ተማሪ የሆኑት ብርሃኑ ስምሪ " **Quality of intrapartum and new born care in public health care facilities wolkite town. Southern Ethiopia 2023** ".በሚል ርዕስ በመስራት ላይ ይገኛሉ። ስለሆነ በትምህርት ክፍሉ የድጋፍ ደብዳቤ እንድንጽፍላቸው በጠየቁት መሰረት በእናንተ በኩል አስፈላጊው ትብብር እንዲደረግላቸው ስንል እንጠይቃለን።

ከሰላምታ ጋር

Addis Ababa University
Department of Reproductive Health & Health Service Management
School of Public Health
ዶ/ር መስፍን አዲሴ
College of Health

በጉራጌ ዞን የወልቂጤ ከተማ
አስተዳደር ጤና ጥበቃ ጽ/ቤት
Gurage zone wolkite
City administration health Office

ቁጥር ወከአ/ጤ/ጥ/ጽ/ቤት 1/.../2015
Ref.No
ቀን 26/07/2015 ዓ.ም
Date

ለ ሁሉም ጤና ጣቢያ

ወልቂጤ፤

ጉዳዩ፦ ለጥናት የሚደረግ ትብብርን ይመለከታል፤

በአዲስ አበባ ዩኒቨርሲቲ የሕብረተሰብ ጤና ትምህርት ቤት Health Service management ትምህርት ክፍል የድህረ ምረቃ ተማሪ የሆኑት ወጣት ብርሃኑ ለምራ "Quality of intrapartum and new born care in public health care facilities wolkite town. Southern Ethiopia 2023". በሚል ርእስ በመስራት ላይ ይገኛሉ። ስለሆነም ለሚያደርጉት ጥናት አስፈላጊውን መረጃ በመስጠት ትብብር እንዲያደርጉላቸው በማለት በማለት የአዲስ አበባ ዩኒቨርሲቲ የሕብረተሰብ ጤና ትምህርት ቤት በቁጥር 535/15 በቀን 04/07/2015 በተፃፈ ደብዳቤ ገልፆልናል። ስለሆነም ከላይ በተገለጸው መሰረት ለሚፈልጉት መረጃ አስፈላጊውን ትብብር ሁሉ እንዲያደርጉላቸው እንገልፃለን።

ሕይወት ለመስጠት ስትል እናት ለምን ትሙት!!

ታደሰ ደግፌ
የስ/ህ/አስ/ልማት ዳይሬክቶሬት ቡድን መሪ

ግ ል ባ ጭ፤

- ለጽ/ቤታችን ኃላፊ ቢሮ
- ለሰው ሀብት አስተዳደር
  ወልቂጤ፤
- ለወጣት ብርሃኑ ለምራ
  ባሉበት፤

☎ 011-3301899 እባክዎ ምላሽ ሲጽፉልን የደብዳቤ ቁጥራችንን መጥቀስዎን አይዘንጉ!!
ትንባሆ ጤናን ይጎዳል!!

ደ/ብ/ብ/ሕ/ክ/መንግስት
የጉራጌ ዞን ጤና መምሪያ
South Nations Nationalities and people's Regional
State Gurage Zone Health Department

ቁጥር ____________
Ref.No ____________
ቀን ____________
Date ____________

ለእማጥ ሆስፒታል

እማጥ!

ጉዳዩ:_ ትብብርን ይመለከታል!

በአዲስ አበባ ዩኒቨርስቲ የህብረተሰብ ጤና ት/ቤት Health service management ትምህርት ክፍል የድህረ ምረቃ ተማሪ የሆኑት ብርሀኑ ስምሬ "Quality of intrapatum and new born care in public health care facilities wolkite town,Southern Ethiopia 2023" በሚል ርዕስ ጥናት በመስራት ላይ ይገኛሉ:: ስለሆነ በትምህርት ክፍሉ የድጋፍ ደብዳቤ እንድንጽፍላቸው በጠየቁት መሰረት በእናንተ በኩል አስፈላጊው ትብብር እንዲደረግላቸው እንጠይቃለን በማለት አዲስ አበባ ዩኒቨርስቲ ጤና ሳይንስ ኮሌጅ በቁጥር 535/15 በቀን 4/07/15 የገለጸልን ስለሆነ በእናንተም በኩል አስፈላጊውን ትብብር እንዲደረግላቸው እናሳስባለን::

እንዲትም እናት በወሊድ ምክንያት መሞት የለባትም!!

ቸሩ አስፋው ግርማንጋ
Cheru Asfaw Girmanga

የጉራጌ ዞን ጤና መምሪያ ኃላፊ
Head of Gurage Zone
Health Department

❖ ለመምሪያ ኃላፊ ቢሮ
ወልቂጤ!

011-330-0994
011-330-0102
011-330-0134
011-330-139
011-330-0013

እባክዎን ምላሽ ሲጽፉ የደብዳቤውን ቁጥር መጥቀስ አይርሱ

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