

**QUALITY OF INTRAPARTUM CARE AT HEALTH CENTRES OF WEST GOJJAM
ZONE, AMHARA REGION, ETHIOPIA**

by

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SUPERVISOR: PROF JM MATHIBE-NEKE

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DECLARATION

I declare that the work titled as **QUALITY OF INTRAPARTUM CARE AT HEALTH CENTRES OF WEST GOJJAM ZONE, AMHARA REGION, ETHIOPIA** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software. The result summary is attached.

I further declare that I have not previously submitted this work, or part thereof, for an examination at UNISA for another qualification or at any other higher education institution.



.....
SIGNATURE

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20 January 2022

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**QUALITY OF INTRAPARTUM CARE AT HEALTH CENTRES OF WEST GOJJAM
ZONE, AMHARA REGION, ETHIOPIA**

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ABSTRACT

Introduction: Ethiopia is among the top five maternal mortality contributors and has high newborn mortality rate and the provision of quality intrapartum care at primary health care units of health centres could reduce maternal and newborn death.

Purpose: the purpose of the study was to assess the quality of intrapartum care, providers' practise of respectful maternity care and clients' satisfaction with intrapartum care at selected rural health centres and to develop strategies to improve the quality of intrapartum care at health centre level.

Method: the researcher selected a convergent parallel mixed methods research design for the study. Twenty-six health centres, 279 labour and delivery clients and 247 post-natal women were enrolled to participate.

The study was conducted in five strands, namely three quantitative, one qualitative, and a Delphi technique to reach consensus on the strategies developed for quality intrapartum care improvement at health centre level.

Result: the study found a 74% overall quality of intrapartum care service provision, 81.4% availability of medical equipment and supplies, and 66.5% quality intrapartum care competency and respectful maternity care, and 74.5% client satisfaction.

Challenges included poor cleanliness of labour and delivery rooms and beds; shortage of water; shortage of incinerators; unsafe waste disposal; shortages of equipment, supplies, and drugs; inadequate staffing; inadequate utilisation of partographs; lack of technical competency, and a loose referral system and feedback.

Strategy development: Based on the findings, the researcher developed strategies to improve quality intrapartum care service at health centre level. Finally, a Delphi panel of experts reached consensus on the final strategies.

Key terms

Client satisfaction; competency; health care providers; mentors; quality intrapartum care; respectful maternity care; strategy; supervisor.

አብስትራክት (ABSTRACT IN AMHARIC)

ኢትዮጵያ ከፍተኛ የእናቶች እና የጨቅላ ህፃናት ሞት የሚመዘገቡበት ሀገር ስትሆን ይህንን የእናቶች እና የጨቅላ ህፃናት ሞት ለመቀነስ ጥራት ያለው የወሊድ አገልግሎት መስጠት ችግሩን ለመቅረፍ እንደሚረዳ ይታመናል።

የጥናቱ አላማዎች፡- በወሊድ አገልግሎት አሰጣጥ ጥራት ላይ ጥናት ማድረግ፣ የጤና ባለሙያዎች የወሊድ አገልግሎቱን አክብሮት በተሞላበት መስጠታቸውን ማጥናት፣ የደንበኞችን እርካታ ማጥናት እና በጤና ጣቢያዎች ደረጃ የወሊድ አገልግሎት ላይ ጥራቱን ለማሻሻል የሚያስችል ስልቶችን መንደፍ ነው።

ተመራማሪው የጥናቱን ዓላማዎችን ለማሳካት የተቀናጀ ትይዩ ድብልቅ የምርምር ዘዴ (convergent parallel mixed methods research design) ተጠቅሟል። በዚህ ጥናት ላይ 26 ጤና ጣቢያዎችን ፣ 279 የወሊድ አገልግሎት በማግኘት ላይ ያሉ እናቶችን እንዲሁም 247 ድህረ ወሊድ በማግኘት ላይ ያሉ እናቶችን በጥናቱ እንዲካተቱ አድርጓል።

ጥናቱ በአምስት መዕራፎች ተከፍሎ የተሰራ ሲሆን የመጀመሪያዎቹ ሶስት ምዕራፎች ኳንቲታቲቭ ሲሆኑ አራተኛው ደግሞ ኳሊታቲቭ እንዲሁም የአምስተኛው ደልፊ ሲሆን ይህ ደልፊ የጥናት ስልት ጥራቱን ለማሻሻል የሚስችል ስልቶችን ለመንደፍ የሚመለከታቸውን የጥናቱ ተሳታፊዎች በስልቱ ላይ ስምምነት እንዲደርሱ አድርጓል።

የጥናቱ ውጤት የወሊድ አገልግሎት ጥራት 74% ሲሆን ፣ ህክምና ዕቃዎችና የግብዓት አቅርቦት 81.4%፣ የጤና ባለሙያዎች ብቃትና አክብሮት የተሞላበት የወሊድ አገልግሎት አሰጣጥ 66.5% እና የወሊድ አገልግሎት ያገኙ እናቶች እርካታ 74.5% ነው።

በወሊድ አገልግሎት አሰጣጥ ወቅት የገጠሙ ተግዳሮቶች ደግሞ በወሊድና ምጥ ክፍሎችና አልጋዎች ላይ የንፁህ ጉድለት፣ የውሀ እጥረት፣ የቆሻሻ ማቃፀጠያ ኢንሲንሬሬተር አጥረት፣ ጥንቃቄ የጎደለው የቆሻሻ አወጋገድ፣ ህክምና ዕቃዎችና የግብዓት አቅርቦት እጥረት፣ የጤና ባለሙያዎች በበቂ ሁኔታ አለመኖር፣ የፓርቶግራፍ አጠቃቀም ክፍተት፣ የጤና ባለሙያዎች የብቃት ክፍተትና የቅብብሎሽ ስርዓቱ የላላ መሆን ናቸው።

የጥናቱን ውጤት መሰረት በማድረግ ተመራማሪው የወሊድ አገልግሎቱ ጥራቱን የጠበቀ እንዲሆን ጥራት የማሻሻያ ስልቶችን ያዘጋጅ ሲሆን፣ ይህንን ጥራት የማሻሻያ ስልት የደልፊ ኤክስፐርቶች የመጨረሻውን ስልት ስምምነት ላይ እንዲደርሱበት ተደርጓል።

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DEDICATION

I dedicate this study to:

*Manalíe Semie, my late mother, for her love, example and faith, and
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and

*Sosina Alemu, my wife, and Bitanya and Siphara, our children, for their
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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Ante Natal Care
BEMOC	Basic Emergency Management of Obstetric Complications
BSc	Bachelor of Science
CAC	Comprehensive Abortion Care
CCT	Controlled Cord Traction
CEMOC	Comprehensive Emergency Management of Obstetric Complications
CFP	Comprehensive Family Planning
CRC	Compassionate Respectful and Caring
CSA	Central Statistical Agency
DRC	Democratic Republic of Congo
EDHS	Ethiopian Demographic and Health Survey
EPHI	Ethiopian Public Health Institute
EPMM	Ending Preventable Maternal Mortality
EPSA	Ethiopian Pharmaceutical supply agency
ENAP	Every Newborn Action Plan
FMHACA	Food Medicine Health Administration and Control Authority
FMOH	Federal Ministry of Health
HSDP	Health Sector Development Program
IM	Intramuscular
IOM	International Office of Migration
IV	Intravenous
MDG	Millennium Development Goal
MOH	Ministry of Health
RHB	Regional Health Bureau
RMC	Respectful Maternity Care
RMNCH	Reproductive Maternal Newborn and Child Health
SARA	Service Availability and Readiness Assessment
SDG	Sustainable Development Goal
SPSS	Statistical Package for Social Sciences
UHC	Universal Health Coverage
UNICEF	United Nation Children Office
WHO	World Health Organization

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Globally, maternal and child health are a major challenge for health systems, particularly in developing countries. A high burden of maternal and child deaths are concentrated in Sub-Saharan Africa and Asia (World Health Organisation [WHO] 2015b:19-20).

This chapter discusses the background to the research problem, the purpose, research design and methodology and significance of the study.

1.2 BACKGROUND TO THE RESEARCH PROBLEM

Ethiopia is one of the most populous Sub-Saharan African countries, with an estimated population of 100 million and more than 80 ethnic groups, and covers 1.1 million square kilometres. Administratively, the country has nine regional states and two city administrations (Central Statistical Agency [CSA] 2017).

Maternal mortality in Ethiopia remains among the highest in the world. Ethiopia is among the six high burden countries for maternal death, along with Afghanistan, Democratic Republic of Congo (DRC), India, Nigeria and Pakistan (WHO, UNFPA, UNICEF, World Bank Group and UN population Division 2015:19). Ethiopia has an estimated 412 maternal deaths per 100,000 live births; infant mortality rate of 48, neonatal mortality rate of 28, child mortality rate of 20, and under-5 mortality rate of 67 per 1000 live births. The contraceptive prevalence rate was 36%, ante natal care (ANC) visit at least once was 62%, deliveries attended by skilled birth attendants was 28%, and births conducted at health facilities was 26% (CSA & ICF 2016:286; Federal Ministry of Health [FMOH] 2016a:160).

Although a 45% and 24% global reduction in maternal and neonatal mortality was achieved between 1990 and 2013, respectively, it did not achieve the Millennium Development Goals (MDGs) target of a reduction of the maternal mortality ratio (MMR) by 75% by 2015 (Moran, Jolivet, Chou, Dalglish, Hill, Ramsey, Rawlins & Say 2016:2; WHO, UNFPA, UNICEF, World Bank Group and UN Population Division 2015). In order to meet the maternal and neonatal mortality target, it is important to increase women's access to quality of care before, during and after childbirth (WHO 2017:29). The quality of health services is critical to achieving effective universal health coverage (UHC) and meeting Sustainable Development Goal (SDG) 3: good health and well-being includes working towards the reduction of the global maternal and neonatal mortality rate to achieve an MMR of less than 70 per 100,000 live births, and an NMR of less than 12 per 1,000 live births by 2030 (United Nations Development Programme [UNDP] 2012). The success and value of UHC depends on its ability to provide quality services to all people, everywhere. Moreover, resilient health services require quality as a foundation (WHO 2013:11-18; WHO, UNICEF, UNFPA & UNAIDS 2017). Neonatal infections in resource-constrained developing countries because of poor infection-control practises have adverse effects on future health-seeking behaviour by communities (Zaidi, Huskins, Thaver, Bhutta, Abbas & Goldmann 2005:1175). The WHO (2015b) emphasises quality of care in Every Newborn Action Plan (ENAP) and Ending Preventable Maternal Mortality (EPMM).

Although Ethiopia has significantly reduced maternal and child mortality, improved family planning utilisation and maternal health indicators, 412 mothers per 100,000 live births still die from pregnancy-related causes. In response, the government of Ethiopia considered maternal health a priority in the *health sector transformation plan, 2016-2020* and in the *health sector transformation plan II, 2020/2021-2024/2025*, with the emphasis on quality and equity (CSA & ICF 2016:286; FMOH 2016a:111; FMOH 2020b:60).

In 2016, a study in Southern Ethiopia found that the institutional birth rate in Ethiopia was among the lowest in the world (Windsma, Vermeiden, Braat, Tsegaye, Gaym, Van den Akker & Stekelenburg 2017:1). Several factors contributed to low service utilisation, including sociodemographic, cultural and communal factors, limited access to health facilities, and poor quality of care in health facilities (Windsma et al 2017:1). The perception that services delivered at health centres were of poor quality led mothers to bypass primary health care centres and seek care from hospitals. Bypassing a midlevel

facility resulted in higher costs and subsequent underutilisation of lower-level health care facilities. This led the Ethiopian Government to upgrade the capacities of rural health centres to provide basic emergency obstetric and newborn care services (Tiruneh, Karim, Avan, Zemichael, Wereta, Wickremasinghe, Keweti, Kebede et al 2018:4).

In order to reduce maternal mortality, there is a need to improve the institutional delivery rate. Uptake of institutional delivery would improve if the quality of the services provided were acceptable to the community.

1.3 STATEMENT OF THE RESEARCH PROBLEM

After the introduction of Ethiopia's health policy in 1993, the Federal Ministry of Health developed the Health Sector Development Plans, which had four 5-year strands (1997-2016). The purpose of the health development plans and strategies was to achieve the Millennium Development Goals (MDGs) and universal health coverage (UHC). At the conclusion of the HSDP, the Ministry of Health introduced the health sector transformation plan of Ethiopia, 2015/2016-2019/2020 and the national health care quality strategy of Ethiopia, 2016 as part of the growth and transformation plans of the country. The HSTP-I had four priorities: transform the quality and equity of health care; information revolution (IR); Woreda transformation, and caring, respectful and compassionate (CRC) health workforce (FMOH 1993; FMOH 2016a:111).

In 2020, the health sector transformation plan II, 2020/2021-2024/2025 was introduced. The HSTP-II has five priority areas: quality and equity; information revaluation; caring, respectful and compassionate (CRC) health care workers; financing, and leadership (FMOH 2020b:66).

In order to realise the transformation agenda, Ethiopia's health system is organised into three tiers, namely primary, secondary, and tertiary levels of care. The primary level of care includes primary hospitals, health centres (HCs) and health posts (HPs). A primary hospital is expected to serve 100,000 people and be a referral point for health centres. A health centre is expected to serve 25,000 in a rural setting and 40,000 in an urban setting, and a health post is expected to serve 5,000 under the direct supervision of a health centre. The secondary level of care is a general hospital, which is expected to serve 1

million to 1.5 million, and the tertiary level of care is a specialised hospital, which is expected to serve 3.5 to 5 million (FMOH 2017:9).

In order to meet the population's health service needs, the government upgraded health facilities, in particular health centres and primary hospitals, to improve health service coverage. The expansion in health facilities coverage in rural areas improved the geographical accessibility of essential services including maternal and newborn services as well as intrapartum care access. Access to intrapartum care should be augmented through improved institutional delivery rates by means of quality intrapartum care to reduce maternal mortality (FMOH 2016a:137-167).

An institutional delivery, including management of labour and delivery by competent health care providers, has a significant impact on averting maternal death. In their study in Amhara region, Yigzaw, Abebe, Belay, Assaye, Misganaw, Kidane, Ademie, Van Roosmalen, Stekelenburg and Kim (2017:261) found that a lack of capacity building training on labour management for service providers of health facilities resulted in inadequate performance improvement. The findings revealed that 72.4% of the participant midwives were competent, 16.5% were incompetent, and 11.1% were outstanding in providing routine intrapartum care.

A baseline evaluation of maternal and newborn health care services in 25 selected Woredas in Amhara, Southern Nations, Nationalities, and Peoples (SNNP), and Oromia regions found that most health centres did not perform all the WHO recommended signal functions due to lack of supplies, drugs and equipment, and trained human resources, and no patient indications to perform some signal functions of BEMOC (Ethiopian Public Health Institute and Ministry of Health [EPHI & FMOH] 2013:42-43).

Moreover, the country has executed quality improvement initiatives at the hospitals and health centers. Those quality improvement initiative outcome has been explored by scholars whereas there was no significant studies undertaken in health centers quality improvement outcome status.

The researcher, therefore, conducted this study at primary health care centres serving 25,000 to 40,000 of the population in West Gojjam Zone of Amhara Region, Ethiopia.

1.4 PURPOSE OF THE STUDY

The purpose of the study was to assess the quality of care, providers' practise of respectful maternity care, and clients' satisfaction with the intrapartum care at health centres and to develop strategies to improve the quality of intrapartum care at health centre level.

1.5 OBJECTIVES OF THE STUDY

In order to achieve the purpose, the objectives of the study were to:

- Develop strategies to improve the quality of intrapartum care at health centre level in West Gojjam Zone, Amhara Region.
- Assess women's perspectives on the perceived quality of intrapartum care received in West Gojjam Zone, Amhara Region.
- Determine the practise of health care providers regarding respectful maternity care and its determining factors during normal childbirth in West Gojjam Zone, Amhara Region.
- Investigate the quality of the care provided to women during the intrapartum period during normal childbirth.
- Explore the views and challenges of health care providers and supervisors in the implementation of quality of intrapartum care provision during normal childbirth.

1.6 RESEARCH QUESTIONS

The study wished to answer the following research questions:

- What strategies can be used to enhance the quality of intrapartum care in West Gojjam Zone, Amhara Region?
- What is the perceived quality of intrapartum care received by women in West Gojjam Zone, Amhara Region?
- Do service providers practise respectful maternity care during intrapartum care service provision in West Gojjam Zone, Amhara Region?

- What is the quality of intrapartum care provision in West Gojjam Zone, Amhara Region?
- What are the views and challenges of health care providers and supervisors on the implementation of quality intrapartum care monitoring during normal childbirth?

1.7 SIGNIFICANCE OF THE STUDY

The Federal Ministry of Health introduced four transformation agendas, currently updated to five. In all the plans and strategies of the country, improving quality remained the priority area of transformation of the health sector. In order to track this, various studies have been conducted at hospital level to assess the quality of maternal health services but little assessment has been done at primary health care (PHC) centres, which the majority of clients access. Moreover, most uncomplicated maternal health services are provided at rural health centre level. This study should therefore help health centres, districts, zones and regional health bureaus with first-hand evidence to identify gaps in order to transform the quality of intrapartum care service provision at primary health care units.

The research will have a significance for policy makers to design a doable policy from the research findings policy recommendations at health centres. It also should benefit the pregnant women and the community from the policy recommendations and with the implementation strategy.

In addition, clients should benefit from the findings by subsequent government action to improve the identified quality gaps through the implementation of the recommended strategies.

1.8 THEORETICAL GROUNDING OF THE STUDY

A theory is a set of defined and interrelated concepts about a phenomenon developed from abstract thoughts, findings, and lived experiences (Burns & Grove 2007:117). A conceptual or theoretical framework deepens understanding of the phenomenon under study and is crucial for knowledge on the phenomenon (Polit & Beck 2014:264). A theoretical framework can be considered a map or travel plan for travelling from a familiar place to a new, unfamiliar area (Gliner, Leech & Morgan 2017:520). Individuals should

have some knowledge and understanding about the possible way, taking previous experience and other factors into consideration. In this study, the researcher applied Donabedian's (2003) quality care framework and its three components, namely structure, process and outcome, to assess quality.

Donabedian (2003:46) defines *structure* as designated conditions under which the care is provided, which include:

- Material resources, such as premises, delivery bed, stethoscope, sphygmomanometer, fetoscope, and other medical equipment necessary for intrapartum care
- Human resources, such as availability and number of trained competent health care providers
- Organisational characteristics, such as availability of systems of supportive supervision and quality monitoring meetings.

Process refers to the treatment, client education, supporting in labour, nursing care provided by the service providers, respectful maternity care, emotional support, involvement of champion and other care components in a timely and equitable manner

Outcome refers to the end goal of the service provision or quality of care, such as improved quality of service provision, reduction in maternal and newborn mortality, or improved client satisfaction with the provision of intrapartum care service.

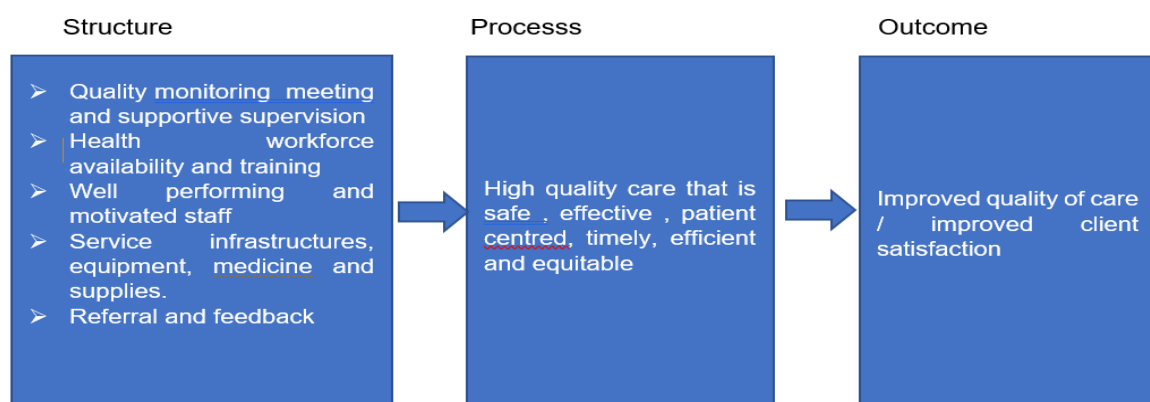


Figure 1.1 Theoretical framework for quality intrapartum care provision

(Adopted from Donabedian 2003:79-88)

1.9 RESEARCH DESIGN AND METHODOLOGY

This section briefly describes the research design and methodology used in the study.

1.9.1 Research paradigm

A paradigm is a way of looking at natural phenomena that encompasses a set of philosophical assumptions and guides a researcher's approach to inquiry (Polit & Beck 2018:11). Polit and Beck (2018:15) add that paradigms are lenses that help to sharpen the researcher's focus on a phenomenon. The research paradigm and research approach are the same and may be qualitative, quantitative or mixed methods of research (Brink, Van der Walt & Van Rensburg 2005:55).

In this study, the researcher applied pragmatism as the research paradigm. A pragmatic paradigm is a research paradigm in which there is an option to use multiple approaches to arrive at the research reality. In this view the researcher has an option to apply multiple methods and techniques to draw the conclusion on the reality. Thus, the researcher applied this paradigm in order to assess the research questions and objectives with multiple approaches (Clark & Creswell 2014:39; Gliner et al 2017:33).

1.9.2 Research design

A research design is the "overall plan for addressing a research question, including the specifications for enhancing the integrity of the study" (Polit & Beck 2018:12). The researcher used a mixed methods design for the study. Mixed method studies use a combination of qualitative and quantitative methods (Creswell & Creswell 2018:14).

Qualitative research is the investigation of phenomena, typically in an in-depth and holistic fashion, through the collection of rich narrative materials using a flexible research design (Polit & Beck 2018:739). Qualitative research is a means of exploring and understanding the meaning individuals and groups ascribe to social problems (Creswell & Creswell 2018:147; Dawson 2007:32-33).

Polit and Beck (2018:736) describe quantitative research as a set of orderly and disciplined procedures used to gain knowledge. Quantitative research uses methods employing measurement to record and investigate aspects of social reality.

The researcher selected a convergent parallel mixed method design to simultaneously collect qualitative and quantitative data and to generate valid evidence on quality intrapartum care (Creswell & Creswell 2018).

Cross-sectional descriptive studies collect and examine data at one point in time (Brink et al 2005:10). Therefore, the researcher collected quantitative data in strands 1, 2 and 3 and qualitative data in strand 4. Data analysis was done separately and findings merged during interpretation.

The convergent mixed methods design enabled the researcher to generate complete, holistic and valid evidence on the quality of intrapartum care.

The quantitative data helped the researcher to understand the patient satisfaction level, availability of essential drugs and supplies for the provision of quality intrapartum care; assess the level of technical competency and assess the quality of intrapartum care with direct non-participatory observation. The qualitative data helped the researcher gain a detailed understanding of the conduciveness of the working environment and explore the enabling factors for quality intrapartum care provision, including the planning for quality intrapartum care, implementation, and monitoring of quality improvement interventions.

The researcher developed the quality improvement strategy based on the findings by means of a Delphi method consultation with maternal health experts at the Ministry of Health, regional health bureaus and zone health departments, as well as *woreda* health office level in strand 5.

The researcher conducted the study in five strands with the same time as follows:

1.9.2.1 Strand 1

The researcher carried out direct observation of health facilities for general cleanliness, availability and functionality of electricity, water, toilet, incinerator, liquid and solid waste

disposal. The availability of infection prevention supplies, drugs and equipment were checked. The availability of trained human resources for the provision of quality intrapartum care were assessed. Data were collected by means of a structured questionnaire adapted from the WHO (2018) recommendations of Intrapartum care for a positive childbirth experience. The data collectors were senior midwife nurses who had experience in intrapartum care working other than the study sites.

The researcher used random sampling to select the health centres. There are 104 health centres in West Gojjam Zone health department, and 25% or 26 health centres were randomly selected for the study.

1.9.2.2 Strand 2

Directly observed intrapartum care service providers' technical competency and respectful maternity care service provision during intrapartum care was assessed with a structured questionnaire adapted from the WHO (2018) recommendations of Intrapartum care for a positive childbirth experience.

Field data collectors collected data from health care providers of labour and delivery rooms of health centres. A statistician determined the sample size using a single proportion sample size calculation formula. The selected 26 health centres had sample population proportional to the weight of eligible pregnant women population available. Convenient/consecutive sampling was used to select the sample.

1.9.2.3 Strand 3

Data were collected by means of administered questionnaires on client satisfaction. The sample population consisted of post-natal mothers visiting the health centres, who had given birth at the health centres.

The total sample size was calculated with single proportion sample size estimation formula and each health centre had a sample size determined by the number of normal live birth deliveries per month for the last six months at the health centres.

1.9.2.4 Strand 4

In-depth interviews were conducted with health care providers, mentors and supervisors until data saturation was achieved. The purpose was to obtain rich data and a deeper understanding of intrapartum care activities, capacity building and supplies provision activities to ensure quality intrapartum care at health centres.

1.9.2.5 Strand 5

The study generated findings which were crucial for quality improvement interventions at rural health centres. Based on these findings, the researcher developed strategies to address the identified limitations.

The draft strategies were circulated to health managers/supervisors at the Ministry of Health, regional health bureau, zone health department and *woreda* health offices, experts working within the health sector and for development partners as well as clinicians working at health facilities maternal health units to review and comment through Delphi technique strategy development process.

The comments were included and re-circulated for validation and final agreement by the above categories of professionals and managers/supervisors. Finally, the revised final strategies were communicated with Delphi experts to validate and rank according to a 5-point Likert scale.

1.9.3 Research methodology

Research methodology is the plan for conducting the specific steps of a study (Burns, Grove & Gray 2013:230). The methodology includes the setting or study area, population, sampling and sample, and data collection and analysis.

1.9.3.1 Study area or setting

Ethiopia has nine regional states and two city administrations. Amhara region is one of the nine regional states, the second most populous region next to Oromia region. Amhara region has 11 zones and the study was conducted in West Gojjam Zone.

In the 2010 Ethiopian fiscal year (EFY), West Gojjam Zone had an estimated population of 2,655,309. The zone has 17 districts with the capital city of Fenoteselam, 200 km from Bahir Dar (the capital of Amhara region) and 355 km from Addis Ababa, the capital of Ethiopia. The zone is among the top performing in terms of volume of delivery services among all zones of Amhara region but the quality of the intrapartum care is not known at health centre level.

1.9.3.2 Population

A population is the entire aggregate of cases in which a researcher is interested (Gliner et al 2017:137; Polit & Beck 2018:273).

West Gojjam Zone has a total population of 2,655,309, an estimated pregnancy of 89,489 and institutional delivery of 59,977 (2010 EFY) with an institutional delivery rate of 67%. Of the 59,977 institutional deliveries, 7,681(12.8%) were conducted at hospitals and 52,296 (87.2%) were conducted at health centres. The zone has seven hospitals and 104 health centres. In strand 1, the population was 104 health centres of the zone health department and the clients who gave birth at health facility level and attended post-natal clinics.

Clients who gave spontaneous birth at the selected health centres in the data-collection period served as the population for strand 2. Post-natal clients who gave birth at the selected health centres and attended post-natal care during the data-collection time were the population for strand 3. The health service providers, mentors, supervisors and managers of the selected health centres and districts in West Gojjam Zone health department were the population for strand 4.

1.9.3.3 Sampling

A sample refers to a subset of a population (individuals, elements or objects) or a group selected to act as representatives of the population as a whole (Polit & Beck 2018:275). The researcher used simple random sampling to select the health centres in the study area. In strand 2, the researcher used convenient/consecutive sampling for labour and delivery clients in the selected health centres. In strand 3, the researcher used systematic

sampling to select post-natal clients who gave birth at the health centres and visited the post-natal clinic during data collection. In strand 4, the researcher used purposive sampling to select the participants for qualitative data collection.

1.9.3.4 Data management and analysis

Quantitative data were collected using a structured questionnaire and checklist during direct observation of intrapartum service provision and respectful maternity care (Annexures 10, 11 and 12). Interviews were conducted with post-partum clients who gave birth at the selected health centres for level of satisfaction with the intrapartum care (Annexures 13, 14 and 15). An interview guide was used for qualitative data collection (Annexures 16 and 17). The quantitative data were entered using an EPI-Info data entry template and analysed using the Statistical Package for Social Sciences (SPSS) software program version 20. The qualitative data were transcribed verbatim then imported to Atlas ti 8 software for coding and content analysis.

1.10 DEFINITION OF KEY TERMS

The following key terms were used in this study as defined below:

- **Quality of care:** The WHO (2016:22) defines quality of care as “the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficient, equitable and people-centred”.
- **Intrapartum care:** Intrapartum care is care given to a client from the onset or start of true labour until the completion of the third stage of labour with delivery of the placenta (*Mosby’s Medical & Nursing Dictionary* 1986:601).
- **Patient or client satisfaction:** Patient satisfaction is a significant measure of health care quality as it offers information on the provider’s success at meeting clients’ expectations. To improve the quality of nursing care, nurses need to know what factors influence patient satisfaction (Berwick, Godfrey & Roessner 2002; WHO 2014a).
- **Provider competency:** Health professionals who are competent to provide care during labour and childbirth must possess the particular competencies required for intrapartum care (WHO 2018:19). They must be competent to: (i) provide and

promote evidence-based, human rights-based, quality, sociocultural sensitive and dignified care to women and newborns; (ii) facilitate physiological processes during labour and delivery to ensure a clean and positive childbirth experience, and (iii) identify and manage or refer women and/or newborns with complications (WHO 2018:19).

- **Skilled birth attendant:** A skilled birth attendant refers to an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns (WHO 2018).
- **Post-natal care** refers to the care provided to mother and newborn from birth to within 42 days of childbirth at health institutions (WHO 2018:94).
- **Respectful maternity care:** Respectful maternity care refers to care organised for and provided to all women in a manner that maintains their dignity, privacy and confidentiality, ensures freedom from harm and mistreatment, and enables informed choice and continuous support during labour and childbirth (WHO 2018).
- **Intrapartum** refers to the period from the start of true labour until delivery of the placenta (WHO 2016).

1.11 OPERATIONAL DEFINITIONS

For the purposes of the study, the following terms were used as defined below.

- **Quality of care:** Quality of care was defined in terms of the three components of quality measures, namely structural, process, and outcomes or patient satisfaction. If the assessment revealed a score of 75% or more, the quality of intrapartum care was considered good and in accordance with the WHO (2014a) standards.
- **Structure quality:** Structure quality was considered good if the availability of supplies, medicines, medical equipment, toilet, and general labour and delivery cleanliness assessment indicated 75% or more.
- **Process quality:** Service provision was considered good if the standards achieved 75% or more for technical and respectful maternal care.

- **Patient or client satisfaction:** Patient or client satisfaction was considered good if patients' needs were met and the quality of care and service they received exceeded their expectations and achieved 75% or more.
- **Patient or client privacy:** Patient or client privacy referred to maintaining their audio-visual privacy during labour and delivery or intrapartum care service provision.
- **Health care providers** refers to health workers working in the maternal health services of the selected health centres to ensure quality of intrapartum care.
- **Managers** refers to the nurses providing monitoring, supervision and support for quality of intrapartum care service provision.
- **Intrapartum** refers to the period from the start of true labour to the end of the third stage of labour or delivery of placenta and the patients were transferred to a post-natal room.

1.12 ETHICAL CONSIDERATIONS

Ethics deals with matters of right and wrong. When humans are used as study participants, care must be taken in ensuring that their rights are protected (Polit & Beck 2018:748). Accordingly, the researcher obtained ethical approval and permission to conduct the study from the University of South Africa Ethical Review Committee (Annexure 1), and permission from the Amhara Regional Health Bureau Public Health Institute (Annexure 3) to do the study in West Gojjam Zone Health centres. The researcher upheld the principles of privacy and confidentiality, justice and autonomy (see Chapter 3 for discussion).

1.13 STRUCTURE OF THE DISSERTATION

The dissertation consists of eight chapters.

Chapter 1: This chapter describes the background to the study, the research problem, theoretical framework, purpose, research design and methodology of the study, and defines key terms used in the study.

Chapter 2: This chapter discusses the literature review conducted for the study.

Chapter 3: This chapter describes the research design and methodology of the study including the ethical considerations.

Chapter 4: This chapter discusses the quantitative data analysis and interpretation and findings.

Chapter 5: This chapter discusses the qualitative data analysis and interpretation and findings.

Chapter 6: This chapter integrates and discusses the qualitative and quantitative findings.

Chapter 7: This chapter discusses the strategy development from the qualitative and quantitative findings.

Chapter 8: The chapter briefly discusses the findings, limitations and contribution of the study, and makes recommendations for practise and further research.

1.14 CONCLUSION

The chapter discussed the research problem, purpose, objectives and research design and methodology of the study, and defined key terms.

Chapter 2 discusses the literature review conducted for the study on quality of health care, intrapartum care, respectful maternal care, patient satisfaction, and gaps in quality service delivery.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

Chapter 1 outlined the background, purpose, significance, research design and methodology of the study. This chapter discusses the literature review conducted for the study. Polit and Beck (2018:99) refer to a literature review as a critical summary of existing knowledge on a topic, often prepared in order to contextualise the research problem. Burns and Grove (2007:67) describe a literature review as “a written, well-organised presentation of what has been published on a topic. A literature review lays the foundation for the research as it gives a representation of what is known and not known about the research problem”. “A literature review involves researching, reading and understanding literature relevant to the study” (Brink et al 2005:55). The purpose of a literature review is to convey what is currently known regarding the topic of interest and to assist researchers to comprehend and extend their knowledge of the phenomenon under study (Polit & Beck 2018:99).

The literature review was conducted to search for studies done on quality of intrapartum care and factors determining quality and client satisfaction. Inclusion criteria for the studies were Sub-saharan African countries/Ethiopia in between 2015-2019 or more recent ones. The studies included descriptive, case control, qualitative, situational analysis and program evaluation reports. The search were conducted through Google scholar and PubMed by the following terms: “Quality Intrapartum”, “Quality Labour and delivery”, childbirth”, “Quality” and “Sub-Saharan Africa”, “Ethhiopia”.

The purpose of the study was to assess the quality of care, providers’ practise of respectful maternity care, and clients’ satisfaction with the intrapartum care at health centres, and to develop strategies to improve the quality of intrapartum care at health centre level. Little assessment has been done at primary health care (PHC) centres, which the majority of clients’ access. Moreover, most uncomplicated maternal health services are provided at rural health centre level. The researcher therefore wished to

identify gaps in order to transform the quality of intrapartum care service provision at PHC facilities.

The literature review covered an overview of Ethiopia's health care system; quality in health care; quality intrapartum care and its parameters; respectful maternity care; intrapartum care service provision; client satisfaction; quality improvement standards, and measures of quality. Quality improvement enabling factors like infrastructure, supplies and medicines were reviewed.

The literature review focused on labour and delivery service globally, in the Horn of Africa, Ethiopia, and Amhara region. The researcher consulted books, textbooks, journals, and EPHI, FMOH, WHO, WHO, UNICEF, UNFPA, UNAIDS, and World Bank publications.

2.2 ETHIOPIA'S HEALTH CARE SYSTEM

Maternal mortality in Ethiopia remains among the highest in the world. Although Ethiopia has significantly reduced maternal and child mortality, improved the family planning utilisation and maternal health indicators, 412 mothers per 100,000 live births still die from pregnancy-related causes. In response, the government of Ethiopia considered maternal health a priority in the health sector transformation plan, 2016-2020 and in the health sector transformation plan II, 2020/2021-2024/2025, with emphasis on quality and equity (CSA & ICF 2016:286; FMOH 2016a:111; FMOH 2020b:60; FMOH 2020c:70). In order to realise the transformation agenda, Ethiopia's health system is organised into three tiers, namely primary, secondary, and tertiary levels of care. The primary levels of care include primary hospitals, health centres (HCs) and health posts (HPs). A primary hospital is expected to serve 100,000 people and be a referral point for health centres. A health centre is expected to serve 25,000 in a rural setting and 40,000 in an urban setting, and a health post is expected to serve 5,000 under the direct supervision of a health centre. The secondary level of care is a general hospital, which is expected to serve 1 million to 1.5 million, and the tertiary level of care is a specialised hospital, which is expected to serve 3.5 to 5 million (FMOH 2017:9).

2.3 QUALITY IN HEALTH CARE

The WHO (2018:14) defines quality of care as the degree to which health services for individuals and populations increase the likelihood of desired health outcomes. It is based on evidence-based professional knowledge and is critical for achieving universal health care. Quality health care can be defined in many ways but there is growing acknowledgement that quality health services should be effective, safe, and people-centred. Effective means providing evidence-based health care services to those who need them; safe means avoiding harm to people for whom the care is intended, and people-centred means providing care that responds to individual preferences, needs and values.

To realise the benefits of quality health care, health services must be timely, equitable, integrated, and efficient. Timely means reducing waiting times and sometimes harmful delays. Equitable means providing care that does not vary in quality on account of gender, ethnicity, geographic location, and socio-economic status. Integrated means providing care that makes available the full range of health services throughout the life course. Efficient means maximising the benefit of available resources and avoiding waste.

2.4 QUALITY INTRAPARTUM CARE

The WHO (2018) envisions intrapartum care as a platform to provide pregnant women with respectful, individualised, woman-centred, and effective clinical and non-clinical practises to optimise birth outcomes for the woman and her baby, by skilled health care providers in a well-functioning health care system. The recommendations are intended to inform the development of relevant national- and local-level health policies and clinical protocols.

Accordingly, the WHO (2018:19-21) recommends the following on intrapartum care throughout labour and birth:

- Respectful maternity care, which refers to care organised for and provided to all women in a manner that maintains their dignity, privacy and confidentiality, ensures freedom from harm and mistreatment, and enables informed choice and continuous support during labour and childbirth.
- Effective communication between maternity care providers and women in labour, using simple and culturally acceptable methods.

- A companion of choice for all women throughout labour and childbirth.
- Midwife-led continuity of care support throughout the antenatal, intrapartum and postnatal continuum in settings with well-functioning midwifery programmes.
- Definitions of latent and active first stages of labour for practise.
- Information on duration of first stage of labour.
- Auscultation for the assessment of foetal well-being on labour admission, and intermittent auscultation of the foetal heart rate for healthy women in labour.
- For healthy pregnant women requesting pain relief during labour, depending on a woman's preferences.
 - Epidural analgesia.
 - Parenteral opioids, such as fentanyl, diamorphine and pethidine.
 - Relaxation techniques, including progressive muscle relaxation, breathing, music and other techniques.
 - Manual techniques, such as massage or application of warm packs.
- Oral fluid and food intake, for women at low risk.
- Encouraging the adoption of mobility and an upright position during labour in women at low risk.
- The use of uterotonics for the prevention of postpartum haemorrhage (PPH) during the third stage of labour for all births.
- Oxytocin is the recommended uterotonic drug for PPH.
- Delayed umbilical cord clamping (not earlier than 1 hour after birth) for improved maternal and infant health and nutrition.
- Controlled cord traction (CCT) for vaginal births in settings where skilled birth attendants are available, if the care provider and the parturient woman regard a small reduction in blood loss and the duration of the third stage of labour as important.
- Keeping newborns without complications in skin-to-skin contact (SSC) with their mothers for the first hour after birth to prevent hypothermia and promote breastfeeding.
- Putting all newborns, including low-birthweight (LBW) babies who can breastfeed, to the breast as soon as possible after birth when they are clinically stable, and the mother and baby are ready.
- Giving all newborns 1 mg of vitamin K intramuscularly after birth (That is. after the first hour by which the infant should be in skin to skin contact with the mother and breastfeeding should be initiated).

- Delaying bathing until 24 hours after birth, but if not possible due to cultural reasons, waiting for at least six hours.
- Appropriate clothing for the baby for ambient temperature, meaning one to two layers of clothes more than adults, and use of hats/caps.
- Mother and baby should not be separated and should stay in the same room 24 hours a day.
- Postpartum abdominal uterine tonus assessment for early identification of uterine atony for all women.
- After an uncomplicated vaginal birth in a health care facility, healthy mothers and newborns should receive care in the facility for at least 24 hours after birth.

2.4.1 Standards for improving quality of maternal and newborn care in health facilities

Although there has been progress in coverage of births in health facilities, reductions in maternal and neonatal mortality remain slow. In 2014, the WHO developed the quality maternal and newborn care (QMNC) framework, which presents the scope of care to which all women and newborns should have access, and which improves outcomes. With increasing numbers of births in health facilities, attention turned to the quality of care provided because poor quality of care contributes to morbidity and mortality (WHO 2016:1). The period around childbirth is the most critical for saving the maximum number of maternal and newborn lives. The WHO (2016:1) sees a future in which pregnant women and newborns receive high-quality care throughout pregnancy, childbirth and the postnatal period. In order to achieve this, the WHO defined quality of care and published a set of standards to provide facilities with a framework for improving the quality of care for mothers and newborns. The framework contains eight domains of quality of care that should be assessed, improved and monitored within the health system. The aim is to work towards realising the vision in six strategic areas, namely clinical guidelines, standards of care, effective interventions, measures of quality of care, relevant research, and capacity building (WHO 2016).

Quality of care is a crucial aspect of human rights and a key determinant of health outcomes. The QMNC framework identifies two key dimensions of quality, namely *provision of care*, and *experience of care*. Provision of care includes evidence-based practises, efficient information and referral systems (WHO 2016:24). Experience of care

includes effective communication, respect, dignity, and emotional support. The availability of competent, motivated care providers and physical resources are prerequisites for good quality of care in health facilities. The WHO standards define what health care planners, managers and care providers should ensure in order to guarantee high-quality care around the time of birth (WHO 2016:24).

2.4.2 Reproductive, maternal, newborn and child health (RMNCH)

Reproductive, maternal, newborn and child health (RMNCH) has been a priority for both governments and civil society in low- and middle-income countries (LMICs). The Millennium Development Goals (MDGs) called for countries to reduce child mortality by 67% and maternal mortality by 75% between 1990 and 2015. Although substantial progress was made, few countries achieved the needed reductions. Continued focus on RMNCH is needed to address the remaining considerable burden of disease in LMICs from unwanted pregnancies; high maternal, newborn, and child mortality and stillbirths; high rates of undernutrition; frequent communicable diseases (CDs) and non-communicable diseases (NCDs), and loss of human capacity (Black, Walker, Laxminarayan & Temmerman 2016:30). RMNCH encompasses health problems across the life course from adolescent girls and women before and during pregnancy and delivery, to newborns and children. The continuum-of-care approach is important in the links from mother to child and the delivery of integrated preventive and therapeutic health interventions across the stages of life (Black et al 2016:30).

Ethiopia reduced its maternal mortality rate considerably, yet it remained very high and the country is among the top five contributors of high maternal mortality (FMOH 2016a). The under-five and neonatal mortality rates remained high and varied across income, gender and geographical areas. The national strategy for newborn and child survival in Ethiopia was introduced, and effective coverage for life-saving high quality newborn and child health interventions steadily increased. However, access and utilisation of the interventions were not uniform across all sectors of the population and different geographical areas. Building on the success of the four cycles of the health sector development plans (HSDPs), the Ministry of Health undertook to work with regional health bureaus and the health development partners to ensure universal coverage of high impact newborn and child survival interventions. The Health Sector Transformation Plan, 2015/2016-2019/2020 was introduced to guide the implementation of the strategy. The strategy planned to ensure universal coverage of quality newborn and child health interventions along with meaningful community development and participation (FMOH 2016).

The strategy identified and prioritised 39 high impact and cost-effective newborn and child survival interventions with key guiding principles for implementation including equity and

accessibility; community engagement, empowerment and ownership; integration; partnership; efficient use of resources; innovation and use of technology; evidence-based decision making, and provision of quality maternal, newborn and child health services. A sustained government and partners' commitment, the primary health care unit with its health extension programme for social mobilisation and strengthened referral and linkage would remain the basis for continued gains in newborn and child health (FMOH 2016a).

The Ministry of Health of Ethiopia has put into place different strategies and initiatives to reduce the maternal mortality. Among those strategies, RMNCH and quality improvement strategies are vanguard strategies which the country developed and has started its implementation since June 2016. Quality improvement strategy was developed and endorsed in 2016 and served the country from 2016 to 2020. The strategy identified five strategic focus areas and the first of those five strategic focus areas is quality improvement in maternal, neonatal and child health interventions (FMOH 2016a:98-99).

2.4.3 Quality improvement

Quality is a direct outcome of the primary health care principles of equity, accessibility, cost-effectiveness, sustainability and partnership with the community. Therefore, quality assurance and improvement in primary health care continues to top the agenda for most countries of the world (WHO 2004:17). Quality improvement is the framework used to systematically improve care. Quality improvement seeks to standardise processes and structures to reduce variation, achieve predictable results, and improve outcomes for patients, health care systems, and organisations. The quality improvement process is systematic and ongoing and involves three steps: setting aims to focus improvement, choosing a balanced set of measures to determine if improvement occurs, and testing new ideas to change the current process. In 2016, the WHO developed standards for improving quality of maternal and newborn care in health facilities.

Johnson and Sollecito (2020:24) state that health facilities and health professionals initiate quality improvement for three reasons: accreditation of their health facility according to national or international standards of quality; for cost control, or for competition in the health sector industry by consumers or pressure from employers or payers of the health sector. The approach to quality improvement is further classified and illustrated a true process improvement in which health facilities effectively implement

quality improvement activities in terms of both technical and client preferences; others simply apply it to get a share of the local health market and still others apply it for whatever is necessary to maintain the accreditation.

Donabedian (2003:37) defined quality as the result of the application of skill and expertise in the day-to-day practises of health care service provision. Quality is achieved with “efficacy, effectiveness, efficiency, optimality, acceptability, legitimacy and equity”. Donabedian (2003) maintains that quality assurance in clinical service provision settings is necessary to monitor clinical performance and conduct quality improvement activities accordingly.

According to Donabedian (2003:45), the following steps should be taken to monitor clinical performance:

- Decide what to follow/observe
- Decide priorities to monitor
- Select a method to assess performance
- Formulating criteria and standards
- Collect the necessary information
- Choosing when to monitor
- Constructing a monitoring system
- Bringing about behavioural change

Assessing performance has three components to be monitored, namely structure, process and outcome (Donabedian 2003:46). Structure refers to designating the conditions under which care is provided. These include:

- Material resources, such as facilities and equipment.
- Human resources, such as the number, variety, and qualifications of professionals and support personnel.
- Organisational characteristics, such as the organisation of the medical and nursing staffs, the presence of teaching and research functions, kinds of supervision and performance review, methods of paying for care, and so on.

Process refers to the activities that constitute health care- including diagnosis, treatment, rehabilitation, prevention, and patient education usually carried out by professional personnel, but also including other contributions to care, particularly by patients and their families.

Outcome refers to changes (desirable or undesirable) in individuals and populations that can be attributed to health care (Donabedian 2003:46-47). During the implementation of a quality improvement cycle, it is stated by WHO (2004:30-122) that certain procedural steps are to be taken to assure the quality improvement cycle. The first step in the quality improvement cycle is to plan for and define quality features that are critical to the different dimensions of service delivery that is, management or users/community. At the early stage of primary health care quality implementation, it is desirable to select a package of quality features to avoid the development of unlimited numbers of standards, which may discourage their voluntary use by the different primary health care teams. These selected quality features need to reflect the priority community health problems and the primary health care needs. The next step of the quality improvement cycle is the setting of standards. Once the standards have been set, it is possible to measure performance in relation to each standard. In this regard, health staff collect and record performance against standards using the chosen measures. The collected data are then analysed in order to evaluate the care actually delivered and compared against the set standards (WHO 2004:30-122).

The Ministry of Health of Ethiopia implemented quality improvement activities in particular for mothers and their children's health services at health centres to meet technical dimensions and customers preference.

2.4.3 Quality maternal and newborn care

According to the WHO (2018:15-17), the quality of care framework has eight quality framework standards. The quality framework standards help to improve the quality of childbearing women and newborn desired outcome. The standards help childbearing women to have a positive experience in health facilities during labour and delivery process.

The eight standards are listed as data driven based practise of care and treatment of complications, actionable information system, functional referral system, effective information flow, respect and preservation of dignity, emotional support, competent and motivated human resources and availability of essential physical resources (WHO 2018:24).

2.4.4 Standard recommendation on quality of care during intrapartum care

The WHO has standard technical recommendations on quality of intrapartum care. This quality intrapartum quality of care standard recommendations have been regularly updated every two years. The recent WHO (2018) recommendations are articulated in four components of intrapartum care that is, care that is provided from the onset of true labour until third stage of labour, care that is provided during the first, second and third stages of labour. Some recommendations are applicable at health centres level within the country health system from onset of labour to the delivery of the placenta and these recommendations are stated below.

The first WHO recommendation is to be done from the start of labour up to the placental delivery. Those actions are providing care which is respectful in a human rights-based approach as well as effective communication between health care providers and clients. Moreover, there should also be effective communication among health care providers and champions/doula of labour and delivery.

The second recommendation articulated for the first stage of intrapartum care is that health care providers have to provide the required information about the time span of labour and delivery services for women giving birth for the first time and others appropriately. There is also a suggestion to measure the maternal vital signs and foetus

heartbeat by using the available and appropriate measuring instruments from the start of labour until the delivery of baby. The other recommendation is to do bimanual vaginal examination every four hours for low-risk women, and utilize pain relief methods such as continuous muscle tone relaxation and playing classical music including deep breath exercises and other techniques deemed important. In addition to this there is also a suggestion to avail a massage or semi-hot pack to relieve pain. The health care providers are encouraged to advise clients to have fluids and food intake as well as ambulation and standing position for women of low risk.

The third recommendation of WHO focused on the second stage by intrapartum care. Labour and delivery clients whether they are taking pain relief or not, health care providers are encouraged to allow the clients to have a birth position of their preference. Clients in the second stage of labour and giving birth are encouraged and supported to apply their own urge to push and normal delivery.

The fourth recommendation by WHO focused on the third stage of intrapartum care which comprised of: availing medicine which returns the uterus to its original position to prevent bleeding after delivery. The WHO recommended drugs are oxytocin of 10 International Units by injection or Intravenous administration. The second option to give if oxytocin is not available at the health centres level is ergometrine or methylergometrine or oral misoprostol (600 µg). Moreover, WHO recommended the delay of cord clamping by one minute in order to have a better mother, newborn and nutrition outcome. It is recommended that health care providers to apply controlled cord traction technique to deliver the placenta. If the new-born has no health problem immediately after birth, it is advised to have skin to skin contact with the mother as well as immediate initiation of breast feeding.

The last WHO recommendation stated that every newborn including infants having low birth weight (less than 2500 mg) and capable of feeding it is recommended to initiate breast feeding as early as possible whenever the newborn is able to feed and mothers health are in good condition within an hour. The mother and newborn suitable body temperature should be maintained through clothing and skin to skin contact with mothers. The next recommendation by the WHO and MOH is to give 1gram of Vitamin K intramuscularly. Moreover, it is recommended to have skin to skin contact of mother and newborn as well as to postpone bathing of new-born by 24 hours. It is recommended to

give immediate post-natal services within 24 hours both for the mother and newborn after birth for any bleeding, uterus status assessment and other associated issues (WHO 2018:19-167).

2.4.5 Resources for quality maternity care

According to the WHO (2018:22), the main resource requirements for quality are respectful maternity care by staffing, training, supplies, equipment, infrastructure, and supervision and monitoring.

2.4.5.1 Staffing and training

There should be adequate numbers of competent, trained, supervised and adequately remunerated skilled birth attendants with an appropriate skills mix, working in multidisciplinary teams that are able to provide dignified and continuous care to women. Health facility management should be sensitised and oriented to respectful maternity care and trained to develop and apply RMC policies. Staff should receive regular practise-based, in-service training on RMC delivery. Outreach staff should receive training for effective community engagement. Orientation sessions should be provided for service users and birth champions/birth support persons/doula (WHO 2018:22).

A systematic review conducted in lower- and middle-income countries revealed that the clinical competency of health care providers was limited due to gaps in pre-service training or in service training. There might not be scheduled skills-based pre-service and/or in- service trainings to capacitate health care providers (Munabi-Babigumira, Glenton, Lewin, Fretheim & Nabudere 2017:26).

An assessment was conducted in Libo kemkem district, North-West of Ethiopia to compare the effect of attending a conference on birth preparedness and complication readiness practise among recently delivered women. The result explained there was a significant impact on the improvement of ANC coverage and institutional delivery rate by pregnant women. Pregnant women who attended the conference had adequate knowledge about pregnancy and delivery as well as shared experiences among themselves (Asresie, Abitew, Bekele & Tesfaye 2019:5). Moreover, the study showed

that pregnant women who had attended a conference had knowledge of the danger signs that triggered the pregnant women to seek institutional delivery.

2.4.5.2 Infrastructure, physical environment, cleanliness, and availability of health professionals

Infrastructure includes an enhanced physical environment encompassing clean, appropriately illuminated, well ventilated labour, childbirth and neonatal areas that allow for privacy and are adequately equipped and maintained; continuous energy supply; clean and accessible bathrooms by women in labour; safe drinking water, and hand hygiene stations with soap or alcohol-based hand rubs; curtains, screens, partitions and sufficient bed capacity; facilities for labour companions, and an onsite pharmacy, medicine and supplies stock management system managed by a trained pharmacist or dispenser (WHO 2018:23).

In 2011, a study on the availability and distribution of and geographic access to emergency obstetric care in Zambia found that few health facilities provided all basic emergency obstetric care functions nor had qualified health professionals available on a 24-hour basis; geographic access was low, and in many cases provision of electricity was limited (Gabrysch, Simushi & Campbell 2011:177).

A study on the availability, utilisation and quality of maternal and neonatal health care services in the Karamoja region, Uganda, found gaps in the availability of essential infrastructure, equipment, supplies, drugs and staff for maternal and neonatal care, especially at health centres. For example, there was a shortage of maternal and child health service consultation rooms; not all labour and delivery rooms had beds, and few health facilities had incinerators (Wilunda, Oyerinde, Putoto, Lochoro, Dall'Oglio, Manenti, Segafredo, Atzori, Criel, Panza & Quaglio 2015:4). Gaps in coverage, equity and quality of health services hinder the achievement of the Millennium Development Goals of reducing child mortality and improving maternal health in most countries of sub-Saharan Africa and other high-burden countries (Wilunda, Putoto, Riva, Manenti, Atzori, Calia et al 2015:1). There is a need to profile health care provision in all three dimensions for planning (Wilunda, Putoto et al 2015:1).

Health centres in rural Ethiopia are staffed with health officers, midwives, clinical nurses, laboratory technicians, environmental health technicians, and pharmacy technicians. The maternal health department in most health centres is led by midwives who provide maternal health service at health centre level. The midwife to population ratio in Amhara region is 1.3 per 1000 people, health officer to population ratio is 1 per 1000 people, and the overall health worker to population ratio is 1.3 per 1000 population which is lower than the standard of 2.25 skilled health workers (midwife, nurse or doctor) per 1000 people to achieve 80% assisted maternal health deliveries in developing regions (Feysia, Herbst, Lemmo & Soucot 2012:24; FMOH 2018:34).

After the introduction of a conditional cash transfer scheme in India, the number of women giving birth in institutions rapidly increased, but there were important gaps in the quality of childbirth services. An intervention was introduced to improve the quality of the services in 44 high caseload public health facilities in ten districts of Rajasthan, India (Iyengar, Jain, Thomas, Dashora, Liu, Saini, Dattatreya, Parker & Iyengar 2014:1471). The aim was to encourage adherence to evidence-based practises before, during and after childbirth. The intervention consisted of orientation training of doctors and programme managers and regular facility visits. The study found that an intervention based on repeated facility visits combined with decision-makers actions could lead to substantial improvements in quality of childbirth practises at health facilities (Iyengar et al 2014:1471).

The availability of infrastructure, cleanliness of the health facilities compound and having health service professionals in adequate numbers per WHO and MOH recommendation is a key enabling factor for the rendering of quality childbearing services. The research conducted in Zambian health centres and hospitals to assess the CEMOC and BEMOC availability revealed that the availability of electricity in those health facilities were 96% (Gabrysch et al 2011:174-179). In addition to electricity, availability of water and its use is another basic amenity to enhance quality health service provision, in particular intrapartum quality health service provision. In Uganda the availability of reliable water supply near to the maternal and child health service consultation room was only in 38% health facilities, whereas 23% of health facilities had incinerators and 54% of labour and delivery rooms had delivery beds in the designated room (Wilunda, Overinde et al 2015:4). Moreover, the study conducted to review quality of labour and delivery care

service provision revealed that the cleanliness of labour and delivery rooms was 73% and the cleanliness of the delivery bed was 59% (Iyengar et al 2014:1471).

Health centres in rural Ethiopia are staffed with health human resources of health officers, midwife nurses, clinical nurse, laboratory technicians, environmental health technicians, and pharmacy technicians. The maternal health department in most health centres is led by mid wife nurses and they are playing critical role in the provision of mid wife led maternal health service provision at health centre level (FMOH 2018:34; Feysia et al 2012:24).

The health facilities distribution for the catchment population at health centres level is reflected in the health sector strategic plan and health and health-related indicator of Ministry of Health of Ethiopia in 2018. According to these documents, the health centres located in rural area are expected to provide services for 25,000 population and 40,000 population for urban health centres. The actual coverage of the rural health centre of West Gojjam Zone of Amhara region was 23,705 population per health centre (FMOH 2016a :142; FMOH 2018:30).

West Gojjam Zone has health centres which are providing labour and delivery services and these health centres' infrastructure and human resource availability are hardly assessed with structured assessment tool for quality intrapartum care provision in line with WHO and FMOH quality of care standards. So, this assessment gives us evidence on the availability of the above key enabling factors at health centres.

2.4.5.3 Supplies, medicines and medical equipment

The WHO (2018:22) defines supplies as: written, up-to-date standards and benchmarks that outline clear goals, operational plans and monitoring mechanisms for respectful maternity care; provision for staff in labour wards, such as refreshments; health educational materials in an accessible written or pictorial format and available in the languages of the communities served by the health care facilities; a standard informed consent form; information (written or pictorial) for the woman and her companion, and essential medicines for labour and childbirth available in sufficient quantities at all times in the labour and childbirth areas. Equipment includes basic and adequate equipment for

labour and childbirth that is available at all times in the labour and childbirth areas (WHO 2018:22).

Robust health systems should have a functioning supply chain system and regular replenishment of the supplies and medicines so that the service quality is maintained throughout health service provision at health facility level. The provision of quality EmOC relies on the presence of skilled health attendants working in an environment where adequate quality drugs and medical supplies are available when needed. A survey of health facilities and managers in a rural area of Tanzania found that the unreliability of obtaining drugs and medical supplies compromised the timely provision of quality services (Mkoka, Goicolea, Kiwara, Mwangi & Hurtig 2014:108). The study concluded that multiple approaches should be used to address the challenges within the health system that prevent access to essential drugs and supplies for maternal health in order to promote accountability and transparency.

The poor maintenance of equipment and inadequate supplies of drugs and other items contribute to the low quality often found in rural settings in low- and middle-income countries and raise the risk of adverse patient outcomes through delayed care provision (Penfold, Shamba, Hanson, Jaribu, Manzi, Marchant, Tanner, Ramsey, Schellenberg & Schellenberg 2013:61). A facility survey and examination of staff experiences of providing maternity services in rural southern Tanzania found many missing or broken items and frequent stock outs. Participants reported increased workloads, reduced morale, difficulties in providing optimal maternity care, and carrying out procedures with potential health risks to themselves as a result. The study concluded that improving stock control and maintaining equipment could benefit mothers and babies not only through removing restrictions to the availability of care, but also through improving staff working conditions (Penfold et al 2013:61).

Quality of intrapartum service provision is determined by the availability of essential supplies, drugs and medical equipment for the service provision with oxytocin as one of the drugs which is important for the prevention of post-partum haemorrhage. Research conducted to review the availability of oxytocin in health facilities showed a variation as low as 18-24% in Tanzanian selected health facilities, and as high as 63.4% and 90% at Indian and Malawian selected health facilities respectively. Ringer's Lactate and normal saline are other lifesaving supplies that are vital for stabilisation and prevention of

obstetric emergencies, different study assessments revealed that the supplies were available only in 50% to 60% of the health facilities (Galvin, Hirschhorn, Shaikh, Maji, Delaney, Tuller, Neville, Firestone, Gawande, Kodkany, Kumar & Semrau 2018:240-249; Kozuki, Oseni, Mtimuni, Sethi, Rashidi, Kachale, Rawlins & Gupta 2017:4; Mkoka et al 2014:108; Penfold et al 2013:61; Sikder, Labrique, Ali, Hanif, Klemm, Mehra, West & Christian 2015:9).

The overall availability of essential medicines and supplies to conduct normal childbearing process in public health centres and hospitals of Ethiopia was 56% which is very low as Ministry of Health Ethiopia planned to achieve the country maternal mortality reduction (Getachew, Ricca, Cantor, Rawlins, Rosen, Tekleberhan, Bartlett & Gibson 2011:22). The absence of medical equipment and supplies is a major obstacle to provide BEMOC and CEMOC services in line with a minimum acceptable quality of care (Wilunda, Overinde et al 2015:4). The availability of essential drugs, supplies and equipment is important for quality intrapartum care and the availability of those essential drugs, supplies and equipment are assessed at Ethiopian hospitals but not adequate enough at health centres, so this study brings evidence on the availability of those supplies and equipment.

2.4.5.4 Supply chain

A study was conducted to explore the views, experiences, and behaviours of skilled birth attendants and those who support them: (1) to identify factors that influence the delivery of intrapartum and postnatal care in low- and middle-income countries and (2) to explore the extent to which these factors were reflected in intervention studies. The findings on supply chain management documented that a gap in the supply chain management resulted in lack of drugs or supplies in the health facilities. The lack of drugs and supplies resulted in mothers or their carers having to purchase their own. This sometimes led to wasted time in procuring the drugs and supplies and the creation of informal markets and corruption at health facilities (Munabi-Babigumira et al 2017:26).

2.4.5.5 Supervision and monitoring

Supervision, monitoring and capacity building include regular supportive supervision by labour ward/facility leaders; staff meetings to review RMC practises; easily accessible mechanisms for service users and providers to submit complaints to management; establishment of accountability mechanisms for redress in the event of mistreatment or violations, and establishment of informed consent procedures (WHO 2018:22).

Maternal mortality can be reduced if women receive important service components. A study in 2013 examined the availability and components of maternity services according to providers and users' perspectives in North Gondar, Northwest Ethiopia (Worku, Yalew & Afework 2013:43). The study found that only 24% of the providers used a partograph consistently. During delivery, 80% of the patients had their blood pressure measured; 78% were informed on labour progress; 89% had auscultation of foetal heartbeat; 80% took drugs to prevent bleeding, and 78% had counselling on early and exclusive breastfeeding. Although antenatal and delivery care was provided in most of the facilities, important components of both routine and emergency maternity care services were incomplete. Worku et al (2013:43) found that improving the functional capacity of health facilities for the delivery of routine and EmOC services was needed.

A study to assess the quality of facility-based active management of the third stage of labour in Ethiopia, Kenya, Madagascar, Mozambique, Rwanda and Tanzania observed women in 390 health facilities (Bartlett, Cantor, Lynam, Kaur, Rawlins, Ricca, Tripathi & Rosen 2015:759). Most of the women were given Oxytocin or another uterotonic with uterotonic and related supplies were generally available onsite. Although all the study countries had national policies and/or guidelines on active management of the third stage of labour, the presence of guidelines in facilities varied across countries, and only 36% of the investigated providers had received relevant training in the previous three years (Bartlett et al 2015:765). The study recommended more research on optimising the timing of uterotonic administration, training on the use of new clinical guidelines and implementation research on the best methods to update such training (Bartlett et al 2015:767).

The parameters used to measure technical competency for quality of intrapartum care are WHO standards recommendation. Among the parameters checking fetomaternal

conditions is one, during active first stage of labour the following feto-maternal conditions were to be assessed: membrane intactness was assessed for 27.1% of the clients, cervical dilatation for 33.6%, uterine contraction for 30.7%, descent of presenting part for 23.2% and fetal heart rate was assessed for 20% of the labouring mothers and those events were documented through partograph only for 35.1% of the clients (Gbadamosi & Osungbade 2017:5). Feto-maternal condition regular assessment is expected to be monitored through partograph starting from 4cm cervical dilation until the delivery of the baby. Research conducted to assess quality of routine and emergency intrapartum and postnatal care using a health facility assessment, and to estimate “effective coverage” of skilled attendance in Brong Ahafo, Ghana showed that the partograph utilisation was 41% which is far below the anticipated benefit of the partograph utilisation for timely clinical decision making (Nesbitt, Lohela, Manu, Vesel, Okyere, Edmond, Agyei, Kirkwood & Gabrysch 2013:5).

Another study conducted by Worku et al (2013:10) in Amahara Region, Ethiopia to assess the availability and the components of maternity services according to the perspectives of service users and providers, showed that partograph utilisation was 24%. This partograph utilisation is even much lower in one study conducted in India, 18% of the service providers used it (Iyengar et al 2014:1471).

Research was conducted on quality of midwife-provided intrapartum care in Amhara Regional State, Ethiopia to assess the quality of midwifery care during labour, delivery and immediate postpartum period. The findings of this research revealed that only 48% of the study participants said that the Ministry of Health and Regional Health Bureaus conducted supportive supervision assessment and only 44.7% were visited at least at every three-month intervals. A motivation system for health care providers were available for 28% through monetary and non-monetary incentives (Yigzaw et al 2017:261)

2.4.6 Quality intrapartum care service provision

The literature review evidenced quality intrapartum care findings as stated below:

2.4.6.1 *Championship*

A study done in Ethiopian public health facilities to assess the prevalence of respectful maternity care (RMC) and mistreatment of women in hospitals and health centres, and identified factors associated with occurrence of RMC and mistreatment of women during institutional labour and childbirth services. The findings revealed 84% of health care providers allowed a birth champion/birth support person to be available at the labour and delivery room (Sheferaw, Bazant, Gibson, Fenta, Ayalew, Belay, Worku, Kebebu, Woldie, Kim, Akker & Stekelenburg 2017:60).

A qualitative and quantitative study conducted in Kenya to answer a research question: Do providers and women differ in their perceptions of person-centered care and what are potential reasons for differences in reports of person-centred care from the provider's perspective found that on championship or the presence of a support person during labour and delivery qualitative findings from health care providers showed that some health care providers allowed only husbands, while others indicated that the woman may bring along any companion she would like. Other providers indicated that no one is allowed to accompany a woman in the ward. Among providers who said companions are not allowed, several acknowledged the importance of being able to have a birth companion, although it was still not allowed (Sudhinaraset, Giessler, Golub & Afulani 2019:83).

A study conducted in Teheran at a non-teaching public hospital aimed to explore the perceptions of Iranian midwives regarding respectful maternity care during labour and childbirth. The study findings revealed that health care providers did not allow a champion to accompany labour and delivery clients during delivery which compromised the autonomy of the clients (Moridi, Pazandeh, Hajian & Potrata 2020:5).

A qualitative study conducted in Ethiopia to examine the experiences of disrespect and abuse in maternal care from the perspectives of both providers and patients revealed that many health care providers did not want accompaniment during labour because they were concerned about privacy or because they did not want to distress family or worry about comforting others while in pain (Burrowes, Holcombe, Jara, Carter & Smith 2017:263).

A qualitative evidence synthesis was conducted to describe and explore the perceptions and experiences of women, partners, community members, health care providers and administrators, and other key stakeholders regarding labour companionship; to identify factors affecting successful implementation and sustainability of labour companionship; and to explore how the findings of this review could enhance understanding of the related Cochrane systematic review of interventions in low, middle- and high-income countries. The findings demonstrated that championship supported and encouraged the labouring mother and assisted her in ambulation as well as in changing of position during labour and delivery, and required minimal training on how to serve as a birth champion. The orientation or giving training on how to provide birth championship in labour and delivery clients were not practised in the assessed by health centres health care providers (Bohren, Berger, Munthe-Kaas & Tunçalp 2019:21-23).

2.4.6.2 Ensuring client comfort

A study was conducted in Ethiopia to examine the experiences of disrespect and abuse in maternal care from the perspectives of both providers and patients revealed that health care providers deterred clients to give birth in the preferred position of birth (Burrowes et al 2017:263).

A study was conducted in Ethiopian public health facilities to assess the prevalence of respectful maternity care (RMC) and mistreatment of women in hospitals and health centres, and identify factors associated with occurrence of RMC and mistreatment of women during institutional labour and childbirth services. The study findings documented that health centres' health care providers were better in giving an option for the birthing position preferred by the client. The variation could be explained by the methodological difference in the data collection (Sheferaw et al 2017:8).

2.4.6.3 Providing friendly service

A study conducted in Teheran at a non-teaching public hospital aimed to explore the perceptions of Iranian midwives regarding respectful maternity care during labour and childbirth. The findings revealed that the health care providers, especially those with longer work experience, believed that establishing a good and friendly relationship was essential for providing RMC. The health care providers stated that pregnant women are

worried about their own and their baby's health status and believed that creating a good relationship would create a very friendly atmosphere to preserve RMC (Shimoda, Horiuchi, Leshabari & Shimpuku 2018:4).

2.4.6.4 Maintain client privacy

A study conducted in Kenya to answer a research question whether providers and women differ in their perceptions of person-centred care and what are potential reasons for differences in reports of person-centred care from the providers' perspective. The qualitative findings by health care providers revealed that a majority of health care providers described the wards as extremely crowded. Sharing of beds is common making privacy impossible. Providers also described cases when women were forced to deliver on the floor due to high patient volume and lack of subsequent bed space (Sudhinaraset et al 2019:15).

A study conducted on midwives' respect and disrespect of women during facility-based childbirth in urban Tanzania revealed that most of the examination areas and labour beds were in rooms readily visible to others, several beds were partitioned with curtains. Some of the midwives were considerate and protected a woman's privacy from other women using partitions and clothes (Shimoda et al 2018:4).

2.4.6.5 Communication and counselling skills

An assessment conducted in Tanzania by Shimoda et al (2018:4) on interpersonal communication revealed that establishing excellent interpersonal communication between midwife and client had significant contribution in creating comfort and making feel relaxed. Similarly, another study done by Chodzaza, Mbiza, Gadama and Kafulafula (2020:4) in Malawi demonstrated that communication had significant impact on client safety.

Studies done in Nigeria and Uganda revealed that the interpersonal communication among the providers and clients were inadequate (Rosen, Lynam, Carr, Reis, Ricca, Bazant & Bartlett 2015:7; Yang, Meghan, Bohren, Kyaddondo, Titiloye, Olutayo, Oladapo, Souza, Gülmezoglu, Mugerwa & Fawole 2017:22).

2.4.6.6 Partograph and its benefit

A partograph is a tool that supports monitoring the progress of labour and taking appropriate action for the wellbeing of the mother and baby. Regarding clinical service providers' practise, the participants found that some health care providers at the health centres did not practise the national guideline recommendations to safeguard the mother and newborn. They had gaps in utilising partographs consistently, failure to monitor the vital signs of the mother and newborn according to the recommendations.

Study findings cited in Yang et al (2017:5) done in Nigeria and Uganda revealed a gap in utilisation of partographs. In addition to the above studies other studies also documented the benefit of partograph in monitoring labour and delivery (Hagos , Teka & Degu 2020:4; Hailu , Nigus, Gidey, Hailu & Moges 2018:3; Iyengar et al 2014:1471-2393; Nesbitt et al 2013:5; Worku et al 2013:4).

Dynes, Twentyman, Kelly, Maro, Msuya, Dominico, Chaote, Rusibamayila and Serbanescu (2018:8) and Yang et al (2017:20) revealed that partograph utilisation was inadequate and not filled out in a timely manner. It was also documented that the partograph was filled after the labour progress faced some challenges or completed in particular if there was a diagnosis of poor progress of labour retrospectively.

2.4.6.7 Monitoring maternal and foetal wellbeing

A study conducted in Addis Ababa city public health facilities by Hagos et al (2020:4) found that health care providers monitored the blood pressure of mothers, uterine contraction, status of membrane and foetal heartbeat regularly for the majority of the clients.

2.4.6.8 Infection prevention practise

A study conducted in six health facilities of Nigeria identify the barriers and opportunities experienced by staff when implementing infection prevention and control (IPC) guidelines in maternity wards and delivery units found that all instruments used to manage delivery services were sterilised or cleaned with high-level chemical disinfectant before being using with subsequent clients (Buxton, Flynn, Oluyinka, Cumming, Esteves, Mills, Shiras,

Sara & Dreibelbis 2019:428-434). The study also found that half of the health facilities did not separate the waste as non-infectious, infectious and hazardous waste.

2.5 RESPECTFUL MATERNITY CARE (RMC)

In 2011, the White Ribbon Alliance published the Respectful Maternity Care Charter, based on the principle that respectful maternity care is every woman's right. Safe motherhood is more than the prevention of death and disability. Safe motherhood encompasses respect for every woman's basic human right: autonomy, dignity, feelings, choices, and preferences. Yet all over the world, women continue to face disrespect and abuse in pregnancy and childbirth. In 2013, Windau-Melmer (2013) published a guide for advocating for respectful maternity care (RMC), which centred on the charter and presents ways to build awareness among women and communities regarding RMC and advocates for the institutionalisation of RMC as a core value of the maternal system. Windau-Melmer (2013:7-19) provides information and user-friendly tools and techniques to help raise awareness and generate demand from civil society for RMC rights; mobilise communities to hold local leaders and service providers accountable for RMC, and secure commitment at national level to institutionalise RMC as the standard of care.

According to Windau-Melmer (2013:7-19), every pregnant woman has seven rights and the rights are:

- Article one: "Every woman has the right to be free from harm and ill treatment". The pregnant women have right to get service which is safe and with no harm. Health care providers to pregnant women hand to body contacts should be calm, bolstering and cheering as much as possible.
- Article two: "Every pregnant woman has the right to get information of care, well-versed agreement and refusal, and reverence for her choice and preferences including doula during maternity care": this means that every woman has the right to have adequate information/knowledge, agree or refuse a procedure or treatment and no treatment will be given without the consent of the client.
- Article three: "Every pregnant woman has the right to privacy and confidentiality" by health care providers: every procedure and treatment to clients will be managed with privacy and confidentiality of clients and her information.
- Article four: "Every woman has the right to be treated with dignity and respect."

- Article five: “Every pregnant woman has the right to equality, freedom from discrimination and equitable care.”
- Article six: “Every pregnant woman has the right to health care and to get the maximal level of care.”
- Article seven: “Every pregnant woman has the right to liberty, autonomy, self-determination, and freedom from coercion” (Windau-Melmer 2013:78-79).

Promoting respectful care at childbirth is important to improve quality of care and encourage women to utilise skilled delivery services. A review of evidence of disrespect and abuse during childbirth in Nigeria found that non-dignified care through negative, poor and unfriendly provider attitudes, physical abuse, and detention in facilities was fairly prevalent (Ishola, Owolabi & Filippi 2017:8-10). The main causes of disrespect and abuse were low socioeconomic status, lack of education and empowerment of women, poor provider training and supervision, and lack of accountability. Ishola et al (2017:8-10) concluded that the findings indicated the importance of educating women on their rights, strengthening health systems to respond to specific needs of women at childbirth, improving providers’ training to encompass interpersonal aspects of care, and implementing and enforcing policies on respectful maternity care. In Enugu, Nigeria, Okafor, Ugwu and Obi (2015:110) found that disrespect and abuse, including non-dignified care, non-consented services, abandonment/neglect during childbirth and non-confidential care, were highly prevalent. In Kenya, Abuya, Warren, Miller, Njuki, Ndwiga, Maranga et al (2015:9) reported that poor quality of care including fear of disrespect and abuse from health workers influenced women’s decisions to seek maternity care. The key manifestations of disrespect and abuse were physical abuse, non-consented, non-confidential and non-dignified care, discrimination, and abandonment in health facilities.

In Addis Ababa, Ethiopia, Asefa, Bekele, Morgan and Kermodé (2018:4) examined service providers’ experiences of disrespectful and abusive behaviour towards women during facility-based childbirth in one hospital and three health centres. Many of the participants reported that the workload was heavy and the working environment was poor. The study found that most of the participants had witnessed disrespectful practises during childbirth and believed that lack of respectful care discouraged pregnant women from coming to health facilities for delivery.

The prevalence of physical abuse (violation of article 1, which states that “Every woman has the right to be free from harm and ill treatment” in various forms during maternal care service provision revealed huge variation from country to country as well as from facility to facility which had been witnessed by clients. The findings were highest in Nigerian health facilities with a prevalence of 36% and lowest in Kenyan health facilities with a prevalence of 4.3%. The physical abuse was approximately 23% at public health facilities in Addis Ababa, Ethiopia. The prevalence of verbal abuse was 8% verbal abuse from the client verbal autopsy at government owned health centres and hospitals (Abuya et al 2015:9; Asefa et al 2018:5; Ishola et al 2017:10; Okafor et al 2015:110-113).

The second article of childbearing women’s rights is about the information on the provision of services, consent in getting the service, refusal and championship during labour and delivery. Research undertaken to review the prevalence of respectful maternity care with direct observation in selected Southern and Eastern African countries showed that 62% of clients received information prior to the procedure and shared the findings to the clients in 67% of the observations (Rosen et al 2015:7). Consented care is another indicator which was assessed with different scholars and the findings vary from 4.3% non-consented care in Kenya, from 48% to 94.3% in Ethiopia and 54.5% in Nigeria (Abuya et al 2015:8; Assefa et al 2015:5-6; Okafor et al 2015:59-72; Sheferaw et al 2017:6). Labour and delivery clients have the right to have their birth championship (Doula) during labour and delivery service provision. Most of the time this right is overlooked by health service providers and researchers evidenced that the birth championship is practised relatively well in health facilities, about 80% of clients had been allowed to have birth champion/birth support person/doula during labour and delivery (Sheferaw et al 2017:8).

Privacy and confidentiality are key components in quality-of-care service provision and part of the childbearing woman rights as article 3. The privacy and confidentiality were also assessed by different researchers, one study conducted in southern and Eastern Africa showed that Tanzania had 54% auditory and visual privacy, Kenya had 65% auditory and visual privacy, Madagascar had 72% auditory and visual privacy and Rwanda had 77% auditory and visual privacy whereas Ethiopia and Zanzibar had no separate room for labour and delivery as well as no screens or any barriers for visual privacy (Abuya et al 2015:9; Assefa et al 2015:7; Igboanugo & Martin 2011:59-72; Okafor et al 2015:59-72; Rosen et al 2015:306; Sheferaw et al 2017:7).

The confidentiality issues of clients are critical and one study done in Nigeria revealed that 18% of the clients were getting services which were not confidential and sensitive information was shared to third parties without their consent (Okafor et al 2015:59-72). Every childbearing woman has right to have services provided with dignity and respect, in order to ensure this, different researchers conducted assessments and the results showed that unfriendly shouting labour and delivery women, even the worst unethical and unprofessional practises during service provisions like using soiled linen, using client clothes for cleaning the client vagina and others were observed (Rosen et al 2015:7). In general, the overall prevalence of disrespect and abuse during labour and delivery was varied from lowest of 11% prevalence to highest of 71% prevalence at different research results (Abuya et al 2015:9; Assefa et al 2015:7; Ishola et al 2017:10; Okafor et al 2015:59-72; Sheferaw et al 2017:5).

2.6 DETERMINANTS OF RESPECTFUL MATERNITY CARE PROVISION

Respectful maternity care is a fundamental human right that includes respecting women's beliefs, independence, emotions, dignity and preferences to reserve their right of having a companion or performing their cultural rituals (WHO 2008, 2014; Windau-Melmer 2013). The WHO developed the safe childbirth checklist in 2008 to support the delivery of essential maternal and perinatal practise. In 2014 the WHO called for the prevention and elimination of disrespect and abuse during childbirth, stating that every woman has the right to the highest attainable standard of health, including the right to dignified, respectful care during pregnancy and childbirth. The components of respectful maternity care include providing safe and timely care; nurturing positive interactions between midwives and women; protecting confidentiality; maintaining an active role in the labour process; providing information regarding procedures to women and obtaining the women's consent before performing procedures.

Patient or client satisfaction is the main determinant or indicator of RMC and the availability of safe birth supplies and resources are vital to implementing the WHO safe childbirth checklist, which was designed to improve delivery of 28 essential birth practises (Galvin et al 2018:240-249; Getenet, Roba, Seyoum, Mamo & Darghawth 2019:1-11). Satisfaction with maternity care promotes utilisation of health facility-based services and reduces maternal and newborn mortality.

According to a study done by Sheferaw et al (2017:9-10) in Ethiopian public health facilities to assess the prevalence of respectful maternity care (RMC) and mistreatment of women in hospitals and health centres, factors associated with occurrence of RMC and mistreatment of women during institutional labour and childbirth services were identified. The result revealed that respectful maternity care provision can be affected by different factors including the type of health service providers, that is midwife nurses provided better RMC services than clinical nurses. Sex of the health service providers male midwifery nurses provided better RMC services than female midwifery nurses. Presence of birth champion(doula) was found to be one of the determining factors to have better quality of RMC. Another systematic review of different publications in Nigeria cited by Ishola et al (2017:11) explained that women who had not been previously exposed to any health care service provision were not usually feeling any form of abuse and disrespect with health care providers and did not usually complain about this abuse and disrespect to anyone. Clients who have no financial capacity to pay for the services received different forms of disrespect and abuse by the health care service providers. It was also shown that clients who had no or low educational level and with low socio-economic status were vulnerable to disrespect and abuse by the health care service providers.

2.7 CLIENT SATISFACTION

Patient or client satisfaction is one of the crucial elements to increase facility-based delivery rate as an approximate or closest indicator for the improvement of quality of intrapartum care and mechanism for improving continuous quality improvement of intrapartum care. Regular client feedback collection about the service they have is not well designed and utilised in developing countries like Ethiopia. According to Srivastava, Avan, Rajbangshi and Bhattacharyya (2015:5), study results of a systematic literature review on client satisfaction of labour and delivery in developing countries had been conducted, the findings revealed that 24 of the 54 research results declared that greater than 75% of the clients were satisfied with the service they got, 10 publications reported that the client satisfaction level is between 50%-75% whereas only 3 publications had client satisfaction level is below 50%. A study conducted by Kigenyi, Tefera, Nabiwemba and Orach (2013:1371) revealed that the overall client satisfaction expressed as quality of intrapartum care at Uganda national referral hospital was 49.4% which assessed different components of client perspectives on the quality of intrapartum care provision it

was much lower in another study conducted in Jordan with an overall satisfaction rate of 36.12% (Mohammed, Shaban, Homer & Creedy 2014:32-39). Moreover, another cross-sectional study conducted in Eritrea Asmara by Kavitha, Prasath, Solomon, Tsegaye, Tsegay and Teklit (2014:252) explained client satisfaction level with three different categories, the first one being highly satisfied in the service which had a prevalence of 74%, satisfied with the service with a prevalence of 24% and dissatisfied with the service with a prevalence of 2%.

2.8 DETERMINANTS OF CLIENT SATISFACTION WITH INTRAPARTUM CARE

Client satisfaction by the quality of intrapartum care can be determined by different factors and different scholars found that there are factors that determine client satisfaction with Intrapartum care. Among the scholars Ishola et al (2017:11) conducted a systematic literature review on disrespect and abuse during childbirth and this research identified some determining factors. From the identified factors normalisation of abuse and disrespect was one, which means that women who had never been exposed to these kinds of services were accepting any forms of disrespect and abuse as a normal phenomenon for any childbearing women since they did not have the awareness of their rights such that they were less likely to report any disrespect and abuse. Another determinant factor was low financial capacity of clients, clients who had financial difficulty to pay their bill were more frequently received with disrespectful abusive care compared with those who had financial capacity to pay their bills. Level of education and socioeconomic status were determinant factors for the client satisfaction, which implied that those clients with less or no education had more chance of getting disrespectful and abusive care during childbirth than those who were more educated as well as those clients with low socioeconomic status received disrespectful and abuse care compared with those with higher socio-economic status in the community.

According to research conducted by Mohammed et al (2014:32-39) on women's satisfaction with hospital-based intrapartum care in a Jordanian study on maternal satisfaction regarding quality of nursing care during labour and delivery in Sulaimani teaching hospital identified factors for low client satisfaction level among clients who gave birth normally experienced pain and the pain management was reported sub-optimal, having an episiotomy procedure as part of normal delivery and clients having postpartum haemorrhage.

Another study cited in Assefa and Bekele (2015:7) assessed the level of respectful and non-abusive care in selected hospitals and health centres of Addis Ababa. This assessment was done by interviewing immediate post-partum clients and there was a factor identified as determinant of respectful and non-abusive care for childbearing women. The determinant factor was monthly income of the client, according to the research finding, as the monthly income of the client gets lesser there was a higher probability of getting disrespect and abusive care compared with those clients who had higher monthly income.

2.9 CONCLUSION

This chapter discussed the literature review undertaken for the study. The literature review covered an overview of Ethiopia's health care system; quality in health care; quality intrapartum care and its parameters; respectful maternity care; intrapartum care service provision; client satisfaction; quality improvement standards, and measures of quality, and respectful maternity care.

Chapter 3 discusses research design and methodology.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter presents the research design and methods of the study. It details how the research objectives and questions were addressed. The study explored different designs and methods to address the research objectives. The purpose of the study was managed through five strands. The chapter outlines the rationale for the chosen design, the research method: population, sampling, data collection processes, data analysis, validity and reliability, trustworthiness and ethical considerations

3.2 PURPOSE OF THE STUDY

The purpose of the study was to assess the quality of care, providers' practise of respectful maternity care, and clients' satisfaction with the intrapartum care at health centres and to develop strategies to improve the quality of intrapartum care at health centres level.

In order to achieve the purpose, the objectives of the study were to:

- Develop strategies to improve the quality of intrapartum care at health centre level in West Gojjam Zone, Amhara Region Assess women's perspectives on the perceived quality of intrapartum care received in West Gojjam Zone, Amhara Region.
- Determine the practise of health care providers regarding respectful maternity care and its determining factors during normal childbirth in West Gojjam Zone, Amhara Region.
- Investigate the quality of the care provided to women during the intrapartum period during normal childbirth.
- Explore the views and challenges of health care providers and supervisors in the implementation of quality of intrapartum care provision during normal childbirth.

3.3 RESEARCH DESIGN

A research design is a set of logical steps taken by the researcher to answer the research questions (Brink et al 2005:217). Burns and Grove (2007:195) refer to a research design as a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. Polit and Beck (2014:273) describe a research design as the overall plan for addressing a research question, including the specifications for enhancing the integrity of the study.

In order to meet the research objectives, the researcher selected a mixed methods approach. Mixed methods research combines qualitative and quantitative approaches to complement each other to provide comprehensive data and gain deeper understanding of research problems (Bowling 2009:452; Christensen, Johnson & Turner 2014:382; Polit & Beck 2014:309).

The researcher selected a convergent parallel mixed methods research design to offer equal weight to both qualitative and quantitative approaches (Andrew & Halcomb 2009:36). The researcher considered this design appropriate for the purpose and to meet budget and time constraints. Convergent parallel mixed methods studies collect quantitative and qualitative data concurrently (Creswell & Creswell 2018:388).

3.4 RESEARCH METHODOLOGY

Research methodology is the plan for conducting the specific steps of a study (Burns & Grove 2007:129). Research methods are “the techniques researchers use to structure a study and to gather and analyse information relevant to the research question” (Polit & Beck 2014:741). The methodology includes the setting, population, sampling and sample, data collection and data-collection techniques, data analysis, and trustworthiness. The researcher conducted the study in five strands. The research methodology for the five strands is discussed next.

3.4.1 Strand 1: Quantitative

In strand 1, the researcher examined the readiness and cleanliness of the health facilities and availability of amenities.

3.4.1.1 Setting

Ethiopia has a three-tier health system in which the primary level health care consists of primary hospitals, health centres and health posts. The secondary level health care is managed by general hospitals while the tertiary level is managed by specialised central hospitals. The primary level of health care and the health centres are the point of entry to most curative and preventive health care service provision.

Ethiopia has nine regional states and two city administrations. Amhara region is one of the regional states, the second most populous region next to Oromia region, and has 11 zones. The study was conducted in West Gojjam Zone, which has 106 functional health centres.

In the 2010 Ethiopian fiscal year (EFY), West Gojjam Zone had an estimated population of 2,655,309. The zone has 17 districts with the capital city of Fenoteselam, 200 km from Bahir Dar (the capital of Amhara region) and 355 km from Addis Ababa, the capital of Ethiopia. The zone is among the top performing in terms of volume of delivery services among all the zones of Amhara region but the quality of the intrapartum care is not known at health centre level.

3.4.1.2 Population

A research population refers to the entire set of elements, individuals or objects with some common characteristics in which a researcher is interested (Polit & Beck 2014:337). Burns and Grove (2007:544) describe the population as all the individuals that meet certain criteria for inclusion in a study. Polit and Beck (2014:338) distinguish between the target and the accessible population. The target population refers to the entire group of individuals about whom the researcher would like to generalise to. The accessible population is the subset of the target population to which the researcher has access for the study.

The target site population for strand 1 were the 106 health centres in West Gojjam Zone. Of those health centres, 104 provide labour and delivery services and were the population of interest for the study.

3.4.1.3 Sample and sampling

A sample refers to a subset of a population (individuals, elements or objects) or a group selected to act as representatives of the population as a whole (Polit & Beck 2014:275). Sampling is “a process of selecting a portion of the population to represent the entire population, so that inferences can be made about the population” (Polit & Beck 2014:275). In order to meet time and resource constraints, the researcher used simple random sampling to select 25% (n=26) of the health centres for the study (Dattalo 2008:13). The researcher listed all the health centre names and randomly selected the participant health centres.

3.4.1.4 Data collection

Data collection is the precise, systematic gathering of information relevant to the purpose or objectives of the study (Burns & Grove 2007:152; Polit & Beck 2014:280).

3.4.1.4.1 Data-collection instrument

In strand 1 data were collected by means of observation, using a structured checklist. The checklist was developed and adapted from the WHO, USAID/MCHIP, Jhpiego and FMOH quality assessment checklists. The adaptation was mainly to fit the rural health centre conditions.

The data-collection checklist evaluated the readiness of the selected health centres to provide quality intrapartum care and covered the availability of infrastructure, medical equipment and supplies necessary to conduct normal labour and delivery services. The survey (observation) included infrastructure, cleanliness of the delivery rooms and couches, medical equipment, drugs and supplies essential for intrapartum care in the labour and delivery rooms.

3.4.1.4.2 Testing data collection instrument

The researcher conducted a pilot study of the data-collection instrument at the Robit Health Centre, which was not included in the main study. The researcher trained twenty-six experienced health care workers as field workers for field work on the purpose and objectives of the study, the checklist, and data collection procedures. After the pilot study, the researcher modified the checklist according to the field workers' feedback. The feedbacks were there was misinterpretation of the contents of the message.

3.4.1.4.3 Data-collection process

The field workers collected data by observation and completing the checklist. The observation covered the cleanliness of the health centre compound, labour and delivery rooms as well as delivery beds, the availability of an incinerator, water, medical supplies, drugs and equipment in the labour and delivery rooms. Each field worker observed one health centre for ten days to collect data. The observation findings were filled in on the checklist. The study supervisor and the researcher supervised and checked the data collection and completed checklists. The researcher also did regular spot checking and communicated with the field workers telephonically, especially if any gaps were identified.

3.4.1.4.4 Data organisation, management and analysis

After data collection, the researcher checked the data for completeness and entered the data into EPI-info program. After data entry and cleaning, the final data were exported. The statistician analysed the data using the SPSS version 20 software program, and presented the findings in frequencies, tables and diagrams.

3.4.2 Strand 2: Quantitative

Strand 2 assessed the quality of care provision during labour and delivery by means of direct non-participatory observation of labour and delivery management from the start of true labour until the delivery of the placenta without interference. The data were collected using the structured checklist.

3.4.2.1 Population

The second strand of the study was based on a study population of 89,489 pregnant women and an institutional delivery rate of 67% which gave an institutional delivery rate of 59,977 pregnant women in West Gojjam Zone health facilities. Of all institutional deliveries, 87.5% were attended at health centre level. Therefore, the study had a target population of 52,300 pregnant women who were expected to attend labour and delivery services at the health centres (West Gojjam Zone Health Department administrative report for 2011 EFY (2018/2019 G.C) Ethiopian fiscal year).

In strand 2 the target population was the labour and delivery mothers at the selected health centres of West Gojjam Zone Health Department. The researcher recruited participants from the health centres during the data-collection period.

3.4.2.2 Sampling and sample

The researcher extracted the study population from the zonal health department DHIS 2 delivery service report for 2011EFY of the health centres and 279 women who attended the health centres' labour and delivery rooms during the data-collection period were included as the sample population. Moreover, the health centres had a sample size weighted against the delivery service report of 2011EFY (2019/2020 G.C). The To be included in the study, participants had to be over 18 years old, give birth during the study period, and consent to participate.

The researcher allocated the number of labour and delivery clients to be enrolled in each health centre through the weight of the delivery services reported for 2011 EFY of the DHIS 2 report of the zonal health department. Clients who attended the labour and delivery rooms of the health centres were enrolled in the study through non-probability, convenience sampling, based on availability. The researcher used a sampling frame from the average deliveries attended according to the selected health facilities weighted average. The researcher ensured its statistical representation of the health centers through taking into account case load of the previous year labour and delivery report as factor to allocate weighted sample size to the health centres. The calculation to obtain the number of sample for strand three per health centres were calculated as follows: Initially the number of delivery services per health centres extracted from the

administrative report of zonal health department for one years, the percentage of services for each health centres were calculated and this percentage was used to calculate the number of sample sizes required per each health centres (see Table 3.1).

Table 3.1 Weighted sample size allocation of each health centre for strand 2 according to number of deliveries at each health centre

SN	Name of health centre	Number of deliveries at health centre in 2011EFY	Weighted deliveries %	Sample for Strand 2 (deliveries)
1	Agumamit	172	1.6	5
2	Andassa	465	4.4	13
3	Adet	847	8.0	24
4	Alefa	370	3.5	10
5	Areb Gebeya	262	2.5	7
6	Belen	213	2.0	6
7	Debremawi	301	2.8	8
8	Demdengay	345	3.3	10
9	Dembecha	1031	9.7	29
10	Durebetie	368	3.5	10
11	Enegadi	201	1.9	6
12	Fentoteselam	353	3.3	10
13	Forehisankera	278	2.6	8
14	Geregera	453	4.3	13
15	Gish Abay	540	5.1	15
16	Jiga	487	4.6	14
17	Kinbaba	686	6.5	19
18	Kuch	746	7.0	21
19	Liben	223	2.1	6
20	Mankussa	423	4.0	12
21	Sekella	223	2.1	6
22	Talia	257	2.4	7
23	Wogedad	498	4.7	14
24	Wotet Abay	334	3.1	9
25	Woyinema	250	2.4	7
26	Yinesa	282	2.7	8
	Total	10608	100.0	299

The sample size was determined based on the formula which took into consideration the proportion or prevalence of the study subjects, the confidence interval and margin of error which the study accepted.

Therefore, the formula to estimate the sample size was as follows:

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

$$n= (1.96) (1.96)^2 \times (0.77) (0.23)/(0.05)^2$$

$$n=0.680347/0.0025 \quad n=272$$

Consider 10% non-response rate

$$n \text{ final}= (272 \times 0.1) + 272 = 299$$

Where n for sample size and n final for final sample size after considering 10% non-response rate:

$Z_{\alpha/2}$ =confidence level taken as 95%=1.96

P=prevalence or proportion of client satisfaction for the intrapartum care services delivered at health facility taken from the previous study conducted in Amhara Region Ethiopia by Yigezaw et al (2017:261) to assess the quality of midwifery care during labour, delivery and immediate postpartum period with a proportion of 77% provider competency and d=margin of error taken as 5%.

The above sample size was calculated and allocated to 26 health centres based on the number of deliveries attained in the respective health facilities prior to the data collection year (table 3.1).

3.4.2.3 Data collection

In strand 2, data were collected by means of non-participatory, direct observation, using a structured checklist.

3.4.2.3.1 Data-collection instrument

The researcher developed and adapted the checklist from the WHO intrapartum quality of care standards, the FMOH maternal and child health quality monitoring checklist, USAID/MACIPA, and Jhpiego checklists. The data-collection checklist was developed in English and translated into Amharic for ease of understanding and communication, and later translated back to English for consistency and validity.

The data-collection instrument consisted of three sections, namely participants' sociodemographic profile, observation checklist for quality of intrapartum care service provision, and respectful maternity care provision by the service providers.

3.4.2.3.2 Testing data collection instrument

The researcher conducted testing data collection instrument with twenty-six experienced health care workers as fieldworkers at the Robit Health Centre, which was not included in the main study. After the testing of the data collection instrument of study, the researcher modified the checklist according to the field workers' feedback. The findings of the data collection tool showed that there were difficulty in identifying one of the question message to fill out from the observation of health care providers.

3.4.2.3.3 Data-collection procedure

Data were collected by means of non-participatory, direct observation, by experienced health care workers as fieldworkers for the study to assess the quality of intrapartum care including respectful maternity care. The checklist was developed and adapted from the WHO, USAID/MCHIP, Jhpiego and FMOH quality assessment checklists. The observation of labour and delivery service provision started from the admission of clients to labour and delivery rooms up to delivery of the placenta. The health care workers had prior experience of data collection.

Data collection took place during labour and delivery with direct observation of the procedure from the admission of the clients to the labour ward up to the delivery of placenta. The structured non-participatory observation checklists were completed for all labour and delivery procedures.

3.4.2.3.4 Data management and data analysis

After data collection, the researcher checked data completeness and quality, and entered the data using EPI-info data entry template developed by the statistician with the questionals flow considered. The statistician analysed the data, using the SPSS version 20 program and presented the findings in frequencies, tables and diagrams. Moreover,

some analytical analysis through binary and multiple logestics regression conducted and presented in table.

3.4.3 Strand 3: Quantitative

Strand 3 assessed the participants' perceptions of the quality of intrapartum care received and involved post-natal clients who had given birth at the selected health centres in the previous six months and came for post-natal visits.

3.4.3.1 Population

In strand 3 the target population was post-natal clients who had given birth at the selected health centres in the last six weeks.

3.4.3.2 Sample and sampling

The researcher allocated number of post-natal clients to be enrolled into the study through the weight of the post-natal services reported for 2011 EFY of the DHIS-2 report of the zonal health department as well as the post-natal visited trends of the health centres. Participants who attended the post-natal clinic at the selected health centres and met the inclusion criteria were enrolled in the study by systematic random sampling in which every fourth client was recruited.

Using systematic random sampling, the researcher selected every fourth client who attended the post-natal clinics at the health centres during the data-collection period. To be included in the study, the participants had to be over 18 years of age, had given birth at the selected health centres, and consent to participate. Every fourth client who met the inclusion criteria was selected for 10 days until the required sample size met the weighted sample size of the respective health centres. The interval was calculated based on the daily client flow registers of the health centres and the daily maximum intake was 8 post-natal clients per day per the average rigestry of the health centres administration data.

A total of 260 participants were selected for strand 3. The sample size was calculated according to a single proportion sample size estimation formula as follows:

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

$$n= (1.96) (1.96)^2 \times (0.81) (0.19)/ (0.05)^2$$

$$n= (3.8416) \times (0.1539)/0.0025$$

$$n=0.591222/0.0025 \quad n=236.5$$

Consider 10% non-response rate

$$n \text{ final}= (236.5 \times 0.1) + 236.5 = 260$$

Where n for sample size and n final for final sample size after considering 10% non-response rate:

$Z_{\alpha/2}$ =confidence level taken as 95%=1.96

P=prevalence or proportion of client satisfaction for the intrapartum care services delivered at health facility taken from the previous study conducted at St Paul hospital millennium college of health science 19%.

d=margin of error taken as 5%.

Similarly, the third strand of the study participants for labour and delivery client satisfaction survey was enrolled from the 26 health centres selected for service availability and readiness assessment. The researcher allocated number of post-natal clients to be enrolled into the study through the weight of the post-natal services reported for 2011 EFY of the DHIS-2 report of the zonal health department as well as the post-natal visited trends of the health centres. Participants who attended the post-natal clinic at the selected health centres and met the inclusion criteria were enrolled in the study by systematic random sampling in which every fourth client was recruited until the required number at clients was obtained. The interval was calculated based on the daily client flow registration of the health centres and the daily maximum intake of the data to be enrolled on a day was 8 post-natal clients per day per the administrative data of health centres.

The sample size calculated for each health centres based on the number of post-natal care provided in the specified health centres prior year of data collection (table 3.2)

3.4.3.3 Data collection

In strand 3, data were collected by trained experienced health care workers as fieldworkers, using a structured interview questionnaire (Annexure 13). Data collection took place in a separate room after the participants had received post-natal services.

3.4.3.3.1 Data-collection instrument

The researcher developed the data-collection instrument by adapting the World Health Organisation intrapartum quality of care standards, the FMOH maternal and child health quality monitoring checklist, and USAID/ MACIPA, Jhpiego checklists. The structured questionnaire was developed in English and translated into Amharic for ease of understanding and communication, and finally translated back to English for validity.

The data collection instrument consisted of three sections, namely the participants' sociodemographic profile: experience of respectful maternity care (RMC), and client satisfaction on experience during labour and delivery of the last childbirth.

3.4.3.3.2 Testing data collection instrument

The researcher tested the data-collection instrument with twenty-six trained experienced health care workers as fieldworkers at Robit Health Centre. After the pilot study, the researcher modified the tool based on the participants' feedback. The feedbacks were there was misinterpretation of the contents of the message on the client satisfaction question misunderstanding.

3.4.3.3.3 Data-collection process

Data were collected by trained fieldworkers who administered the structured interview questionnaire. Data collection took place in a separate room after the participants had received post-natal services. This enabled the participants to respond freely about the services they had received.

The calculation to obtain the number of sample for strand three per health centres were calculated as follows: Initially the number of PNC visits per health centres extracted from

the administrative report of zonal health department for one years, the percentage of services for each health centres were calculated and this percentage was used to calculate the number of sample sizes required per each health centres (table 3.2).

Table 3.2 Weighted sample size allocation for each health centre for strand 3 according to number of PNC clients

SN	Name of health centre	Number of deliveries at health centre in 2011EFY	Number PNC clients managed per health centre in 2011EFY	Weighted PNC (%)	Sample for Strand 3 (PNC)
1	Agumamit	172	177	1.8	5
2	Andassa	465	465	4.8	12
3	Adet	847	863	8.8	23
4	Alefa	370	370	3.8	10
5	Areb Gebeya	262	268	2.7	7
6	Belen	213	182	1.9	5
7	Debremawi	301	286	2.9	8
8	Demdengay	345	345	3.5	9
9	Dembecha	1031	691	7.1	18
10	Durebetie	368	366	3.7	10
11	Enegadi	201	201	2.1	5
12	Fentoteselam	353	636	6.5	17
13	Forehisankera	278	278	2.8	7
14	Geregera	453	454	4.6	12
15	Gish Abay	540	284	2.9	8
16	Jiga	487	487	5.0	13
17	Kinbaba	686	686	7.0	18
18	Kuch	746	321	3.3	9
19	Liben	223	242	2.5	6
20	Mankussa	423	396	4.0	11
21	Sekella	223	200	2.0	5
22	Talia	257	267	2.7	7
23	Wogedad	498	462	4.7	12
24	Wotet Abay	334	337	3.4	9
25	Woyinema	250	250	2.6	7
26	Yinesa	282	264	2.7	7
	Total sample	10608	9778	100.0	260

3.4.3.3.4 Validity and reliability

The quality of a research instrument is determined by its validity and reliability. Validity refers to the degree to which an instrument accurately measures what it is intended to measure (Polit & Beck 2014:1922). Reliability refers to the degree of consistency or dependability with which the instrument measures the attributes it is designed to measure (Burns & Grove 2007:389).

Internal validity refers to how well a study is conducted, and confounding factors are controlled. The researcher developed the instruments to generate valid information. External validity signifies the generalisability of the findings of the study to a larger population. The internal validity of a study is critical to the level of confidence in its conclusion and applicability to similar samples or populations. For content and construct validity, the researcher developed the data-collection instruments based on existing instruments. Content validity refers to whether the items or questions measure what the instrument is supposed to measure and the extent to which the instrument represents the factors of the study (Polit & Beck 2014:192).

Reliability refers to “the degree of consistency or dependability with which the instrument measures the attribute it is designed to measure. If the instrument is reliable, the results will be the same each time the test is repeated” (Polit & Beck 2014:194). Reliability refers to the reproducibility and consistency of the research instruments and their findings (Bowling 2009:170; Johnson & Christensen 2016:610).

3.4.4 Strand 4: Qualitative

Strand 4 was qualitative and explored health care providers’ views and challenges in the implementation of quality of intrapartum care provision during normal childbirth.

3.4.4.1 Population

The population for strand 4 consisted of all the intrapartum care providers, supervisors and mentors at the selected health centres.

In order to ensure representativeness of the population, the researcher included diverse categories of service providers, supervisors and managers working at different levels of the health system (Polit & Beck 2014:320). The researcher purposively selected clinical service providers involved in intrapartum care provision and supervisors and managers who were responsible for support and supervision of intrapartum care provision at zonal health departments, district health offices, primary hospitals and health centre level.

Purposeful sampling enabled the researcher to recruit study participants who had detailed information about the views and challenges of health care providers and supervisors in the implementation of quality of intrapartum care provision during normal childbirth. This study purposefully selected clinical service providers who had a day-to-day role in quality intrapartum care service provision, supervisors and managers who had a direct supportive supervision role in the quality of intrapartum care service provision at zonal health department, district health offices, primary hospitals, and health centre level. The mentors and supervisors were originally from zonal health department, district health offices and primary hospitals who conducted a regular field visit to the health centres for quality and performance monitoring.

The study wished to explore the views and challenges of health care providers, mentors and supervisors in the implementation of quality intrapartum care provision during normal childbirth.

The data collection to health care providers were carried out at the health centre level at the labour and delivery room. The in-depth interview was utilizing an unstructured tool, having audio record and field note documentation of the health care providers opinions and experiences of quality intrapartum care provision. Data collection for mentors and supervisors were conducted at their designated areas of district health offices and primary hospitals since they were living there. The data were recorded with field notes and recorded with audio recording.

3.4.4.2 Data collection

The researcher conducted in-depth interviews with 24 participants, using an unstructured interview guide to collect qualitative data. The researcher took field notes and audio-recorded the interviews with the participants' permission. The interviews lasted about 30

minutes and were conducted in a room that provided privacy and no disturbance. The researcher conducted the interviews in Amharic and later translated the recorded interviews into English. Data collection continued until saturation was reached and no new information emerged.

After data collection, the researcher transcribed the interviews verbatim and translated them into English, then entered the translated data and field notes onto Word documents. The researcher used the computer software program Atlas ti to code the data. Coding and re-coding was done using the Atlas ti 8 computer software program. Then the researcher did thematic analysis with thick descriptions and interpreted the findings.

3.4.5 Strand 5

The purpose of the study was to assess the quality of care, providers' practise of respectful maternity care, and clients' satisfaction with the intrapartum care at health centres and to develop strategies to improve the quality of intrapartum care at health centre level. In strand 5, the researcher developed strategies based on the research findings. The strategy development was done using a Delphi method approach. The Delphi method is a process used to arrive at a group opinion and decision by surveying a panel of experts (Keeney, McKenna & Hasson 2011:14). The experts respond to several rounds of questionnaires, and the responses are aggregated and shared with the group. After receiving feedback, the experts review and rank their responses in the light of the feedback (Keeney et al 2011:14). The goal is to reach consensus.

Therefore, the researcher developed draft strategies based on the research findings and circulated them to the experts for their opinions. Based on the feedback received, the researcher then revised the strategies and circulated them again. This was done several times. The researcher wanted the experts to buy in and own the strategies. Finally, the experts reached consensus on the strategies (Keeney et al 2011:24).

According to Novakowski and Wellar (2008:1485), a Delphi panel is usually composed of 8 to 12 experts. In this study, the researcher invited ten experts who had experience and knowledge of quality of intrapartum care. The panel consisted of one each from the Federal Ministry of Health, Amhara Regional Health Bureau and West Gojjam Zone health department; one each from two non-governmental organisations (NGOs) working

in maternal and child health services, and one each from five elected *woreda* health offices and health centres.

3.4.6 Trustworthiness

Trustworthiness refers to the confidence that qualitative researchers have in their data, using the strategies of credibility, dependability, confirmability, and transferability (Polit & Beck 2014:220).

- Credibility refers to the believability of the results from the participants' perspective. Accordingly, the researcher ensured that the results reflected the participants' experiences and views (Polit & Beck 2014:221). The researcher deployed different data sources from health care providers, mentors and supervisors to improve the credibility of the study findings. Moreover, the researcher engaged on the data collection for adequate time to deeply familiarize with the quality practises at the health centres.
- Dependability refers to the achievement of similar results if the study were conducted again. The field notes and audio transcribed documents were undergone member check by peers for the correctedness and reality of the findings.
- Transferability refers to the degree to which the results of qualitative research can be generalised or transferred to other contexts or settings. The scope and detailed descriptions of the steps of the study ensured the generalisability of the results to other settings.
- Confirmability refers to the degree to which the results could be confirmed by other independent reviewers (Polit & Beck 2014:228). The interview transcriptions and audio recordings served as evidence of the participants' views.

3.5 ETHICAL CONSIDERATIONS

Ethics deals with matters of right and wrong. When humans are used as study participants, care must be taken in ensuring that their rights are protected (Polit & Beck 2018:748). Accordingly, the researcher obtained permission to conduct the study, obtained informed consent from the participants, and observed the ethical principles of

confidentiality, beneficence, respect for human dignity, and justice (Bowling 2009:183; Polit & Beck 2018:748).

- **Permission**

The researcher obtained ethical approval and permission to conduct the study from the Department of Health Studies Higher Degrees Committee of the University of South Africa with ethical clearance number: HSHDC/908/2019 (Annexure 1) and permission from the Amhara Regional Health Bureau Public Health Institute to do the study in West Gojjam Zone health centres. The UNISA Addis Ababa Coordination Office sent a letter to the Amhara Regional Health Bureau, who gave permission for the study to be conducted at West Gojjam Zone health of Amhara region, Ethiopia. The zonal health department informed the respective *Woreda*/district health offices, who sent letters to the selected health centres to confirm permission to conduct the study. Permission to conduct the study was also obtained from the Amhara Regional Health Bureau Public Health Institute to do the study in West Gojjam Zone Health centres and the management of the selected facilities (Annexures 2, 3 and 4).

- **Confidentiality**

The principle of confidentiality refers to treating all data collected with the strictest confidentiality without disclosure to any third party. The data collectors signed a confidentiality agreement. The researcher kept all the data, agreements, and completed questionnaires under lock and key.

- **Autonomy and informed consent**

All the participants were informed of the purpose of the study. The data collectors explained the purpose and objectives of the study, the methods of data collection, and answered any questions before commencing observations to collect data.

The researcher informed the participants of the purpose and objectives of the study, that they had the right to withdraw from the study at any time if they so wished and obtained informed consent from them before conducting the face-to-face interviews.

- **Beneficence**

The principle of beneficence states that one should do good and, above all, do no harm (Burns & Grove 2007:165). The findings of the study and the strategies should benefit the health centres and the patients who receive quality intrapartum and respectful maternity care.

- **Justice**

The principle of justice refers to the right to privacy and the right to fair treatment (Polit & Beck 2014:174). The researcher assured the participants of privacy, confidentiality and anonymity, and treated all the participants with respect and fairly. The researcher assured the participants that all the data would be treated with strict confidentiality and kept under lock and key, accessible only to the researcher. All the quantitative data collected was also treated fairly and confidentially.

3.6 RESEARCH INTEGRATION OVERVIEW

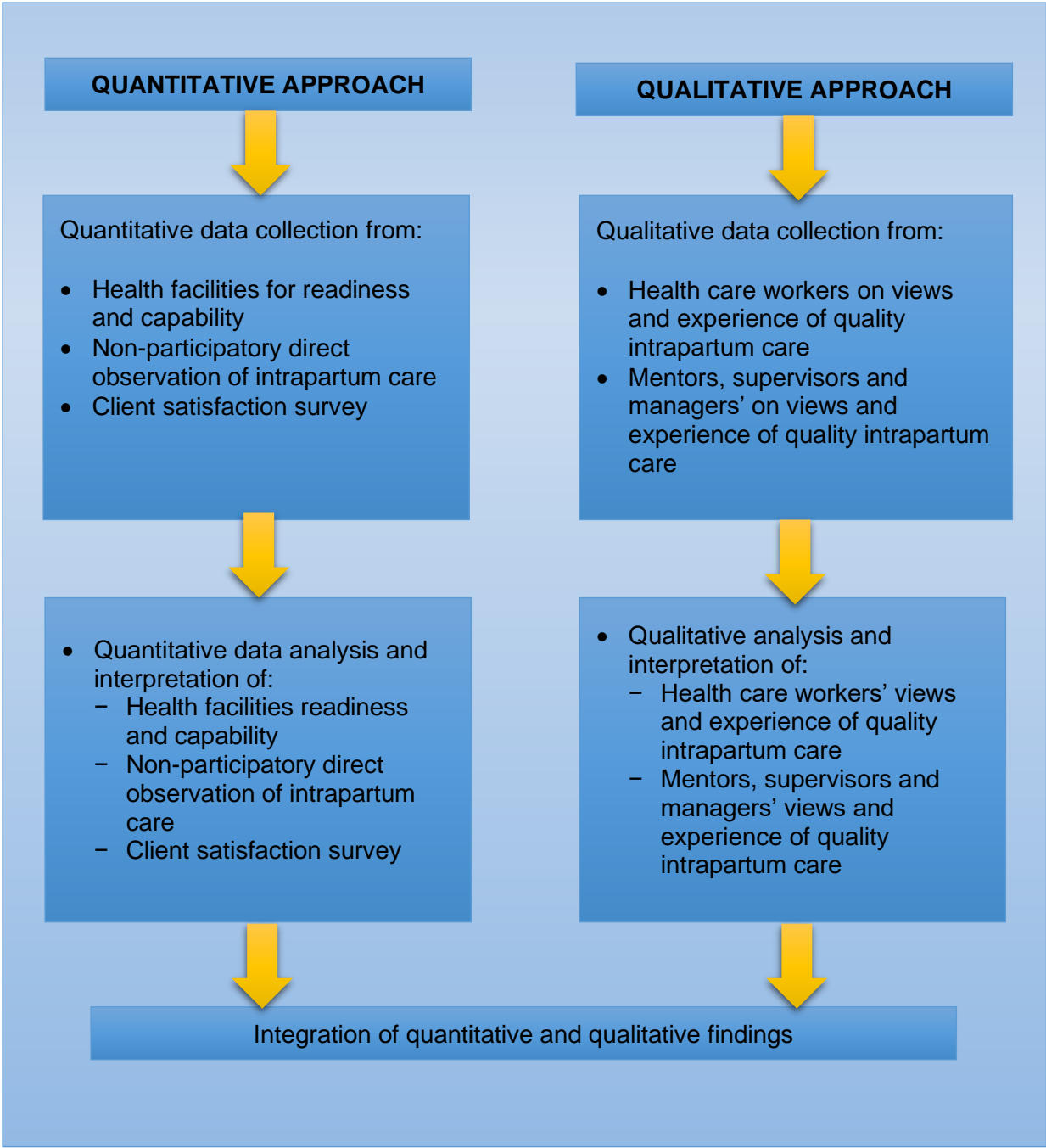


Figure 3.1 Data collection, analysis and integration flow chart

Table 3.2 Research methods in each strand

SN	Research strand	Research design	Target population	Sample size	Sampling	Data analysis
1	Strand 1	Quantitative	104 Health centres	26 Health centres	Simple random	SPSS
2	Strand 2	Quantitative	Labour and delivery patients of HCs	299 labour and delivery patients	Consecutive	SPSS
3	Strand 3	Quantitative	Post-natal mothers of health centres	260 post-natal patients	Systematic	SPSS
4	Strand 4	Qualitative	Clinicians, supervisors and managers of HCs	24 clinicians, supervisors and managers	Purposeful	Atlas ti 8
5	Strand 5	Delphi technique	Panel of experts in maternal health	10	Purposeful	
6	Strand 5	Delphi technique	Summary of expert panel strategies recommendation	10	Purposeful	

Table 3.3 Weighted sample size for each health centre

Weighted sample size for each health centre in strand 2 and 3 according to number of deliveries and post-natal care visits							
SN	Name of health centre	Number of deliveries at health centre in 2011EFY	Number PNC provisions per health centre in 2011EFY	Weight of deliveries (%)	Weight of PNC (%)	Sample for Strand 2 (deliveries)	Sample for Strand 3 (PNC)
1	Agumamit	172	177	1.6	1.8	5	5
2	Andassa	465	465	4.4	4.8	13	12
3	Adet	847	863	8.0	8.8	24	23
4	Alefa	370	370	3.5	3.8	10	10
5	Areb Gebeya	262	268	2.5	2.7	7	7
6	Belen	213	182	2.0	1.9	6	5
7	Debremawi	301	286	2.8	2.9	8	8
8	Demdengay	345	345	3.3	3.5	10	9
9	Dembecha	1031	691	9.7	7.1	29	18
10	Durebetie	368	366	3.5	3.7	10	10
11	Enegadi	201	201	1.9	2.1	6	5
12	Fentoteselam	353	636	3.3	6.5	10	17
13	Forehisankera	278	278	2.6	2.8	8	7
14	Geregera	453	454	4.3	4.6	13	12
15	Gish Abay	540	284	5.1	2.9	15	8

Weighted sample size for each health centre in strand 2 and 3 according to number of deliveries and post-natal care visits

SN	Name of health centre	Number of deliveries at health centre in 2011EFY	Number PNC provisions per health centre in 2011EFY	Weight of deliveries (%)	Weight of PNC (%)	Sample for Strand 2 (deliveries)	Sample for Strand 3 (PNC)
16	Jiga	487	487	4.6	5.0	14	13
17	Kinbaba	686	686	6.5	7.0	19	18
18	Kuch	746	321	7.0	3.3	21	9
19	Liben	223	242	2.1	2.5	6	6
20	Mankussa	423	396	4.0	4.0	12	11
21	Sekella	223	200	2.1	2.0	6	5
22	Talia	257	267	2.4	2.7	7	7
23	Wogedad	498	462	4.7	4.7	14	12
24	Wotet Abay	334	337	3.1	3.4	9	9
25	Woyinema	250	250	2.4	2.6	7	7
26	Yinesa	282	264	2.7	2.7	8	7
	Total	10608	9778	100.0	100.0	299	260

3.7 CONCLUSION

This chapter described the research design and methodology of the study. The researcher selected a mixed methods research design and conducted the study in five strands.

Chapter 4 discusses the quantitative data analysis, interpretation and findings.

CHAPTER 4

QUANTITATIVE DATA ANALYSIS, INTERPRETATION AND FINDINGS

4.1 INTRODUCTION

This chapter discusses the quantitative data analysis, interpretation and results from the first three strands of the study.

The study assessed facility readiness and availability of human resources, medical supplies and equipment; quality of intrapartum care; practise of respectful maternity care, and client satisfaction with the intrapartum care. The results are discussed with reference to the literature reviewed.

4.2 DATA MANAGEMENT

The quantitative data collection were done in three strands. In strand 1, data was collected by means of observation, using a structured checklist, to investigate the participant facilities' readiness and availability of human resources, supplies and equipment to provide quality intrapartum services. Strand 2 assessed the quality of care provision during labour and delivery by means of direct non-participatory observation of labour and delivery management from the start of true labour until the delivery of the placenta without interference. Data were collected using the structured checklist (Annexures 10, 11 and 12).

Strand 3 investigated the quality of the care provided to women during the intrapartum period during normal childbirth at the selected health centres. The study assessed post-natal participants' perceptions of the quality of intrapartum care received at the facilities. Data was collected using a structured interview questionnaire (Annexure 13).

Data management includes careful organisation and preparation for use of data. After data collection, the quantitative data were cleaned and entered using an EPI-Info data entry template. The statistician analysed the data, using the SPSS software program version 20, and presented the findings in frequencies, tables and diagrams.

4.3 DATA ANALYSIS

The quantitative data analysis is discussed according to the three strands, namely the facilities' readiness to provide intrapartum care; observation of intrapartum care provision, and participants' perceptions of and satisfaction with intrapartum care service provision.

4.3.1 Facility readiness to offer quality intrapartum care

This strand discusses the selected health facilities' readiness and availability of medical supplies and equipment to provide quality intrapartum care.

4.3.1.1 Availability of water and incinerators for intrapartum care

Water is a basic factor in providing quality care at health centres. This study found that of the selected health centres (100%; n=26), 88.5% (n=23) had water in the labour and delivery rooms.

Health centres generate medical waste which can be disposed of by burning and incinerators are essential for burning (disposing of) medical waste. The study assessed the availability of functional incinerators for the safe disposal of hazardous waste at the health facilities. Of the health facilities, 96.2% (n=25) had functional incinerators in the health centres compounds.

4.3.1.2 Availability of medical equipment in the labour and delivery rooms

In labour and delivery services, there are different kinds of labour and delivery medical equipment which need to be reused for subsequent labour and delivery clients. Instrument processing is a procedure which makes the equipment ready for reuse safely. In order to process labour and delivery equipment, presence of sterilisation machine at the labour and delivery room is paramount. The study revealed that all the health centres (100%; n=26) had sterilisation equipment.

The labour and delivery rooms were assessed for the availability of basic delivery equipment, namely delivery bed, delivery pack, vacuum extractor, examination light, and

suction machine to manage labour and delivery. The results showed that all the health centres had adequate delivery bed and delivery sets for the number of labour and delivery clients to be managed. All the visited health centres had vacuum extractors and infant weighing scales. Of the health centres, 26.9% (n=7) had examination lights and 69.2% (n=18) had suction machines.

One of the quality indicators to assess health care service provision is doing routine vital signs on admission and regularly (WHO 2014a). For this reason, the study assessed the availability of vital signs assessment apparatus. The results showed that of the health centres, 50% (n=13) had thermometers; 57.7% (n=15) had sphygmomanometers, and 69.2% (n=18) had fetoscopes.

4.3.1.3 Cleanliness of the labour and delivery rooms for intrapartum care

Health centres are expected to be clean and welcoming for labour and delivery clients. The study therefore examined the cleanliness of the labour and delivery rooms and the delivery beds. The study revealed that only 34.6% (n=9) of the delivery rooms and 38.5% (n=10) of the delivery beds were kept clean. The ambulance service availability on a 24 hours basis was in 96.2% (n=25) of the health centres.

Table 4.1 Availability of water and medical equipment in labour and delivery rooms

Variables (number of health centres=26)		Frequency	Percent
Water	No	3	11.5
	Yes	23	88.5
Incinerator	No	1	3.8
	Yes	25	96.2
Thermometer	No	13	50.0
	Yes	13	50.0
Sphygmomanometer	No	11	42.3
	Yes	15	57.7
Fetoscope	No	8	30.8
	Yes	18	69.2
Delivery bed	No	0	0.0
	Yes	26	100.0
Delivery kit	No	1	3.8
	Yes	25	96.2
Examination light	No	19	73.1
	Yes	7	26.9
Vacuum extractor	No	0	0.0

Variables (number of health centres=26)		Frequency	Percent
	Yes	26	100.0
Suction machine	No	8	30.8
	Yes	18	69.2
Infant weighting scale	No	0	0.0
	Yes	26	100.0
Sterilisation machine	No	0	0.0
	Yes	26	100.0
Ambulance	No	1	3.8
	Yes	25	96.2
Average % availability of equipment		26	80.0
Labour and delivery room cleanliness	No	17	65.4
	Yes	9	34.6
Delivery bed cleanliness	No	16	61.5
	Yes	10	38.5

4.3.1.4 Availability of medical supplies for intrapartum care

The availability of medical supplies is important for quality intrapartum care provision. The availability of disinfectants for instrument decontamination was found in 92.3% (n=24) of the health centres.

Intravenous fluid and IV cannulae were available in 96.2% (n=25) of the health centres while Oxytocin, a drug to prevent uterine atony and post-partum haemorrhage, was available in 46.2% (n=12) of the health centres.

Injectable magnesium sulphate and intravenous (IV)/intramuscular (IM) antibiotics were also assessed. The study found that of the health centres, 76.9% (n=20) had injectable magnesium sulphate while 80.8% (n=21) had IV/IM antibiotics.

A partograph is a tool that supports monitoring the progress of labour and taking appropriate action for the wellbeing of the mother and baby. The study assessed the availability of partographs and found that 88.5% (n=23) of the health centres had adequate stocks of partographs to use for labour and delivery clients.

The health centres had adequate supplies of cord ties and scissors or blades to cut and tie the umbilical cord immediately after delivery. The standard precaution of infection prevention recommends safe handling and disposal of sharp medical equipment. The

study assessed the availability of safety boxes or sharp-resistant containers in the labour and delivery rooms and found that 96.2% (n=25) of the health centres had safety boxes to handle sharp medical waste. Of the health centres, 57.7% (n=15) had clean towels available to wrap newborns.

Table 4.2 Availability of medical supplies for labour and delivery rooms

Variable (number of health centres=26)		Frequency	Percent
Disinfectant	No	2	7.7
	Yes	24	92.3
IV fluid	No	1	3.8
	Yes	25	96.2
IV cannulae	No	1	3.8
	Yes	25	96.2
Oxytocin	No	14	53.8
	Yes	12	46.2
MgSO4	No	6	23.1
	Yes	20	76.9
Antibiotics IV/IM	No	5	19.2
	Yes	21	80.8
Partograph	No	3	11.5
	Yes	23	88.5
Urine dipstick	No	7	26.9
	Yes	19	73.1
Cord tie	No	0	0
	Yes	26	100.0
Blade/scissors	No	0	0
	Yes	26	100.0
Clean towel	No	11	42.3
	Yes	15	57.7
Safe waste disposal	No	4	15.4
	Yes	22	84.6
Safety box	No	1	3.8
	Yes	25	96.2
Average availability			83.8

4.3.1.5 Availability of human resources with professional mix

The health centres' labour and delivery room human resources availability and professional mix were assessed. The study found that Bachelor of Science (BSc) midwives, Diploma midwives and clinical nurses were the professionals assigned to provide labour and delivery services at the health centres. The average number of BSc midwives was 2.08 with a maximum of 5 and minimum of one per health centre. The

average number of Diploma midwives was 1.85 per health centre, with a maximum of 3 Diploma midwives and minimum of one Diploma midwife per health centre. Less than one in every four health centres had clinical nurses assigned to manage labour and delivery.

Table 4.3 Availability of clinical service providers in labour and delivery rooms

Variable (number of health centres=26)	BSc midwife	Diploma midwife	Clinical nurse
Number of health centres	26	26	26
Mean	2.08	1.85	0.23
Median	2.0	2.0	0.0
Mode	2.0	1.0	0.0
Minimum	1.0	1.0	0.0
Maximum	5.0	3.0	1.0

4.3.1.6 Density of health service providers per professional level

The study investigated the health service provider density per health centre. The study found that of the health centres, 30.8% (n=8) had one BSc midwife; 38.5% (n=10) had two BSc midwives working in the labour and delivery rooms, 26.9% (n=7) had three BSc midwives, and 3.8% (n=1) had five BSc midwives working in the labour and delivery rooms. Of the health centres, 77% (n=20) had either one or two Diploma midwives, and 23.1% (n=6) had three Diploma midwives. Clinical nurses were only available in 23.1% (n=6) of the health centres, with one clinical nurse per health centre. The findings indicate that one midwife was served 8,417 patients (equivalent to 0.12 per 1000 population).

Table 4.4 Density of clinical service providers in labour and delivery rooms

Number of clinicians (number of health centres=26)	Frequency	Percent
Number of BSC midwives		
1	8	30.8
2	10	38.5
3	7	26.9
5	1	3.8
Total	26	100.0
Diploma midwives		
1	10	38.5
2	10	38.5
3	6	23.1
Total	26	100.0
Clinical nurses		
0	20	76.9
1	6	23.1
Total	26	100.0

4.3.1.7 Availability of capacity building training on BEMOC, refresher training and clinical protocols to provide quality intrapartum care

The Ministry of Health introduced different capacity building programmes for health service providers working at health centres to deliver quality health services to clients. As part of the system, the Ministry of Health in collaboration with different local and international partners provided basic emergency management of obstetric care (BEMOC) for health service providers working in the labour and delivery units of health centres. This basic training consists of 21 days of knowledge and skill-based training. Theory is covered in class and practical sessions are done at health facilities. Candidates undergo pre- and post-test assessment for certification to work in rural health centres. This study determined whether the participant health centre service providers had taken the basic training of BEMOC. The study found that 80.8% (n=21) of the health service providers had received basic BEMOC training.

4.3.1.8 Refresher training in BEMOC

Health service providers who have been trained in basic training of BEMOC for 21 days are expected to receive regular refresher training at least once per year in order to get new updates and to assess the knowledge and skill set status of the providers. The study found that only 3.8% (n=1) of the health centres had received regular refresher training. Monthly drills or simulation exercises help health service providers to be competent in quality intrapartum health care provision. The study found that health centre that were conducting monthly drills or simulation exercises was only 15.4% (n=4).

4.3.1.9 Basic and refresher training in infection prevention

Infection prevention (IP) is a cornerstone of quality health service delivery in clinical care practise in general and of intrapartum care service provision in particular. The Ministry of Health has provided capacity building training on infection prevention for health service providers as a stand-alone training course programme for five days and also integrated it into most sexual and reproductive health (SRH) service training, like BEMOC, comprehensive abortion care (CAC), comprehensive family planning (CFP) and focused ante natal (ANC) training. The study found that infection prevention training had been provided to 80.8% (n=21) health centres as stand-alone or integrated training with other

training programmes. The study showed that only one health centre had received refresher training on infection prevention on a regular basis.

4.3.1.10 Supportive supervision visits to health centres and availability of job aids and protocols

Ethiopia's health system has different types of supportive supervision to improve service performance and quality of service delivery. Supportive supervision can be conducted in an integrated way with various health programme interventions. Integrated supportive supervision was conducted by the Ministry of Health at Regional Health Bureaus, District Health Offices and selected health facilities. The sub-national structure/RHB or District Health Office/can also do integrated supportive supervision for health facilities under their respective control. This integrated supportive supervision is focused mainly on activity performance and support in the gaps identified in the performance of service delivery. In addition, the programme specific supportive supervision, conducted by the Ministry of Health, Regional Health Bureau or District Health Offices or primary hospitals to health centres, assesses the quality and service performance of the health facilities.

This study assessed the availability and regularity of supportive supervision to the participant health centres. The study found that 38.5% (n=10) of the health centres had received regular supportive supervision from the supervisors or mentors of the health centres.

An important aspect of supportive supervision is the availability of job aids and guidelines. The study found that of the health centres, 57.7% (n=15) had clinical protocols on intrapartum care and 15.4% (n=4) had infection prevention protocols.

Table 4.5 Capacity building for health service providers in labour and delivery rooms

Variable (number of health centres=26)		Frequency	Percent
Training in BEMOC	No	5	19.2
	Yes	21	80.8
Training in IP	No	5	19.2
	Yes	21	80.8
Refresher	No	25	96.2
	Yes	1	3.8
Drill/simulation	No	22	84.6
	Yes	4	15.4
Supportive supervision	No	16	61.5
	Yes	10	38.5
IP protocol	No	22	84.6
	Yes	4	15.4
Clinical protocol	No	11	42.3
	Yes	15	57.7

4.4 OBSERVATION OF LABOUR AND DELIVERY

Data on the quality of labour and delivery service provision were collected by direct observation of labour and delivery care, using a structured interview questionnaire (Annexure 10 & 11).

4.4.1 Participants' sociodemographic profile

The participants' sociodemographic profile included age, residence, educational level, income, occupation, religious affiliation, and gravidity.

4.4.1.1 Participants' age

Of the participants, 53.8% (n=150) were 24-34 years old; 35.5% (n=99) were under 24 years old, and 10.8% (n=30) were 35-49 years old. The mean age of the participants was 27.3 years with a standard deviation of 5.8.

Table 4.6 Participants' age

Age group (number of study participants=279)	Frequency	Percent	Mean	SD
<24	99	35.5	27.3	5.8
24-34	150	53.8		
35-49	30	10.8		
Total	279	100.0		

4.4.1.2 Participants' residence

Of the participants, 59.5% (n=166) were from rural areas and 40.5% (n=113) were from urban areas of the health centre catchment area.

Table 4.7 Participants' residence

Residence (number of participants=279)	Frequency	Percent
Rural	166	59.5
Urban	113	40.5
Total	279	100.0

4.4.1.3 Participants' educational level

Regarding educational level, of the participants 43.7% (n=122) were illiterate and 16.8% (n=47) had primary education.

Table 4.8 Participants' educational level

Educational status (number of participants=279)	Frequency	Percent
Illiterate	122	43.7
Can read and write	75	26.9
Primary schooling	47	16.8
Secondary schooling	26	9.3
Tertiary/post-secondary	9	3.2
Total	279	100.0

4.4.1.4 Participants' income

Of the participants, 50.9% (n=142) had an income of over 1290 Ethiopian birr per month.

Table 4.9 Participants' income

Monthly income (number of participants=279)	Frequency	Percent
<1290	137	49.1
>1290	142	50.9
Total	279	100.0

4.4.1.5 Participants' occupation

Of the participants, 36.9% (n=103) were farmers and 22.6% (n=63) were civil servants.

Table 4.10 Participants' occupation

Occupation (number of participants=279)	Frequency	Percent
Farmer	103	36.9
Merchant	53	19.0
Civil servant	63	22.6
Housewife	56	20.1
Other	4	1.4
Total	279	100.0

4.4.1.6 Participants' religious affiliation

Of the participants, 91.8% (n=256) were Orthodox Christians; 7.5% (n=21) were Muslims, and 0.7% (n=2) were Protestants.

Table 4.11 Participants' religious affiliation

Religious affiliation (number of study participants=279)	Frequency	Percent
Orthodox	256	91.8
Muslim	21	7.5
Protestant	2	0.7
Total	279	100.0

4.4.1.7 Participants' gravidity

Of the participants, 47.7% (n=133) were primigravida and 46.2% (n=129) were multigravida.

Table 4.12 Participants' gravidity

Gravidity (number of participants=279)	Frequency	Percent
Primigravida	133	47.7
Multigravida	129	46.2
Grand multigravida	17	6.1

4.4.2 Direct observation of labouring mothers' admission

Direct observation of labour and delivery service provision was initiated at the admission room of the health centres. Of the participants, 91% (n=254) were assessed during admission. Of the participants, 89.6% (n=250) had the foetal status monitored with measurement of the vital signs.

Of the participants admitted to the labour and delivery rooms, 58.8% (n=164) were informed about the average duration of labour and delivery by the health service providers.

Table 4.13 Direct observation of labour and delivery participants

Variable (number of participants=279)	Status	Frequency	Percent
Client assessment on admission	No	25	9.0
	Yes	254	91.0
Vital signs assessment on admission	No	29	10.4
	Yes	250	89.6
Provided information about progress of labour, average duration of labour and other relevant information	No	115	41.2
	Yes	164	58.8
Average	-	279	79.8

4.4.2.1 Direct observation of partograph utilisation

A partograph is a device to monitor the wellbeing of the baby and the mother. Proper and timely use of the partograph determines the quality of intrapartum service provision. Hence, the study assessed proper and timely partograph utilisation. The study found that of the participants, 73.5% (n=205) were managed by using a partograph.

The study assessed the timely and proper filling of the partograph. The study found that the timely filling of the partograph was done for 55.9% (n=156) and the proper filling of the partograph according to the information required was done for 68% (n=189) of the participants.

Table 4.14 Direct observation of partograph utilisation

Variable (number of participants=279)		Frequency	Percentage
Use of partograph	No	74	26.5
	Yes	205	73.5
Timely filling of partograph	No	123	44.1
	Yes	156	55.9
Proper filling of partograph	No	89	32
	Yes	189	68
Action for partograph	No	92	33
	Yes	187	67
Average	-	279	66.1

4.4.2.2 Direct observation of labour and delivery

The second stage of labour and delivery is the time from full cervical dilatation to delivery of the baby. The time from the delivery of the baby until the delivery of the placenta is termed the third stage of labour. The study found that 92.5% (n=258) of the participants were encouraged for urge to push, and 86.6% (n=240) were assisted with a hand on the guard rail during the second stage of labour and delivery.

Of the participants, 68.7% (n=191) were protected with a covering drape by the health care providers. The study assessed the health care providers' active management of the third stage of labour. The study found that of the participants, 94.6% (n=269) had been managed with controlled cord traction; 95.7% (n=267) had been given an oxytocin injection after the delivery of the placenta, and 94.6% (n=263) had undergone uterine atony assessment. In 72.4% (n=202) of the participants, the placenta had been clamped with cord clamping by the health care providers.

The study assessed the recommended practises immediately after the delivery of the newborn. The findings indicated that 98.9% (n=275) of the newborns were dried with cloths; 90.3% (n=251) of the newborns were wrapped with towels/cloths, 55.4% (154) of the newborns received injectable Vitamin K; 78.1% (n=217) of the newborns were treated with tetracycline (TTC) eye ointment; 96.1% (n =268) were put in skin-to-skin contact (SSC) with the mother to prevent hypothermia, and for 95%(n= 265) of the newborns the health care providers initiated immediate breastfeeding.

Table 4.15 Direct observation of second and third stage of labour and delivery

Variables (number of study participants=279)		Frequency	Percent
Urge to push	No	21	7.5
	Yes	258	92.5
Hand on guarding	No	37	13.4
	Yes	240	86.6
Cord clamping	No	77	27.6
	Yes	202	72.4
Oxytocin application	No	12	4.3
	Yes	267	95.7
Apply CCT	No	10	3.6
	Yes	269	96.4
Uterine atony assessment	No	15	5.4
	Yes	263	94.6
Skin-to-skin contact	No	11	3.9
	Yes	268	96.1
Breastfeeding	No	14	5.0
	Yes	265	95.0
Apply drape to clients	No	87	31.3
	Yes	191	68.7
Drying	No	3	1.1
	Yes	275	98.9
Wrapping	No	27	9.7
	Yes	251	90.3
Vit K	No	124	44.6
	Yes	154	55.4
TTC eye ointment	No	61	21.9
	Yes	217	78.1
Average	-	279	86.0

4.4.2.3 Direct observation of referral system and feedback on the referral and standby ambulance availability

One of the indicators for quality intrapartum care is the referral system; therefore, the study assessed the referral system of the health centres. The study found that 93.2% (n=260) of the health centres had no need of the referral system, and referrals were made for 6.8% (n=19) patients. From the in need of referral, timely referral was made for 73.7% (n=14) of the patients. Of the health centres, 93.5% (n=22) had a feedback system, and 96.2% (n=25) had standby ambulance services on a 24-hour basis for seven days a week to transport/facilitate referral for labour and delivery clients in particular.

Table 4.16 Referral system for labour and delivery

Variables (number of participants=279)		Frequency	Percent
Referral needed	No	260	93.2
	Yes	19	6.8
Timely referral	No	5	26.3
	Yes	14	73.7
System of referral in place	No	260	93.2
	Yes	19	6.8
Feedback system in place	No	262	93.9
	Yes	17	6.1

4.4.2.4 Direct observation of respectful maternity care in intrapartum care provision

Respectful maternity care (RMC) is one of the criteria to assess the quality of intrapartum care. The study assessed the status of respectful maternity care in the selected health centres. Patients are expected to be greeted as soon as they enter the labour and delivery room of the health centre. The study found that 81.4% (n=227) of the patients were greeted in a friendly way by health care providers at the health centres.

The care is expected to be provided with patient consent and the study assessed consented care provision. The study revealed that consent was obtained from 36.9% (n=103) of the clients.

The study assessed whether the participants were given information on the care they received. The study found that 62% (n=173) of the participants had been given information about the care they received.

The study assessed whether the participants were given coordinated care. The study revealed that 60.2% (n=168) had received coordinated care. Having a championship/doula is one of the determining factors for RMC. The findings indicated that 82.1% (n=229) of the participants had a support person/doula during the time of labour and delivery.

The study found that 78.9% (n=220) of the participants were given service in a polite way and 90% (n=251) had been informed of the findings of the physical examination in the labour and delivery room.

The health service providers were asking participants if they had any questions. In this study, 79.9% (n=223) of the participants were asked if they had any questions. From those clients 220 (78.8%) who had questions or concerns were addressed by the health service providers.

The action of health service providers is one of the parameters to assess RMC, based on this study providers were reacting for 85.3% (n=238) of the participants during labour and delivery. Health service providers are expected to inform clients what is expected next in the progress of labour and the study revealed that 80.3% (n=224) study participants were informed about what to expect during labour and delivery.

For patients who did not have medical contraindication, health care providers should be advising clients to take food and fluids during labour. The study revealed that 78.9% (n=220) of the participants were advised to take food and fluid during labour, and 80.9% (n=225) were encouraged/advised to ambulate (walk).

Maintaining privacy and confidentiality is among the components of RMC. The study observed whether patient privacy and confidentiality had been maintained. The study found that patient privacy had been maintained for 87.5% (n=244) participants and confidentiality for 84.9% (n=248) participants.

The study examined verbal and physical abuse and found that verbal abuse occurred with 32.3% (n=90) participants and physical abuse occurred with 8.2% (n=23) participants.

Table 4.17 Respectful maternity care for labour and delivery

Variables (number of participants=279)		Frequency	Percent
Privacy	No	52	18.5
	Yes	227	81.5
Greeting clients	No	52	18.5
	Yes	227	81.5
Consented care	No	176	63.1
	Yes	103	36.9
Champion/doula/ support person	No	50	17.9
	Yes	229	80.1
Politeness	No	59	21.1
	Yes	220	78.9

Variables (number of participants=279)		Frequency	Percent
Informs client	No	28	10
	Yes	251	90
Asks client if any questions	No	56	20.1
	Yes	223	79.9
Addresses questions or concerns, if any	No	38	13.6
	Yes	241	76.4
Provider actions during labour	No	41	14.7
	Yes	238	75.3
Provider explains what will happen during labour	No	55	19.7
	Yes	224	80.3
Provider encourages client to consume food and fluid	No	59	21.15
	Yes	220	78.85
Ambulation	No	5	18.5
	Yes	22	80.5
Friendly service	No	31	11.11
	Yes	248	89.99
Cover with drape	No	87	31.18
	Yes	192	68.81
Confidentiality	No	31	11.11
	Yes	248	89.99
Assume different position	No	184	66.19
	Yes	94	33.81
Availability of providers	No	32	11.5
	Yes	247	88.5
Verbal abuse	No	189	67.7
	Yes	90	32.3
Physical abuse	No	256	91.8
	Yes	23	8.2
Abusive and disrespectful care	No	184	65.9
	Yes	95	34.1

4.4.2.5 Determinants of respectful maternity care (RMC)

The study explored factors that determined respectful maternity care (RMC) service provision. Of the 23 dependent variables assessed, 13 had a p-value less than 0.05 on binary logistic regression. The variables whose p-value less than 0.05 were: greeting clients (COR=3.38, 95% CI {2.01,7.02}), birth champion/daulla (COR= 4.68, 95% CI {2.46,8.94}), politeness (COR=2.64, 95% CI {1.64, 5.33}), ask question (COR=3.73, 95% CI {2.03,6.84}), provider action (COR=3.32, 95% CI {1.68,6.56}) and confidentiality (COR= 2.96, 95% CI {1.1,7.98}). The researcher selected these 13 dependent variables for assessment and found only one variable was statistically significant. The variable was

participants who were not greeted by the health care providers upon admission with adjusted OR =16 and 95% CI of (1.5,234.3).

Table 4.18 Determinants of respectful maternity care for participants

Variables (number of participants=279)		Frequency	Percent	Crude OR	AOR	P-value
Privacy	No	52	18.5	0.83 (0.44-1.594)		
	Yes	227	81.5	1		
Greeting clients	No	52	18.5	3.38 (2.01-7.02) *	16 (1.5-234.3) *	0.001
	Yes	227	81.5	1	1	
Consented care	No	176	63.10	1.425 (0.84-2.41)		
	Yes	103	36.90	1		
Birth champion/daulla	No	50	17.90	4.68 (2.46-8.94) *		
	Yes	229	80.10	1		
Politeness	No	59	21.10	2.64 (1.64-5.33) *		
	Yes	220	78.90	1		
Informs clients of findings	No	28.000	10.00	0.91 (0.39-2.94)		
	Yes	251.000	90.00	1		
Asked clients if they had any questions	No	56	20.10	3.73 (2.03-6.84) *		
	Yes	223	79.90	1.00		
Addressed questions or concerns, if any	No	38	13.60	1.15 (0.57-2.35)		
	Yes	241	76.40	1		
Provider actions during labour	No	41	14.70	3.32 (1.68-6.56) *		
	Yes	238	75.30	1		
Provider explained what will happen	No	55	19.70	2.67 (1.46-4.88) *		
	Yes	224	80.30			
Provider encouraged participant to consume food and fluid	No	59	21.15	1.58 (0.87-2.84)		
	Yes	220	78.85	1		
Ambulation	No	5	18.50	0.36 (0.03-3.79)		
	Yes	22	80.50	1		
Friendly service	No	31	11.11	0.91 (.41-2.03)		
	Yes	248	89.99	1		
Put on drape	No	87	31.18	1.03 (0.60-1.75)		
	Yes	192	68.81	1		
Confidentiality	No	31	11.11	2.96 (1.1-7.98) *		

Variables (number of participants=279)		Frequency	Percent	Crude OR	AOR	P-value
	Yes	248	89.99	1		
Assume different position	No	184	66.19	1.44 (.80-2.58)		
	Yes	94	33.81	1		

4.5 CLIENT SATISFACTION WITH INTRAPARTUM CARE

Strand 3 explored the participants' satisfaction with the service they received during intrapartum care. The participants had given birth at the health centres and came for early post-natal check-up. Data were collected with a structured interview questionnaire. (Annexure 13).

4.5.1 Participants' sociodemographic profile

The participants' sociodemographic profile covered their age, residence, educational level, income, occupation, religious affiliation, and gravidity.

4.5.1.1 Participants' age

Of the participants, 77.7% (n=192) were 20-34 years old and 12.6% (n=31) were 34-49,. The mean age of the participants was 27 years with a standard deviation of 5.

Table 4.19 Participants' age

Age group (number of participants=247)	Frequency	Percent	Mean	SD
<20	24	9.7	27	5
20-34	192	77.7		
34-49	31	12.6		
Total	247	100.0		

4.5.1.2 Participants' residence

Of the participants, 58.3% (n=144) were from rural areas of the health centres catchment area.

Table 4.20 Participants' residence

Residence (number of participants=247)	Frequency	Percent
Rural	144	58.3
Urban	103	41.7
Total	247	100.0

4.5.1.3 Participants' educational level

Of the participants, 35.2% (n=87) were illiterate and 18.6% (n=46) had primary education.

Table 4.21 Participants' educational level

Educational level (number of participants=247)	Frequency	Percent
Illiterate	87	35.2
Read and write	46	18.6
Primary	46	18.6
Secondary and higher	68	27.5
Total	247	100.0

4.5.1.4 Participants' income

Of the participants, 57.1% (n=141) had an income less than 1900 Ethiopian birr per month.

Table 4.22 Participants' income

Monthly income (number of participants=247)	Frequency	Percent
Less than 1900	141	57.1
Higher than 1900	106	42.9
Total	247	100.0

4.5.1.5 Participants' occupation

Of the participants, 38.5% (n=95) were housewives and 9.3% (n=23) were civil servants.

Table 4.23 Participants' occupation

Occupation (number of participants=247)	Frequency	Percent
Farmer	89	36.0
Merchant	31	12.6
Civil servant	23	9.3
Housewife	95	38.5
Other	9	3.6
Total	247	100.0

4.5.1.6 Participants' religious affiliation

Of the participants, 93.1% (n=230) were Orthodox Christians and 6.5% (n=16) were Muslims.

Table 4.24 Participants' religious affiliation

Religion (number of participants=247)	Frequency	Percent
Orthodox	230	93.1
Muslim	16	6.5
Protestant	1	0.4
Total	247	100.0

4.5.1.7 Participants' gravidity

Of the participants, 49% (n=121) were multigravida.

Table 4.25 Participants' gravidity

Gravidity (number of participants=247)	Frequency	Percent
Primigravida	120	48.6
Multigravida	121	49.0
Grand-multigravida	6	2.4
Total	247	100.0

4.5.2 Participants' experience of intrapartum care

The participants were asked how they were treated upon arrival at Reception of the health centre. Of the participants, 87.9% (n=217) stated that they were received and managed in a friendly way.

The participants were asked whether they had to wait before they were seen by the health care providers. Of the participants, 71.7% (n=177) had to wait before they were examined by the clinicians and 28.3% (n=70) did not have to wait. Of the participants, 62.6% (n=112) waited for less than 15 minutes; 21.8% (n=39) waited for 16-30 minutes; 9.5% (n=17) waited for 31-60 minutes, and 6.1% (n=11) waited for more than one hour.

Of the participants who had to wait, 57.5% (n=107) were not informed of the reason for the delay, and 42.5% (n=79) were informed of the reason.

The study investigated the participants' duration of labour. Of the participants, 58.3% (n=144) were in labour for less than 8 hours; 30.4% (n=75) were in labour for 8-12 hours; 9.3% (n=23) were in labour for 12-18 hours, and 2% (n=5) were in labour for more than 18 hours.

Of the participants, 64.8% (n=160) were informed what to expect and 35.2% (n=87) were not informed; 87.9% (n=217) received friendly service and 12.1% (n=30) did not; 85.8% (n=212) were advised to ambulate and 14.2% (n=35) were not; 85.4% (n=211) were treated with courtesy and respect and 14.6% (n=36) were not.

The study explored whether the participants had experienced any form of abuse during intrapartum care. Of the participants, 83.4% (n=206) had not experienced any verbal abuse and 16.4% (n=41) had experienced verbal abuse; 94.7% (n=234) had not experienced any physical abuse and 5.3% (n=13) had experienced physical abuse.

Of the participants, 74.9% (n=185) were satisfied with the labour and delivery service they received and 25.1% (n=62) were dissatisfied with the care and service.

Table 4.26 Participants' experience of care during labour and delivery

Variables (number of participants=247)		Frequency	Percent
Waiting	No	70	28.3
	Yes	177	71.7
Waiting duration	Less than 15 minutes	112	62.6
	16-30 minutes	39	21.8
	31-60 minutes	17	9.5
	Longer than 1 hour	11	6.1
Informed of reason for delay	No	107	57.5
	Yes	79	42.5
Labour duration	Less than 8 hours	144	58.3
	8-12 hours	75	30.4
	12-18 hours	23	9.3
	More than 18 hours	5	2.0
Comfortable place to sit	No	97	39.3
	Yes	150	60.7
Informed what to expect	No	87	35.2
	Yes	160	64.8

Variables (number of participants=247)		Frequency	Percent
Ambulation	No	35	14.2
	Yes	212	85.8
Reception of friendly services	No	30	12.1
	Yes	217	87.9
HCP friendly service	No	25	10.1
	Yes	222	89.9
Comfortable side to rest	No	21	8.5
	Yes	226	91.5
Treat with courtesy and respect	No	36	14.6
	Yes	211	85.4
Verbal abuse	No	206	83.4
	Yes	41	16.6
Physical abuse	No	234	94.7
	Yes	13	5.3
Satisfaction	Dissatisfied	62	25.1
	Satisfied	185	74.9

4.5.3 Determinants of participants' satisfaction with intrapartum care

The statistician analysed the statistically significant variables for the participants' satisfaction with the intrapartum care received. Binary logistic regression was done for the dependent variable of satisfaction with different variables.

Participants who received friendly labour and delivery service from health care providers were 15 more times likely to be satisfied than those who did not receive friendly service (AOR=15, 95% CI {1.8,124}). Health care providers' courtesy and respect were also a determining factor of satisfaction. Participants who were given service with courtesy and respect were 6.8 more likely to be satisfied with the service they had received (AOR=6.8, 95% CI {1.4, 32.2}).

Other independent factors found to be statistically significant were being informed to take food and fluids and being given a comfortable place to sit while waiting for service. The clients who were informed to take food and fluid had 6.4 times more likely to be satisfied than those who did not informed (AOR=6.4, 95% CI {1.3, 33.3}).

Those clients who had a comfortable place to sit while waiting were 4.7 more likely to be satisfied with the service than those who did not get a comfortable place to sit while waiting for the service (AOR=4.7, 95% CI {1.1,20.7}).

Table 4.27 Participants' determinants of satisfaction during labour and delivery

Variables (number of participants=247)		Frequency	Percent	Crude OR	AOR	P-value
Waiting	No	70	28.3	2.5 (1.2-5.3) *		
	Yes	177	71.7	1		
Waiting duration	<15 minutes	110	62.1	7 (1.8-27.2) *		
	15-30 minutes	39	22.1	5.5 (1.5-19.9) *		
	31-60 minutes	17	9.60	01.1 (0.2-4.9)		
	>60 minutes	11	6.20	1		
Comfortable place to sit	No	29	16.4	1		0.43
	Yes	148	83.6	5.8 (2.5-13.6) *	4.7 (1.1-20.7)	
Reason for delay	No	98	56.00	1		
	Yes	77	44.00	2.0 (1.02-4.04) *		
Friendly reception	No	30	12.20	1		
	Yes, sometimes	31	12.50	0.72 (0.26-1.97)		
	Yes, most of the time	186	75.30	3.55 (1.57-8.0) *		
Courtesy	No	36	15.00	1		0.017
	Yes	211	85.00	10.7 (4.9-23.6) *	6.8 (1.4-32.2)	
Labour duration	<8 hours	144	58.30	2.53 (0.41-15.85)		
	8 hours to 12 hours	75	30.40	1.26 (0.2-8)		
	12 hours to 18 hours	23	9.30	3.17 (0.39-25.58)		
	>18 hours	5	2.00	1		
Move around	Yes, most of the time	96	38.87	2.17 (0.76-6.14)		
	Yes, sometimes	123	49.80	1.36 (0.51-3.67)		
	Not at all	7	2.83	0.38 (0.07-2.16)		
	No, because it was not possible	21	8.50	1		
Comfortable side to lie	Yes, most of the time	108	43.72	5.5 (1.7-17.6) *		
	Yes, sometimes	117	47.37	4.1 (1.3-12.6) *		

Variables (number of participants=247)		Frequency	Percent	Crude OR	AOR	P-value
	Not at all	8	3.24	1.3 (0.2-7.62)		
	No, because it was not possible	14	5.67	1		
Take food and fluid	No	37	15.00	1		
	Yes	210	85	11.4 (5.2-25.2) *	6.4 (1.3-33.3)	0.026
Informed what to expect	No	87	35.20	1		
	Yes	160	64.80	3.02 (1.67-5.47) *		
Ambulation	No	35	14.20	1		
	Yes	212	85.80	10 (4.5-22.1) *		
Friendly service of HCPs	No	25	10.10	1		
	Yes	222	89.90	53.0 (12.2-238.4) *	15.0 (1.8-124) *	0.012
	Rural	144	58.00	1.11 (0.62-1.98)		
Residence	Urban	103	42.00	1		
Income	Less than 1900	141	57.10	0.73 (0.40-1.31)		
	Greater than 1900	106	42.90	1		
Marital status	Single	2	0.80	8077374329 (0-		
	Married	233	94.30	17.4 (3.7-81.9) *		
	Others	12	4.90	1		
Occupation	Farmer	89	36.00	1.44 (0.33-6.21)		
	Merchant	31	12.60	1.22 (0.25-5.98)		
	Civil servant	23	9.30	2.38 (0.41-13.75)		
	Housewife	95	38.50	1.57 (0.36-6.76)		
	Others	9	3.60	1		
Verbal abuse	No	206	83.40	12.67 (5.87-27.33) *		
	Yes	41	16.60	1		
Physical abuse	No	234	94.7	2.72 (0.88-8.44)		
	Yes	13	5.30	1		

4.6 FINDINGS

Quality of care is the outcome of interaction and interconnected interventions, including availability, provision and experience of care (WHO 2018:24). Hence, this study explored the structure, process and outcome in order to assess the availability, provision and experience of intrapartum care provision.

4.6.1 Water availability

The availability of water is critical in the quality of health service delivery by keeping the labour and delivery room clean; hand washing before and after every procedure, and instrument processing after delivery services. The study found that water was available in 88.5% (n=23) of the selected health centres.

4.6.2 Incinerator availability

Health centres generate medical waste which could be dangerous to staff, patients and the surrounding communities if not properly handled and disposed. Incinerators are among the equipment essential for health centres in order to dispose of hazardous medical waste properly by burning. In order to be licensed to operate, health facilities are required to have incinerators (Food, Medicine and Health Administration Control Authority [FMHACA] 2012). The study found that 96.2% (n=25) of the selected health centres had functioning incinerators to dispose of medical waste according to national and international requirements and standards. In 2018, the Ethiopian Public Health Institute (Ethiopian Public Health Institute [EPHI] 2018:33) found that 53% of the health centres in Amhara region had incinerators and equipment for final disposal of hazardous waste, including solid and liquid waste.

4.6.3 Medical equipment availability

The study assessed medical equipment availability in the selected health centres. The study found that all the health centres (100%; n=26) had delivery beds to manage delivery services. This compared favourably with the 2018 assessment for Amhara region and national averages for health centres (EPHI 2018:51).

Delivery packs are essential items for delivery service. The study found that all the health centres had adequate delivery packs (100%; n=26). Vacuum extractors and suction machines are essential tracer equipment for labour and delivery service. Of the health centres, 100% (n=26) had vacuum extractors and 69% (n=18) had suction machines. In 2018, 74% of the health centres in Amhara region had vacuum extractors and 71% had suction machines (EPHI 2018:51).

Examination lights were available in 26.9% (n=7) of the health centres while 73.1% (n=19) had no examination lights. The study finding was lower than the averages of Amhara region SARA findings which were 47% and also lower than the national average for health centres SARA findings of 42% but slightly higher than the overall national average of 25% (EPHI 2018:51).

Infant weight scales help health care providers to classify newborns based on weight and manage them accordingly. In this study, 100% (n=26) of the health centres had infant weight scales. This finding slightly higher than the SARA findings of EPHI (2018:51) that the majority of health facilities (93%) in Amahra region had infant weighing scales.

The study assessed the availability of vital sign measurement equipment, namely sphygmomanometers and thermometers. Of the health centres, 57.7% (n=15) had sphygmomanometers and 50% (n=13) had thermometers.

The study found that the average availability of medical equipment in the selected health centres was 80.7%. In their study of quality of midwife-provided intrapartum care in 56 health facilities in Addis Ababa, Yigzaw et al (2017:261) found that 32.6% had adequate drugs; 73.1% had adequate equipment; 65.4% had supplies; 47.9% had infection prevention supplies, and 43.6% had records and forms. Yigzaw et al (2017:261) concluded that the gaps in the enabling environment suggested that conditions for providing quality intrapartum care were not optimal.

4.6.4 Supplies availability

In order to provide quality intrapartum care, certain supplies are required for labour and delivery services. Disinfectant solution helps in the decontamination of used delivery instruments and other equipment. The study found that 92.3% (n=24) of the health

centres had disinfectant solution. The study finding of SARA for Amhara region was 95% and the national average was 94% (EPHI 2018:51).

Magnesium sulphate is one of the essential drugs to manage severe preeclampsia and eclampsia patients in labour and delivery. The study found that 76.9% (n=20) of the health centres had magnesium sulphate.

Intravenous fluid and IV cannulae are lifesaving medical supplies to manage hypovolemic shock due to haemorrhage. The study found that 96.2% (n=25) of the health centres had adequate supplies of intravenous fluid and IV cannulae.

Study findings of availability of safe childbirth supplies in 284 facilities in Uttar Pradesh, India with availability of greater than 90% (Galvin et al 2018:240-249). A study conducted in Malawi to assess current health facility service availability and readiness and health worker capacity and practise pertaining to labour, delivery, and immediate post-natal care. The Intravenous fluid and IV cannulae were available in 100% of the observed health facilities (Kozuki et al 2017:5). A study conducted in rural district of Tanzania to describe the experience of rural health facility managers in ensuring the timely availability of drugs and medical supplies for emergency obstetric care (EmOC) showed an IV fluid and cannulae availability of 50% (Mkoka et al 2014:108).

Oxytocin is an essential drug to prevent uterine atony which can result in post-partum haemorrhage. This study, 46.2% (n=12) of the health centres had oxytocin and 53.8% (n=14) did not. This study was higher than findings conducted in rural Tanzania showed a maximum availability of 24% and also higher than the SARA-2018 finding of health centres in Ethiopia but lower than a study conducted in Tanzania with an overall availability of 63%, even much lower than a study conducted in Malawi at health centres with an overall availability of 90% (EPHI 2018:29; Galvin et al 2018:240-249; Kozuki et al 2017:4; Mkoka et al 2014:108; Penfold et al 2013:1472; Sikder et al 2015:9).

The average availability of supplies in this study was 83.8% which was higher than the minimum requirement to provide or make optimal quality intrapartum care of 75% and even higher than a study conducted by Yigzaw et al (2017:261) of 65% for Amhara region health centres and hospitals as well as Getachew et al (2011:22) of 56% but lower than the study conducted in Bangladesh with average availability of 90% (Sikder et al 2015:9).

The availability of partograph was 88.5% and SARA 2018 study findings for Amahara region was 93% and the national average finding was 91%. The other study conducted in Amhara region of Ethiopia in 2017 also had availability findings of 43.6%. (EPHI 2018:51; Yigzaw et al 2017:261).

4.6.5 Staffing

Human resource availability with professional mix is a key factor for quality labour and delivery service provision. Ministry of Health has made aggressive move to avail midwife nurses at health centres level. This study revealed that one midwife was serving 8,417 (equivalent to 0.12 per 1000 population) which was in line with other African countries but far lower than the annual report of the country and global recommendation for lower income countries (Feysia et al 2012:24; MOH 2019:144).

4.6.6 Capacity building

Health care providers of labour and delivery services are trained with pre-service education and in-service training programme in the country. The study explored the in-service training availability for labour and delivery service providers. A majority (80.8%) of the health care providers of labour and delivery services received basic training on BEMOC. The study conducted in 2017 in Amhara region health facilities revealed that 31.3% of health care providers were trained on BEMOC (Yigzaw et al 2017:261).

4.6.7 Supportive supervision

Supportive supervision is a mechanism of capacitating health workforce and improving the quality and service performances of labour and delivery. The supportive supervision should be performed with structured assessment tools by a senior and experienced team to capacitate health care providers of health centres.

Although the benefits of supportive supervision are a lot, the study finding showed that 38.5%(n=10) of the health centres received supportive supervision. This finding was lower than the study conducted in Amhara Region of Ethiopia health centres with a supportive supervision of 77.2% (Yigzaw et al 2017:261).

The availability of job aids and clinical protocols is important to improve the quality of health service provision. The study showed that a clinical protocol was available only in 57.7% of labour and delivery services. The finding was extremely low for infection prevention protocol (15.4%) which was lower than the study conducted by Yigzaw et al (2017:261). With availability of 47.9% and the study done by EPHI (2018:32) with 42% that could be explained by the methods difference, this study checked the availability by observation, but the two studies used verbal reports to confirm.

4.6.8 Labouring mother admission

One of the parameters to monitor the technical competency of health care providers in providing labour and delivery services provision is vital sign assessment of labouring mothers on admission. The study assessed/observed the health care providers competency through observation of health care providers vital sign measurement. Eighty-nine-point six percent of the study participants vital sign measurements were taken. The finding was higher than that of a study conducted in Pakistan with vital sign examination of 39%; this could be due to the setting variation of the two countries (Agha, Fitzgerald, Fareed, Rajbhandari, Rahim, Shahid, Williams, Javed & Currie 2019:7).

Information provided about the average duration of the labour and delivery was 58.8% of the participants by the health service providers. This finding was higher than a study done in Pakistan (52%) that could be explained by the setting difference of two studies (Agha et al 2019:7).

4.6.9 Partograph utilisation

Partograph is a simple and effective device which health care providers can use for monitoring progress of labour and take corrective action based on the action line of the graph. The study findings on utilisation of partograph was 73.5% which was higher than a study conducted to assess knowledge and utilisation of partograph among obstetric care givers in public health institutions of Addis Ababa, Ethiopia by Yisma, Desalegn, Astatkie, and Fesseha (2013:1471) with a partograph utilisation rate of 57.4%. A Study conducted by Worku et al (2013:4) to assess the availability and the components had higher partograph utilisation rate of 79%. The study findings were higher than the study

done in Rajasthan, India to improve the quality of childbirth services in selected high caseload public health facilities of 10 districts of Rajasthan by Iyengar et al (2014:1471). The partograph utilisation of the study in Rajasthan, India was 18%. A Study conducted to evaluate quality of routine and emergency intrapartum and postnatal care using a health facility assessment, and to estimate “effective coverage” of skilled attendance in Brong Ahafo, Ghana by Nesbitt et al (2013:4) had a partograph utilisation rate of 40% at health centres.

4.6.10 Labour and delivery care

Participants were observed if their private parts were covered with drapes. Sixty-eight point seven percent of the participants genital areas was covered with drapes. A Study conducted to evaluate quality of routine and emergency intrapartum and postnatal care using a health facility assessment, and to estimate “effective coverage” of skilled attendance in Brong Ahafo, Ghana by Nesbitt et al (2013:4) had used drapes to cover genital areas for 49.8% of the study participants. This difference could be due to case load.

Active third stage management of labour has three main parts, namely applying controlled cord traction (CCT), administration of uterotonic agent (oxytocin), and urine atony assessment. The study explored the practises of CCT by the health centres’ health care providers. Applying CCT is one of the active third stage management of labour by competent health care providers to prevent PPH. The study found that CCT was applied for 94.6% of the patients. The study finding was higher than that of a study done in Southern Ethiopia of 81.3%, Tanzania of 78% and six Sub-Saharan African countries with application of 72% CCT (Bartlett et al 2015:759-767; Bishanga, Charles, Tibaijuka, Mutayoba, Drake, Kim, Plotkin, Rusibamayila & Rawlins 2018:223; Wudneh, Dheresa, Demena & Alemu 2019:92-97).

The study found that of the participants, 95.7% received intramuscular Oxytocin injection. The study had almost the same findings with a study in Pakistan (94%), six Sub-Saharan African countries study average (94%) but lower than a study done in Tanzania (98%) but higher than a study done in Southern Ethiopia (74%) (Bartlett et al 2015:759-767; Bishanga et al 2018:223; Iyengar et al 2014:1471; Wudneh et al 2019:92-97).

In order to prevent hypothermia and infections, health care providers should take necessary action immediately after birth for the newborns. The study explored the measures taken for the prevention of hypothermia and infections and found that the health care providers applied dry cloths to wrap the newborn for 90.3% of the patients; applied skin-to-skin contact with the mother for 96.1% of the patients; initiated breast feeding for 95% of the newborns; administered vitamin K to 55.4% and applied tetracycline eye ointment 78.1% of the newborns.

A study done on quality of labour and birth care in Sindh Province, Pakistan: findings from direct observations at health facilities by Agha et al (2019:7) had immediate newborn care findings of drying for 87.3%, immediate skin to skin contact for 25% and wrapping with dry towel was 76% of the participants. A study conducted on knowledge and practise of immediate newborn care among health care providers in eastern zone public health facilities, Tigray, Ethiopia by Berhe, Tinsae and Gebreegziabher (2017:157) had an immediate newborn findings showed that drying of newborn was conducted for 13.6%, skin to skin contact for immediate breast feeding conducted for 86.4%, TTC eye ointment applied for 73.6% and Vitamin K administered for 66.2% of the newborn. A Study conducted by Yemaneh and Dagnachew (2017:360-367) to assess knowledge and practise of immediate newborn care among health professionals in governmental health facilities of Bahir-Dar revealed that breast feeding for newborn was initiated for 84.3%, skin to skin contact with mother done for 61.9%, drying of the newborn conducted for 94%, TTC eye ointment applied for 94.8% and vitamin K administered for 97.8% of the newborn.

4.6.11 Emergency referral system availability

Labour and delivery service might need emergency referrals during the provision of care. Ethiopia has a referral system covering health posts, health centres and hospitals. Health centres make referrals to primary hospitals. The referral of obstetric emergencies requires/necessitates a 24-hour a day standby ambulance service. This study revealed that 96.2% of the health centres had an emergency transportation system in place. A study conducted in Ethiopia at national level for hospitals and health centres revealed that the availability of 24 hours standby ambulance service was 69% in Amhara region and 71% at national level (EPHI 2018:28).

4.6.12 Respectful maternity care (RMC)

The study explored respectful maternity care, including greeting patients, consented care, information, being accompanied by a companion or support person, and having questions answered. Health care providers' RMC service provision was observed with the utilisation of a structured checklist.

The study found that of the participants, 81.4% were greeted by the health care providers; 36.9% were given information about their care; 90.0% were informed of the findings of tests; 80.3% were informed of what to expect next during labour and delivery; 79.9% were asked whether they had any questions, and 78.8% had their questions or concerns addressed by the health service providers; 78.9% were advised to take light food and fluids during labour; 82.1% had a companion or support person; 68.8% had a drape to provide privacy; 87.5% said their privacy had been maintained; 84.9% said their confidentiality was maintained, and 34.1% received some abuse and disrespect during labour and delivery care.

Consented care is one of the critical components to provide RMC. Numerous study findings revealed non consented care prevalence: 4.3% non-consented care in Kenya, from 48% to 94.3% in Ethiopia and 54.5% in Nigeria the prevalence of consented care provision was 36.9% in this study which means there were 63.1% of the clients who received non-consented care (Abuya et al 2015:8; Asefa et al 2018:5-6; Okafor et al 2015:59-72; Sheferaw et al 2017:6).

Clients have the right to get the information about care they will receive and the study findings of information provision about the care they had got of 62% was almost in line with the study findings by Rosen et al (2015:6) for five East and Southern African countries of 61.9%.

Clients have the right to know the finding and this is in fact one of the parameters for RMC, the study revealed that 90% of the clients had been informed about the findings which was higher than the study findings for five East and Southern African countries of 67% (Rosen et al 2015:7).

A championship/ labour support person is one of the determining factors for RMC in which labouring patients felt comfort and confidence which helps to prevent a sense abandonment felt by the clients. This study finding showed that 82.1% of the participants had support persons which was almost similar with the study findings conducted in Ethiopia with a prevalence of support person/championship of 80% but higher than the study results of five East and Southern African countries of 43.1% (Rosen et al 2015:7; Sheferaw et al 2017:8).

The health service providers were enquiring from clients if they had any questions and in this study 79.9% of the participants were asked if they had any question. Again, the clients' questions or concerns were addressed for 78.8% of participants by the health service providers. This study finding was higher than study findings done in Ethiopia, East and Sub-Saharan African countries with greater than 30% (Rosen et al 2015:7; Sheferaw et al 2017:8).

Health service providers are expected to inform clients what to expect. The study revealed that 80.3% of participants were informed about what to expect next in the labour and delivery. The study finding was almost similar with national level study findings for health centres of 78% but higher than East and Sub-Saharan African countries with 24% (Rosen et al 2015:7; Sheferaw et al 2017:8).

Labouring mothers are advised to take light food and fluids if they have no medical contraindication. The study revealed that 78.9% of the participants were advised to take light food and fluids during labour and delivery. The study finding was higher than East and Sub-Saharan African countries by 22% but lower by 7% for the health centres of Ethiopia study (Rosen et al 2015:7; Sheferaw et al 2017:8).

It is advisable for labouring mothers to ambulate and the study showed that 80.9% of the clients was counselled to ambulate. The study finding were higher than country level health centres assessment finding by 8% and also higher than study findings of East and Southern African countries by 24% (Rosen et al 2015:7; Sheferaw et al 2017:8).

In order to keep visual privacy, health service providers are advised to put a drape over the client private area, 68.8% of the clients had drapes covering in their private areas. which was relatively higher than study findings in lower income country hospitals (50%)

as well as East and Southern African countries findings of 48.5% this difference could be due to case load (Housseine, Punt, Mohamed, Said, SM, Maaloe, Zuithoff, Meguid, Franx, Grobbee, Browne & Rijken 2020:36; Rosen et al 2015:7).

Maintaining privacy and confidentiality is among the components of RMC, the study made observed whether audio-visual privacy had been maintained or not and based on the observation it was found that 87.5% had maintained audio-visual and 84.9% of the clients' confidentiality maintained which was slightly higher than the study findings elsewhere which varies from 54% in Tanzania and as high as 72% in Madagascar (Abuya et al 2015:9; Asefa et al 2018:5-6; Igboanugo & Martin 2011:59-72; Okafor et al 2015:59-72; Rosen et al 2015:360; Sheferaw et al 2017:8).

Verbal and physical abuse was also observed for labour and delivery clients, the findings revealed that verbal abuse occurred in 32.3% of labour and delivery clients. Physical abuse was observed on 8.2% of labour and delivery clients. The physical abuse findings were similar with other study findings but higher verbal abuse in this study (Sheferaw et al 2017:60).

In general, the finding revealed that 34.1% of the clients received the service with some degree of abusive and disrespect during the labour and delivery care at the health centres which was similar with other study findings which varied from 11% to 71% (Abuya et al 2015:9; Asefa et al 2018:7; Ishola et al 2017:10; Okafor et al 2015:59-72; Sheferaw et al 2017:5).

4.6.13 Determinants of respectful maternity care

The study explored the relationship between RMC and various independent variables to establish. If they were determining factors of RMC. In this study, only greeting was found to be a determining factor of RMC. The clients who were not greeted by health care providers in their first encounter were 16 times more likely to receive abusive and disrespectful service than those who were greeted in their first encounter with the health care providers. Different variables were determinants of RMC which were not explored in this study, such as presence of birth champion/support person, parity, educational status and marital status (Assefa & Bekele 2015:7; Ishola et al 2017:11).

4.6.14 Participants' satisfaction with labour and delivery care

Participants of client satisfaction survey were mainly in the age group of 20-34 years which was almost similar in the EDHS (2016:76) findings.

The residence of the participants was in rural area for 60% of the study participants from the health centres catchment population.

The participants who could not read and write were 35.2% followed by the clients who could read and write as well as those who had primary level of education who constituted 18.6%.

Multigravida participants were 49% followed by primigravida women 48%.

The study explored the participants' satisfaction with the labour and delivery care. This included assessing greeting and friendly service, delays, duration of labour, and other aspects.

Of the participants, 81.5% indicated that they were greeted and managed in a friendly way.

Regarding delays to get service, of the participants, 62.6% waited for 15 minutes; 22.1% waited for 15-30 minutes; 9.6% waited for 31-60 minutes and 6.1% waited more than one hour to be seen by providers. Of the participants, 42.5% were given an explanation for the delay and 57.5% received no explanation. The study showed better a result in waiting time than the study done in Gondar referral hospital of Amhara region where greater than 50% of participants waited for more than one hour (Assefa & Bekele 2015:7)

Those who were waiting to receive service, 43.3% did not get any information why services were delayed and 60.7% had comfortable seats while waiting for the service.

The participants were asked about the duration of labour. Of the participants, 58.3% indicated that labour duration was less than 8 hours; 30.4% said that the duration of labour was 8-12 hours; 9.3% said that the duration of labour was 12-18 hours and 2% said the labour duration was more than 18 hours. The study finding about labour duration of

less than 12 hours was 88.7% which was higher than the study conducted by Dewana, Fikadu, Mariam and Abdulahi (2016:11) to assess the satisfaction of women towards labour and delivery care service and identify associated factors at public health facilities in Areba Minch town and the surrounding district, Gamo Gofa Zone, southern Ethiopia with labour duration of less than 12 hours was 57.4%.

Health service providers are expected to provide information about the health service they have provided and what is expected next as well as findings of performed examinations. Of the participants, 64.8% of the study participants were informed what to expect.

The participants were asked about the friendliness of the labour and delivery experiences and the finding was 89.9% of the participants received the service in friendly way. The study showed better than the study conducted by Demas, Getinet, Bekele, Gishu, Birara and Abeje (2017:4) to assess women's level of satisfaction during intrapartum care at Addis Ababa, Ethiopia. The finding showed that 75% of participants received a friendly service. A study conducted by Bulto, Demissie, Tasu and Demisse (2020:303) to assess the mother's satisfaction with existing labour and delivery services and associated factors at all levels of health care in the West Shewa Zone revealed 80% of participants received the service in a friendly approach.

One of the recommendations for clients during labour is to ambulate. The study found that 61.1% of the participants were not allowed to ambulate and 56.3% did not get the permission to assume a preferred position during labour and delivery by the health care providers.

The study explored overall client satisfaction and found that 74.9% of the participants were satisfied with the maternal health service.

The study showed that the satisfaction level was slightly lower than the assessments done in Gamgofa Zone (90.2%), Ambo town (83.9%). It was higher than assessment done in North Wollo (51%) and Gondar town (31%) (Demas et al 2017:4; Dewana et al 2016:11; Gashaye, Tsegaye, Shiferaw, Worku & Abebe 2019:10; Gejea, Abadiga & Hasen 2020:1225-1235).

4.6.15 Determinants of participant satisfaction

Multivariate statistical analysis showed that the participants who experienced friendly service by health care providers were 15 times more likely to be satisfied than those who did not receive friendly service. Health care providers' courtesy and respect are also determining factors for the participants' satisfaction. Those who thought that the service was with courtesy and respect were 6.8 times more likely to be satisfied with the services they had. The predictor variables of client satisfaction with labour and delivery care were similar to other study findings (Mocumbi, Högberg, Lampa, Sacoor, Valá, Bergström, Dadelszen, Munguambe, Hanson & Sevene 2019:7; Srivastava et al 2015:5-7).

Other dependent factors found to be statistically significant were that those labour and delivery clients who were informed to take food and fluids as well as those clients who had a comfortable place to sit while they were waiting for service. Those clients who had a comfortable place to sit were 4.8 times more likely to be satisfied with the services than those who did not get comfortable place to sit. Those clients who had been informed to take food and fluids were 6.4 times more likely to be satisfied with the services they had received than their counterparts.

4.7 CONCLUSION

This chapter discussed the quantitative findings of the study, with reference to the literature review. The study examined the participants' sociodemographic profile; availability of equipment, supplies, drugs and human resources for quality intrapartum care service provision; respectful maternity care, and participants' satisfaction with the labour and delivery service they received.

Chapter 5 discusses the qualitative findings of the study.

CHAPTER 5

QUALITATIVE DATA ANALYSIS, INTERPRETATION AND FINDINGS

5.1 INTRODUCTION

This chapter discusses the qualitative data analysis, interpretation, and findings, with reference to the literature reviewed. Strand 4 explored the views and challenges of health care providers, mentors and supervisors on the implementation of quality intrapartum care provision during normal childbirth.

In strand 4, the researcher used purposive sampling to select the participants for qualitative data collection. The researcher selected 24 participants and data were collected by means of in-depth interviews with the participants until data saturation was reached. The purpose was to obtain rich data and a deeper understanding of intrapartum care activities, capacity building and supplies provision activities to ensure quality intrapartum care at health centre level. An interview guide was used for qualitative data collection (Annexures 15 and 16).

5.2 DATA MANAGEMENT AND ANALYSIS

Qualitative research is interpretative and involves researchers being in a close relationship with the participants (Creswell & Creswell 2018:183). Qualitative data analysis commences with data collection and involves specific to general steps (Creswell & Creswell 2018:193). Accordingly, the researcher organised and prepared the data. First, the researcher transcribed the interviews verbatim and compared the transcriptions with the audio recordings. The qualitative data were transcribed verbatim then imported to Atlas ti 8 software for coding and content analysis. The researcher read all the transcriptions carefully to get an overall picture and jotted down ideas as they came to mind in order to develop codes (Creswell & Creswell 2018:196). Coding is a process of organising data by bracketing chunks and writing a word representing a category in the margin. After coding and categorisation, themes and sub-themes emerged as part of the data analysis. The researcher used participants' quotes to support the themes.

5.3 FINDINGS

The research findings included the health care providers (HCPs), mentors and supervisors' sociodemographic profile. The HCPs findings are discussed first, followed by those of the mentors and supervisors.

5.3.1 HCPs' sociodemographic profile

The participants' sociodemographic profile included age, gender, qualifications and work experience in labour and delivery management.

5.3.1.1 Age

The HCPs' age ranged between 26 and 35 years, with a mean age of 29.4 years. Of the participants, 16.7% (n=2) were 26 years old; 8.3% (n=1) were 27; 25% (n=3) were 28; 8.3% (n=1) were 29; 8.3% (n=1) were 30; 8.3% (n=1) were 31; 8.3% (n=1) were 32; 8.3% (n=1) were 33, and 8.3% (n=1) were 35 years old.

5.3.1.2 Gender

Of the participants, 67% (n=9) were females and 33% (n=3) were males.

5.3.1.3 Qualifications and work experience

Of the participants, 67% (n=9) were BSc midwives; 8.3% (n=1) was a Diploma midwife; 8.3% (n=1) was a health officer, and 8.3% (n=1) was a clinical nurse. Of the participants 8.3% (n=1) had 12 years' experience; 8.3% (n=1) had 12 years' experience; 8.3% (n=1) had 9 years' experience; 16.7% (n=2) had 8 years' experience; 25% (n=3) had 6 years' experience; 8.3% (n=1) had 5 years' experience; 25% (n=3) had 3 years' experience, and 8.3% (n=1) had 2 years' experience. The participants had an average of 5.9 years work experience.

Table 5.1 HCPs' age, gender, qualifications and work experience

Participant	Gender	Age	Qualification	Work experience in L and D
HCP-1	F	29	BSc midwife	3
HCP-2	F	28	BSc midwife	3
HCP-3	F	26	BSc midwife	2
HCP-4	M	30	BSc midwife	6
HCP-5	F	31	BSc midwife	8
HCP-6	F	27	Diploma midwife	6
HCP-7	F	32	BSc midwife	8
HCP-8	F	26	BSc midwife	3
HCP-9	M	33	BSc midwife	9
HCP-10	F	28	BSc midwife	5
HCP-11	M	35	BSc Public Health	12
HCP-12	M	28	Diploma clinical nurse	6

***HCP – Health care provider

5.3.2 Thematic analysis of HCP findings

Four themes emerged from the HCP data. The themes were planning for quality, quality intrapartum care, infection prevention and challenges faced. The themes were further divided into sub-themes (see Table 5.2).

Table 5.2 Health care providers views, experience and challenges of intrapartum care

SN	Theme	Sub-theme
1	Planning for quality	• Benefits of planning for quality
		• Steps of quality intrapartum care planning
		• Components of quality intrapartum care planning
		• Responsibilities and participants of Quality planning tasks
2	Quality intrapartum care	• Involve championship/ doula
		• Ensure client comfort
		• Avail Friendly service provision
		• Maintain privacy
		• Communication skills and counselling skills
		• Partograph and its benefit
		• Quality care routine tasks and their prioritisation
		• Monitoring maternal and foetal well-being
3	Infection prevention	• In place instrument processing
		• Ensure Medical waste separation
		• Ensure Medical waste disposal
		• Disposal of sharp instruments
4	Challenges faced	• Shortage of material resources
		Gaps in availability of infrastructure and human resources
		• Failure to do planning for quality
		• Loose referral system

5.3.2.1 Theme 1: Planning for quality

The HCPs stated that planning for quality means determining, having quality intrapartum care indicators and activities to implement and monitor. The participants had experience of planning for quality and quality improvement initiatives at the health centres as supported by the Ministry of Health's health quality strategy, 2016 (MOH 2016).

5.3.2.1.1 Sub-theme 1.1: Benefits of planning for quality

The quality improvement committee has been established in most health centres and the committee understood the benefit of quality planning although planning exercised at the health centres was fragmented. The participants stated that there were no specific planning sessions for quality improvement at the health centres except fragmented initiatives in place to improve the quality. In addition, the fragmented initiatives had no formal planning sessions and no system of follow up on implementation throughout the year although the benefits of planning were vital.

A study participant shared the experience on quality planning as follows:

“I have been working at this health centre for more than five years, in particular at the maternity unit of the health centre. I observed the health centre infection prevention committee observing the cleanliness of the compound and each department on Monday mornings. The Monday morning visit was sometimes interrupted for unknown reasons for a couple of months and re-initiated the visit mostly if the mentors or *woreda* supervisors were planning to come. To tell you frankly, I did not observe any plan for quality at the health centre level although we were expected to do planning for quality like any other activity planning with the significant benefits it had.” (HCP-7)

5.3.2.1.2 Sub-theme 1.2: Steps of quality intrapartum care planning

The participants indicated that planning for quality had been advocated by Ministry of Health and Regional Health Bureau personnel as well as development partners when they came for supportive supervision. Heads of health centre usually did infection prevention planning for quality. The infection prevention committee had been working as a quality committee. The infection prevention committee evaluated the infection prevention practises in different ways in different health centres which varied from regularly in some health centres up to rarely and no plan for quality at all in some health centres' labour and delivery units.

Study participant shared his view as:

“The planning process in our *woreda* started on May or June of every year for the annual comprehensive planning process. The planning process usually started with providing orientation training on the indicative plan of the region or the *woreda*. I remembered that this indicative plan was disaggregated into our health centres. We developed our comprehensive plan of the health centre and I did not come across plan for quality intrapartum care for the years in which I participated.” (HCP-3)

5.3.2.1.3 Sub-theme 1.3: Components of quality intrapartum care planning

Planning for quality had been conducted on a yearly basis in a few health centres. The main quality of care planning components which were considered during planning sessions were infection prevention and pregnant women's conference. The pregnant women's conference was organised to increase uptake of health centre labour and delivery services and to improve ante natal care (ANC) from 1 to 4 coverage and continuity of care. In addition, health centres planned to improve the infrastructure and supplies that affected quality of health care deliveries like collecting grains/cereals for pregnant women who would stay at health centre at term up to childbirth.

One participant stated,

“As part of a comprehensive plan of the health centre, we planned to organise pregnant women's conference at health post/village level which helped us to increase the institutional delivery rate. In addition to the pregnant women conference, we planned to increase ANC 1 and ANC 4 coverage of the health centre.” (HCP-5)

5.3.2.1.4 Sub-theme 1.4: Responsibilities and participants of quality planning tasks

Planning for quality was also explored. The participants indicated that planning for quality was the task and responsibility of everybody in the health centre. The participants added that planning for quality is the task and responsibility of the health centre community under guidance and support of head of the health centre, *Woreda* Health Office and Regional Health Bureau.

One participant shared the experience as,

“Planning for quality intrapartum care is the task and responsibility of every health centre community, in particular technical team members of the health centre, but most of us did not understand it that way.” (HCP-4)

5.3.2.2 Theme 2: Quality intrapartum care

Quality intrapartum care encompasses championship, ensuring client comfort, providing friendly service, maintaining client privacy and confidentiality, communication and counselling, and provider-client interaction.

5.3.2.2.1 Sub-theme 2.1: Involve championship/doula

This study assessed the availability of support persons for clients in labour and delivery rooms. The participants shared the experiences that having a labour champion makes clients to feel confident and develop a sense of belongingness.

The participants stated that championship/birth support had the benefit of psychosocial support and a better childbirth experience and outcome. Some participants stated that champion/doula would support the health care providers in the second stage of labour particularly and a labouring mother in the first active first stage of labour. Some participants had had experience of having championship while others were not comfortable with the availability of championship during labour and delivery and refused to allow championship.

Study participants stated their views as,

“As a health care provider, we usually counsel labour and delivery clients to have a relative, in particular their mother or husband, together with them during labour and delivery ... but most of them are not happy to have their husband with them and prefer to be alone with the health care providers ... We usually push them to have the mother or husband with them to be on the safe side as a health care provider of a health centre.” (HCP-9)

“I have been requested by the mothers and husbands of labouring mothers to accompany labouring clients. I rejected their request in the second stage of labour. I prefer to work with my colleagues as support rather than let the attendants disturb me in managing the labour and delivery.” (HCP-11)

The researcher explored whether the health care providers provided orientation to the champion on how to support. The participants did not provide any form of training or orientation to the champions/birth support.

One participant described the practise as,

“I have invited lots of attendants to accompany labouring mothers and join as a birth champion. I did not give any orientation or training to any of them.” (HCP-8)

5.3.2.2.2 Sub-theme 2.2: Ensure client comfort

Safety and privacy should be provided for women during labour and delivery at health facilities. Labour and delivery patients should be advised to assume different positions when they want to sleep and to ambulate whenever necessary as well as give birth in their preferred position. The participants shared their experience of trying to ensure comfort for the clients during childbirth. Some participants counselled clients to assume a comfortable and preferred position.

A participant stated the experience as,

“I had the experience of working in labour and delivery for more than five years as a midwife nurse ... I frequently counselled clients to take a rest in any position they want and be comfortable to rest. Unfortunately, some labouring mothers usually raised the issue that having rest on the lateral side would result in endangering the foetus so they resisted to rest on the lateral side regardless of counselling.” (HCP-7)

One participant described the managing clients in the lithotomy position rather than allowing them to choose their preferred position in the second stage of labour:

“To tell you forthrightly, as a health care worker of labour and delivery room, I attended lots of delivery clients in the health centre and I never managed clients other than in the lithotomy position. I knew and I learnt to manage delivery clients with their preferred and comfortable position ... but it might be very tough to manage the mother and newborn in other than lithotomy position ... I would not allow clients to give birth in the preferred or comfortable position other than lithotomy ... Thanks to Almighty God, I did not encounter any cases for the last couple of years with this type of request from clients.” (HCP-2)

5.3.2.2.3 *Sub-theme 2.3: Avail friendly service*

It is essential to provide health services in a friendly way to enhance patients' satisfaction.

Participants described importance of greeting as,

"I treat my clients starting from the beginning with greeting her by her name. The reaction of my client when I call her by name is so important and creates fertile ground for further communication. Next to this I manage every communication and action in friendly way to create satisfaction for my clients." (HCP-7)

The study explored friendly service provision at the peak time of labour management, particularly in the second stage of labour. Some participants stated that they were unfriendly in order to prevent unnecessary complications like foetal distress, vaginal tear, or perineal tear.

One participant stated,

"I manage clients as friendly as possible, but it becomes very tough during second stage of labour if clients are not cooperative. I forced to react with the clients if things went wrong." (HCP-6).

5.3.2.2.4 *Sub-theme 2.4: Maintain privacy*

Maintaining privacy and confidentiality is important to provide quality intrapartum care. The participants reported that maintaining privacy was difficult most of the time due to health centre infrastructure challenges. One participant described the difficulties experienced during the management of labour and delivery clients as follows:

"Clients who come to the health centre are usually tense and scared about everything that we act and do. Hence, as a health care provider in the labour and delivery room, I try to protect the visual privacy of the clients by covering the client's private areas with cloths. I also ... use a screen if there are two mothers in labour at the same time since ... as you see ... only one room for first stage and one room for second stage of labour. ... I could not do anything about audio privacy since

there is no separate room for every client and sounds of clients are sometimes audible inside the labour room. As clients hear others in pain, they start to be scared and I try to reassure them but remain concerned as a health care provider.” (HCP-11)

One participant described maintaining clients’ visual privacy as much as possible by using screens and/or drapes,

“I managed clients in labour and delivery. I had one room for labour and one room for delivery. I used screens and drapes to maintain the visual privacy of clients. Moreover, I did not allow anybody to enter the room without my knowledge and permission”. (HCP-5)

Maintaining audio privacy was very difficult to ensure due to two or more clients being in one room and other infrastructure challenges.

One participant stated the situation,

“I managed two or more clients at a time in one delivery room through separation with screen. I could not manage the audio privacy and even they cared with others labour pain.” (HCP-2)

5.3.2.2.5 Sub-theme 2.5: Communication and counselling

Communication and counselling are important for client confidence and satisfaction with the services provided. Some participants shared the value of communication and counselling in providing quality intrapartum care in a coordinated way.

Participants explained the importance of communication and counselling as,

"I communicate with my clients clearly and in understandable language which fosters the care giving process.” (HCP-3)

“I practise allowing every client to ask any question or concern if they have. Then I try to address the client’s questions and concerns.” (HCP-6)

“Informing my clients about the duration of labour, what is expected during the course of labour and other related issues contributes significantly to client satisfaction.” (HCP-4)

One participant indicated that communication and counselling were not always done strictly according to the national and/or WHO standards. This usually happened when there were two or more cases as well as other overlapping tasks. Health care providers then usually had to hurry to treat one client and then move to the next one.

A participant replied practise of communication and counselling as,

“I usually communicate with my clients as much as they can understand what I am saying and repeat my words, and then ask them to repeat what I said. This might not be applicable to all clients since sometimes we have lots of clients waiting for me. So, I am forced to manage clients as quickly as possible without giving them enough time for understanding.” (HCP-8).

5.3.2.2.6 Sub-theme 2.6: Partograph and its benefit

The participants agreed that a partograph was one of the tools that helped to manage labour and delivery from the start of true labour until the delivery of the placenta.

Most of the participants described the utilisation of a partograph as a routine task. Two participants emphasised the benefit of a partograph as follows:

“Partograph ... graphical representation, which helps us in monitoring the maternal, foetal and progress of labour so the quality of service will be good if we are using it properly. If we do not follow labouring mothers with a partograph, the rate of unnecessary referrals would be high, and we would end up losing mother and newborn unnecessarily.” (HCP-9).

“Health care providers who use a partograph have confidence in the work and how the labour progresses. Health care providers who did not use partographs did not have the confidence to talk about the progress of labour and were blind to monitoring properly. My health centre has a motto to use a partograph. You will see a paper posted at the entrance to the labour and delivery room that says “a

health care worker who does not use a partograph is no different to a Traditional Birth Attendant". So, as a team, we used the partograph and client hand over during night shift was conducted with the partograph which, I think, is unique to our health centre. This was not practised in other health centres according to communication with my friends in other health centres during discussion at different training, meetings and workshops and even telephone conversations with my friends. I believe you will also share this experience with other health centres." (HCP-7)

Another participant stated that the following motto was posted at the entrance to the labour and delivery room of their health centre:

"Health care workers who do not use partographs for labour management are considered traditional birth attendants." (HCP-4)

5.3.2.2.7 Sub-theme 2.7: Quality care routine tasks and their prioritisation

The quality care routine tasks ensure quality intrapartum care by providing the inputs for quality like human resources, materials, supplies, and process of care according to national and international standards.

A participant working in the labour and delivery room described the quality routine care tasks as follows:

"Health care workers in labour and delivery rooms and other support staff were responsible to undergo any preparatory work to admit, manage and take necessary action to keep the quality of care for the mother and newborn. The routine care starts before the onset of labour with the labouring mother staying in the waiting area and continues till discharge of clients from the health centre. "(HCP-5)

Some participants revealed that prioritisation of the task was not practised regularly within predefined criteria.

One participant explained the practise as,

“All equipment was sterilised and kept in with sterility technique. The health centre had relatively benefited with experienced and trained health care workers since it is a safe place to live and experienced HCWs come from the nearby rural HCs with transfer. The clients who were at term were kept in the waiting room of the health centre, documented for regular vital signs while in the waiting area and then they would stay there until true labour began. As soon as true labour started, they would be transferred to the labour room and their labour would be monitored with maximal quality of care as much as possible.” (HCP-5)

Other tasks of the health care providers included arranging a pregnant women’s conference at the catchment *kebele* of the health centre. Every health care provider was responsible for one *kebele* (village) to support the health activities of the health extension workers at community level.

According to one participant, the pregnant women’s conference task was practised regularly on a monthly basis,

“Pregnant women’s conference ... was one of the tasks every midwife nurse was expected to conduct on a monthly basis with the *kebele* in which they are assigned. The conference was good to address the community concerning health facility delivery misconceptions and benefits of giving birth at health centre level. But sometimes the conference ... I mean ... organised for the report purpose, meeting agenda is not thoroughly discussed and the participants are in hurry to address the concern and other related issues. Not only the participants but also health care providers who facilitated the meeting were not ready for the session so that usually the meeting ended up without tangible outcomes.” (HCP-10)

Cleaners and health care providers of the health centres were responsible for preparing and cleaning the pregnant women’s waiting area. The waiting area had to be arranged properly for pregnant women to stay at the health centre before the onset of true labour for patients whose home was far from the health centre. In order for women at term to wait at the health centre until the onset of labour, the health centre team needed to have clinical and non-clinical support provided in a coordinated way.

One study participant stated the experience as,

“The client waiting room was a priority by the district health office for the last couple of years and *woreda* health office mobilised the community and constructed rooms for the clients. The meal services and other non-clinical budget of the client waiting room were managed with the community contribution through in kind donations and *woreda* resource allocation. Currently, the previous attention and priority had not been maintained, so the health centre and this initiative were in a very difficult situation to manage clients waiting at term until delivery.” (HCP-2)

5.3.2.2.8 Sub-theme 2.8: Monitore maternal and foetal well-being

Maternal and foetal well-being monitoring emerged as a critical issue. The participants indicated that they used different mechanisms to monitor the well-being of mother and newborn, such as strict use of partograph and regular checking maternal and foetal conditions according to national guideline recommendations.

One participant disclosed the practise as,

“Health care providers were expected to monitor the vital sign of mother and foetus through partograph. In the actual practise I was doing that for my clients as much as possible.” (HCP-12)

Another participant stated that the frequency of vital sign monitoring depends on the patient’s clinical stability:

“I monitor my clients’ vital signs according to their clinical status and risk factors. I manage more frequent vital sign monitoring for those clients I suspect of having poor clinical condition and less frequent vital sign measurement for good clinical status and low risk factors.” (HCP-3)

5.3.2.3 Theme 3: Infection prevention

This standard universal precaution, in particular infection prevention practise, is pivotal in maintaining the quality and safety of health care provision.

5.3.2.3.1 Sub-theme 3.1: In place instrument processing

The participants stated that instrument processing was their duty and responsibility in the provision of quality intrapartum care. The participants did instrument processing after every labour and delivery to prepare the delivery set/pack and other medical equipment for subsequent labour and delivery clients.

One study participant explained the role of midwife nurse in the instrument processing as,

“Midwife nurses are the ones to keep the client’s safety and quality with the knowledge, skill and experience. In the health centre, we have all the supplies and equipment to process all the equipment which we have used to decontaminate, clean, sterilise and then to store the delivery set and equipment. ... The challenges we encountered were frequent electrical power interruptions for sterilisation of delivery sets since the health centre had no standby generator to work with. So, we were sometimes forced to use high level disinfection in order to reuse delivery sets. As you know, this technique will not kill spore forming microorganisms but what can we do? ... Working in a resource-limited area is a challenging exercise. We rarely run out of some supplies for instrument processing and are forced to use to the extent our own pocket money to provide the supplies.” (HCP-7)

5.3.2.3.2 Sub-theme 3.2: Ensure medical waste separation

Medical waste was generated, collected and separated properly in order to safeguard the clients and the general population from different nosocomial infections. The study further assessed the waste collection and separation system of health care providers at the health centres.

One participant shared his practical experience of the kinds of waste and disposal system as follows:

“There were three different kinds of wastes at the health centre. These three wastes are general waste, medical waste and sharp wastes. Hence, there are three different containers to collect all three wastes and store them in temporary storage. These stored wastes are properly transported and stored accordingly. Although

the theoretical standard is stated as the above, some of the health care providers did not practise it.” (HCP-11)

One participant shared experience of the role of the infection prevention committee of the health centre as follows:

“Our health centre had an infection prevention committee and regularly did supervision on every Monday. The most frequently raised complaint was failure to separate wastes, in particular medical and sharp wastes, which was very ... strange and ... very surprising ... might be ... unusual to see this type of fault again and again regardless of the risks to others like the cleaners.” (HCP-10)

5.3.2.3.3 Sub-theme 3.3: Ensure medical waste disposal

In some health centres, the collected and stored medical wastes were disposed of according to the national guidelines in some health centres, but the disposal was not practised uniformly.

A participant demonstrated the practise of waste disposal as,

“We collected medical waste in medical waste bins, and cleaners transported and disposed it accordingly at the incinerator through burning.” (HCP-9)

5.3.2.3.4 Sub-theme 3.4: Disposal of sharp instruments

The participants indicated that sharps wastes needed careful handling and disposal. The study explored the safe handling and disposal system of the health centres.

According to one participant,

“We were practising no touch techniques, no recapping of used syringes with needles as well as disposal of sharp wastes in puncture resistant container.” (HCP-7)

However, one participant disclosed that there were irregularities in the implementation of the disposal of sharp wastes:

“We have some irregularity in the implementation of the sharps collection and disposal system. We found mixing of sharp and medical wastes together while they were in hurry to manage labour and delivery clients at the second and third stage of labour. The separation, storage and disposal also affected by the availability of sharps containers and their utilisation. Moreover, they shared their experiences up to final disposal of medical wastes.” (HCP-2)

One participant described the experiences and challenges they had at the health centre:

“We are collecting three types of wastes at the health centre, stored them in temporary storage area which was high risk of disseminating infection and because of an offensive smell. The sharp waste was then transferred to the incinerator to burn but the incinerator was not protected so that kids were accessing it. The accessibility of sharp waste by kids was really worrisome to infect the innocent with our negligence ... that was raised lots of times in different meetings of health centre and district health office management but no improvement so far.” (HCP-5)

5.3.2.4 Theme 4: Challenges faced

The participants were asked about the challenges they encountered in the provision of quality intrapartum care. The sub-themes identified are discussed next.

5.3.2.4.1 Sub-theme 4.1: Shortage of material resources

One of the challenges raised by the participants was drugs, equipment and supplies for labour and delivery. The shortage and stock out of supplies, like surgical gloves, and drugs, like magnesium sulphate, injectable antibiotics and hydralazine, were the main ones raised.

A participant added the following challenges,

“Rubber sheets, as you know, used to cover labour and delivery beds ... used one rubber sheet for every client ... are expected to be decontaminated after each procedure by cleaners. But rubber sheets were in short supply and on top of that we also had cleaners who were males and less interested to work as a cleaner as

well as old age to order them. Hence, we are in a very difficult situation to provide infection prevention as we would like and we reported this issue to the head of health centre and woreda health offices ... no solution so far ... we hoped to get a solution to work with minimal acceptable quality of care.” (HCP-11)

5.3.2.4.2 Sub-theme 4.2: Gap in availability of infrastructure and human resources

The participants raised the following challenges: human resource shortage, technical competency gaps in providing quality intrapartum care, staff burnout and reluctance to address quality improvement activities by some health care workers.

One participant reflected his view on the shortage of human resource against the number of delivery services attended per month as follows:

“The health centres had a relatively high delivery client flow, but we are three and not in a position to manage the labour and delivery services.” (HCP-10)

One participant commented on the technical competency gap of health care providers as follows:

“I have observed health care workers, who had a gap in technical competency and negligence on top of limited human resources, available in the labour and delivery room.” (HCP-6)

The gaps in receiving regular capacity building training as well as regular refresher training in basic emergency maternal and obstetric care (BEMOC) and infection prevention, mentorship and others were critical gaps observed by participants.

One participant shared the consequence of absence of regular training as,

“The health care system is a dynamic one which needs regular updating with training and other opportunities. We are here with limited technology access; if we do not get capacity building events, the quality of service delivery would be jeopardised.” (HCP-10)

The availability of infrastructure is important. One participant described the challenge of water availability and other medical equipment for the health centre as follows:

“The shortage of water, while we managed labour and delivery clients, we were forced to put water in a jar so that we used the water from the jar during labour and delivery which was very difficult beyond imagination. The shortage or absence of towels, absence of blankets during the cold season, shortage of beds for labour and delivery women if three or four labouring clients came simultaneously.” (HCP-1)

5.3.2.4.3 Sub-theme 4.3: Failure in doing planning for quality

The health centres were expected to do planning for quality, like the annual activities planning. Most of the participants did not practise quality planning as part of an annual plan or a separate plan. Health centres practised planning for quality as an infection prevention plan. The infection prevention committee of the health centre conducted infection prevention plan as the work of the committee. Thus, there were no other plans for quality included in the annual comprehensive plan of the health centres as they stated.

One participant stated the reason for not conducting regular planning for quality as,

“Planning for quality is the role and responsibility of all of us but we failed to do it due to low attention given to planning to quality in the health centre.” (HCP-8)

5.3.2.4.4 Sub-theme 4.4: Loose referral system

Ethiopia’s health system is organised into three tiers, with a referral system in place. The referral chain starts from the health post to the health centres. The health centres refer to primary hospitals and the primary hospitals refer clients to general hospitals and then to the specialised hospitals. The referral system is expected to have a feedback loop. The referral systems have been in place for some years. According to the participants, however, a major challenge was getting feedback on clients referred with some diagnoses and the final outcome. Most of the participants revealed that they had no system of feedback loop for the clients they had referred to hospitals.

A study participant explained the experience as,

“While the peridium of mentors were supported by partners, we had a strong referral system with referral feedback in place with face-to-face as well as the written feedback during catchment meetings. The sessions were an excellent platform to get knowledge, skill and experience of seniors. Unfortunately, we do not have that system currently and no more comments were coming from the referral facility. Rather a strange challenge was facing like some health care providers at the referral health facilities informed the diagnosis to the clients directly with blaming way and they informed the clients that the providers who referred to us was wrong in diagnoses and some clients were coming to us and informed us that we were wrong in diagnosis. This type of approach definitely affected the health centres and clients in accessing other health services from using it.” (HCP-8)

5.3.3 Mentors and supervisors’ sociodemographic profile

The mentor and supervisor participants’ sociodemographic profile included their age, gender, qualifications and work experience.

5.3.3.1 Age

The participants were within the age range of 27 years to 39 years and with a mean age of 33.2 years.

5.3.3.2 Gender of the participants

The gender profile of the study participants showed that 50% (n=6) females and the rest 50%(n=6) of the participants were males.

5.3.3.3 Participants’ qualification and work experience

Of the participants, 50% (n=6) had a Master of Public Health; 33.3% (n=4) had a BSC Midwife, and 16.7% (n=2) had BSC in Public Health. Of the participants, 8.3% (n=1) had 13 years’ experience; 8.3% (n=1) had 10 years’ experience; 8.3% (n=1) had 9 years’ experience; 50% (n=6) had 8 years’ experience; 8.3% (n=1) had 7 years’ experience; 8.3% (n=1) had 6 years’ experience, and 8.3% (n=1) had 3 years’ experience.

Table 5.3 Supervisors and mentors' age, gender, qualification and work experience

Participant	Gender	Age	Qualifications	Experience in L and D
SM-1	F	31	BSc public health	8
SM-2	M	30	BSc midwife	8
SM-3	F	27	BSc midwife	3
SM-4	F	32	BSc public health	8
SM-5	M	37	Master of Public Health	9
SM-6	F	36	Master of Public Health	8
SM-7	F	35	BSc midwife	8
SM-8	M	38	Master of Public Health	10
SM-9	M	28	BSc midwife	6
SM-10	F	39	Master of Public Health	13
SM-11	M	31	Master of Public Health	7
SM-12	M	34	Master of Public Health	8

***SM – Supervisors or Mentors

5.3.4 Thematic analysis for mentors and supervisors

The thematic areas with its sub-thematic areas for supervisors and mentors are depicted in Table 5.4. Moreover, further description and quotation of the study participants were used to support participants' responses.

Table 5.4 Mentors and supervisors views, practise and challenges of intrapartum care

SN	Theme	Sub-theme
1	Planning for quality	<ul style="list-style-type: none"> • Quality practises • Quality planning components
2	Capacity building	<ul style="list-style-type: none"> • Mentoring practises • Role of quality improvement committee • Supportive supervision practises • Training
3	Supply chain management	<ul style="list-style-type: none"> • Availability of resources • Role of supervisors/mentors in supply chain management
4	Challenges faced	<ul style="list-style-type: none"> • Shortage of material resources • Gaps in availability of infrastructure and human resources • Logistics challenges • Failure to plan for quality • Loose referral system

5.3.4.1 Theme 1: Planning for quality

Supervisors and mentors of health centres have a cluster of health centres (Catchment health centres) to supervise, mentor and coach for quality improvement. The study explored the supervisors and mentors experiences in the preparation of plans for quality improvement in their catchment health centres. The findings showed that planning for quality had scant practise with lack of uniformity in the components and timing of planning as well as follow up of the planned activities implementation was minimal.

5.3.4.1.1 Sub-theme 1.1: Quality practises

The planning for quality was managed by the maternal and child health officer at the *woreda* health office in collaboration with the mentors of the catchment health centres. This exercise was rarely communicated to health centres' health care providers to do similar planning. In some health centres, a quality improvement committee (infection prevention committee) of the health centre was conducting quality improvement. The quality improvement committees of health centres were usually doing a plan for infection prevention and other standard precautions but not for maternal health services of health centres.

One participant stated the planning practise as,

“I have been working at the district health office for the last more than 13 years with maternal and child health programme coordinator in coordination of planning, implementation, monitoring and evaluation of maternal health activities with health centres and health extension workers. The planning was mainly addressed with *woreda*-based plan which was also cascaded down to *woreda* and health centres to plan the comprehensive plan on annual basis and we made implementation, supportive supervision and review meeting of its performance status on regular basis but not planning for quality separately. The planning had some proxy quality indicators for maternal health services but not the clinical quality of maternal health services.” (SM-10)

5.3.4.1.2 *Sub-theme 1.2: Planning for quality components*

The participants stated that the planning and evaluation of planned activities was done together with other planning and performance tracking. The participants revealed that there was no separate planning, discussion or evaluation to assess the progress made towards the performance of the planned activities for quality of care.

One study participant explained as,

“The district health office with the involvement of respective health centres were practising *woreda* base planning for the last couple of years and I was part of the planning process for the last more than five years. The maternal health components major indicators and activities did not capture clinical quality parameters in particular the clinical quality initiatives of the health centres. Surprisingly in some years almost no quality issues were mentioned in the *woreda* base plan of the *woreda* health office. This implied that low attention in practise was given for quality since as a principle if you did not plan it, you will not accomplish it and no evaluation for those tasks which were not addressed in the annual plan of the district. The major components of the *woreda* base plan are mainly maternal health services of Antenatal visit, safe motherhood, misoprostol provision, fistula surveillance, safe abortion services and pregnant women waiting area construction.” (SM-08)

5.3.4.2 Theme 2: Capacity building

Capacity building is critical to achieve, maintain and continue the quality of health care service provision with competent health care providers. The sub-themes of capacity building are discussed next.

5.3.4.2.1 Sub-theme 2.1: Mentoring practises

Mentoring is one of the capacity building modalities to improve the technical competency of health care providers. The participants confirmed that mentoring for maternal health programme in particular for management of labour and delivery clients' quality improvements was not practised regularly.

The *woreda* health office supervisor commented the current mentorship programme in comparison with the mentorship which was supported by development partners.

A participant discussed the experience as,

“The mentorship was regular, supported with high calibre, experienced and skilful health professionals who had the passion to support and capacitate the mentees with the mentor and mentee relationships. Currently, the programme had lot of challenges and limitations to proceed with the technical competency and quality of the services rendered. This happened due to different reasons like some competent mentors were not here to support, the supplies and some sort of incentives no more be available and the regular visit became on and off patterns with no fixed date of schedule in most of the time. That was the critical thing in which district health office, Zonal Health Department (ZHD), Regional Health Bureau (RHB) and Ministry of Health (MOH) should think over it for me as a supervisors of maternal health programme.” (SM-12)

Regarding clinical service providers' practise, particularly partograph utilisation, one participant stated:

“Some health care providers of the health centres were not practising the national guideline recommendation to safeguard the mother and newborn. They had gap in

utilisation of partograph consistently, failure to monitor the vital signs of the mother and newborn per the recommendations”. (SM-3)

5.3.4.2.2 Sub-theme 2.2: Role of quality improvement committee

The participants indicated that health centres in Amhara region had a quality improvement committee (mostly infection prevention committee) in the selected health centres for most of the quality improvement initiatives. The quality improvement committee consisted of the heads of the health centre units as team members and in some health centres the chairman of the committee was the head of the health centre.

The participants indicated that the role of the quality improvement committee was mainly to examine the cleanliness of the health centres' compounds, infection prevention practise, and medical waste management.

Participants commented on the quality improvement committee as,

“The quality improvement committee literally mean an infection prevention committee in practise. The committee is mainly involved in evaluating health centres compound cleanliness and departments infection prevention practise.” (SM-7)

“In order to ensure quality, the quality improvement committee evaluates MCH services with seven pillars ANC4, Iron with Folate acid coverage of 90+ percentage and this is cross checked at household level with site visits as well as cross-checked during return visit of the client, safety child checklist proper filling-sample is cross-check with the committee and provide with feedback, logistics and its administration, community score card on quarterly basis to collect feedback of the community about the services of the health centre, porridge services is available for the clients who gave birth at the health centre.” (SM-11)

5.3.4.2.3 Sub-theme 2.3: Supportive supervision practise

Supportive supervision is one of the tools to improve health service provision in terms of the volume of the service and quality of service delivery. Supportive supervision was considered as a capacity building event in which health care providers gained experience

and skill with feedback and support by senior and experienced supervisors and mentors. Although supportive supervision had these benefits, the participants had mixed experiences.

A participant discussed his mentorship practise as,

“I made a mentorship programme for a couple of clinical health care providers for the last more than four years and I had experience of building the skills and experience of clinical service providers. The supportive supervision had two different experiences: there were service providers who accepted the supportive supervision as a means of getting skill, experience and session for improvement of their performances. However, some service providers considered the supportive supervision as a session for fault finding and means to take administrative measures to fill those faults. Those health service providers became defensive for any skill and experience we shared with them. This was partly some supervisors approach and quality in which they reacted to it and some were due to their personal behaviour and understanding of the purpose of the supportive supervision.” (SM-04)

5.3.4.2.4 Sub-theme 2.4: Training

The participants stated that training in different clinical services had been facilitated and conducted at Bahir Dar, Dangilla, Debreworkose, Addis Ababa, Adama and other towns and cities. The training sessions made service providers' competent and confident to provide quality intrapartum care services. However, health care providers who had relatively short training did not get timely in-service training and, in some instances, did not get all the training, particularly in BEMOC and infection prevention.

A participant shared a terrifying experience as,

“While I made my supportive supervision visits to health centres, I faced some newly joined health care workers who had no skill and experiences on BEMOC and terrible to capacitate them with short period of time.” (SM-4)

The participants indicated that refresher training was not scheduled on an annual basis and there was no system of regular refresher training except integrated refresher training

for health extension workers. Moreover, basic and refresher training for labour and delivery service providers had decreased with reduced partner support and no strong system in place to sustain the government capacity building activities and no learning platform available at health centre level.

One participant stated the experience of training as,

“I am training of trainer (TOT) certified for integrated refresher training of the health extension workers which has comprehensive essential health service interventions and conducted on an annual basis. I had got a chance to provide refresher training to the health extension workers in order to refresh their knowledge and to share experiences among themselves. This experience will benefit maternal health service providers if the government designs and implements an integrated refresher training for different components of maternal health programme in addition to labour and delivery services on an annual basis.” (SM-12)

5.3.4.3 Theme 3: Supply chain management

Drugs, supplies and medical equipment should be available at health centre level. The third theme was supply chain management. The sub-themes are discussed next.

5.3.4.3.1 Sub-theme 3.1: Availability of resources

The availability of equipment, supplies and drugs is pivotal in health care service provision. The study explored the availability of medical equipment, drugs and supplies for intrapartum care provision at the health centres. The participants reported that they struggled to obtain basic medical equipment, drugs and supplies and faced shortages of essential drugs and supplies.

One participant stated:

“I have been visiting health facilities on a regular basis and one of the key areas of support in the health centre is the availability of the drugs and supplies. I managed to communicate and provide supplies and drugs to the health centres as much as possible.” (SM-10)

5.3.4.3.2 Sub-theme 3.2: Role of supervisors/mentors in the supply chain management

The participants stated that supervisors and mentors had a significant role in the supply chain management by communicating with EPSA and the pharmacy department of the district.

A participant elaborated his role as a mentor as,

“While I made supportive supervision, one of my tasks is to see the stock status of each commodity and facilitate those under-stocked or stock out supplies to be refilled.” (SM-6)

5.3.4.4 Theme 4: Challenges faced

The participants were asked about the challenges they faced in quality intrapartum care provision. The following challenges were identified: shortage of material resources; gaps in availability of infrastructure and human resources; logistical problems; failure to plan, and loose referral system.

5.3.4.4.1 Sub-theme 4.1: Shortage of material resources

One of the challenges raised by the participants was drugs, equipment and supplies of labour and delivery. The shortage and stock out of supplies, like surgical gloves, and drugs, like magnesium sulphate, injectable antibiotics and hydralazine, were the main ones raised.

One participant added the following challenge,

“Rubber sheets, as you know, used to cover labour and delivery beds ... used one rubber sheet for every client ... are expected to be decontaminated after each procedure by cleaners. But rubber sheets were in short supply and on top of that we also had cleaners who were males and less interested to work as a cleaner as well as old age to order them. Hence, we are in a very difficult situation to provide infection prevention as we would like and we reported this issue to the head of health centre and *woreda* health offices ... no solution so far ... we hoped to get a solution to work with minimal acceptable quality of care.” (HCP-11)

5.3.4.4.2 *Sub-theme 4.2: Gaps in availability of infrastructure and human resources*

Trained human resource availability is a prerequisite to provide service and competency of the available human resource is essential to provide quality intrapartum care. The participants discussed staff burnout, reluctance to address quality improvement activities, and capacity building gaps to make health care providers competent to provide quality intrapartum care.

Participants shared the view and experiences as,

“As mentor of health centre, I remember two major challenges: shortage of human resource and water. One health centre labour and delivery room health care provider who managed the antenatal and post-natal unit of the health centre which make my mentorship programme horrible. Especially I did not forget one incident which happened two years before, I travelled to the health centre to provide mentorship to a health care provider in the labour and delivery room, but the health care provider had triple responsibilities of managing ANC, PNC, labour and delivery. Hence, I was just supporting him and capacitating him for the three components, but he was so busy to participate in my mentorship programme and ended up without meeting the intended objective of my visit. The second challenge at health centre level was the absence of water in the labour and delivery room which made the clinical service provision and the mentorship programme very tough.” (SM-5)

“Whenever I visited one health centre, most of the time I found health care providers sitting together and discussing some issues, in particular in the afternoon.” (SM-7)

“In the government health system, there was no system of stress and burnout management. That might be the reason for some health care providers becoming reluctant.” (SM-10)

“The capacity building training was not planned and delivered for newly joined health care workers as a system of induction to the job.” (SM-3)

5.3.4.4.3 Sub-theme 4.3: Logistical challenges

Some participants raised the logistical aspect as a critical shortcoming in most health centres.

Participants discussed the challenges as,

“The logistics delivery system of urban health centres is managed with Ethiopian Pharmaceutical and Supply Agency (EPSA) whereas the rural supplies are the responsibility of district health offices to deliver timely logistics for rural health centres.” (SM-11)

“In most instances, we practised the logistics as the storekeeper/pharmacist would notify us of the stock out drugs or supplies with a lead time to the health centre head/supervisor. The head of the health centres in communication with *woreda* health office or EPSA provided those requested drugs as timely as possible.” (SM-13)

Regarding refilling supplies and drugs, one participant described the problem as follows:

“The logistical management has mixed experiences at various health centres. Some health centres kept emergency drugs, two or three gloves and fluids at the delivery room which were regularly refilled by prescription, based on client utilisation. The clients were receiving IV fluids and gloves with no cost at the dispensary room of the health centres through prescription-based refilling. Some health centres used the internal facility reporting and resupplying form (IFRR) to refill the supplies and drugs on a regular basis. Still others did not use it, rather they said that the IFRR is usually used for family planning and ANC commodities but not for labour and delivery services. The utilised supplies and consumables were refilled per client, based on the prescription provided by the health care providers. The attendants who accompanied the labouring mothers collected and refilled the supplies and drugs from the health centre pharmacy. As mentors, we are working to standardise it across all health centres.” (SM-02).

5.3.4.4.4 *Sub-theme 4.4: Failure in planning for quality*

The health centres were expected to do planning for quality like the annual activities planning. Most of the participants indicated that health centres were doing quality intrapartum care planning (quality health care planning) as part of the annual plan or a separate plan. The planning was practised in few health centres as planning for infection prevention as committee work or not included in the annual comprehensive plan of the health centre.

A participant shared an experience as,

“I am in charge to facilitate and assist the annual and six-month planning exercise of the health centres, in particular maternal and child health services. To share my experience with the planning for quality, we had few proxy quality indicators but did not reflect the clinical quality so I personally did not believe that we do planning for quality and health centres did not do as well. This is the gap I observed and sensed as a supervisor”. (SM-09)

5.3.4.4.5 *Sub-theme 4.5: Loose referral system*

The government has a system of referral to be applied which starts at the bottom to the top of the referral system. Mentors and supervisors have a role in improving the referral system linkage through capacity building and mentoring of health care providers. The participants indicated that the referral system had been breached for several reasons in their observation, such as clients' preference to go to higher facilities, lack of supplies and equipment, loss of confidence in some health care providers and negligence of some health care providers.

One study participant explained his experience as,

“My support to the health care providers in the health centres articulated mainly on technical issues, but technical support without the availability of drugs, supplies and equipment is meaningless. Therefore, I frequently discussed with heads of health centres, *woreda* health office heads and EPSA regional providers to provide stock out drugs and supplies.” (SM-11)

5.4 FINDINGS

The qualitative findings are discussed next.

5.4.1 Participants' sociodemographic profile

The participants' average age was 29.4 years with ages ranging from 26 to 36 years old; 67% were females and 33% were males, and their average work experience was 6 years.

5.4.2 Planning for quality

The Ministry of Health in collaboration with various development partners developed and implemented a five-year quality and equity strategy plan since 2016 (MoH 2016). Currently, the strategy plan is under revision. The quality strategy plan addressed the three levels (primary, secondary and tertiary levels of care) of health services quality improvement. The strategy plan implementation has been initiated at federal level and cascaded to regions and further. In response to this, regional health bureaus and *woreda* health offices were expected to develop strategic and operational plans for quality. As part of this process, health facilities were also expected to develop quality operational plans together with their annual operational plans.

The study found that some health centres had a standalone infection prevention plan for the infection prevention committee of those health centres. Other health centres had several plans, such as improving ANC 4 coverage, increasing the institutional delivery rate and conducting pregnant women's conferences at village level, expansion of client waiting areas, and collecting grain for pregnant women. These plans were integrated into the health centres' comprehensive plan.

The study found that planning for quality practise had been conducted for the last three to four years at district health office level; planning for quality was not practised uniformly and the content of the annual comprehensive plan did not address the three components of quality to tackle the quality gaps for improvement. Some health centres did not have dedicated staff to oversee quality improvement, and the infection prevention committees had no terms of reference (TOR). Most health centres had no plan for quality and planning for infection prevention activities was not comprehensive enough to address other quality

components of the health centres' health service delivery. The pregnant women's conference was a common practise in most health centres. The benefit of the conference was to plan and promote institutional delivery by pregnant women. Although the conference had these benefits, there were limitations on planning for it properly and giving adequate time for the facilitators and the participants of the conference. Some conference facilitators did not give adequate time for preparation and presentation of the subject matter.

An assessment conducted by Asresie et al (2019:5) documented similar results on the purpose of pregnant women conference. The conference had a significant impact on the improvement of ANC coverage and institutional delivery rate by pregnant women. Pregnant women had a chance to have adequate knowledge about pregnancy and delivery as well as to share experiences among themselves.

A study conducted by Asresie et al (2019:5) found that pregnant women who had attended a conference had knowledge of the danger signs that triggered the pregnant women to seek institutional delivery.

5.4.3 Quality intrapartum care

The findings indicated that the quality of intrapartum care was sub-optimal. The parameters explored and discussed using face-to-face interview assessment findings are as follows:

5.4.3.1 Championship

The presence of a husband, mother or relative as a birth champion for the labour and delivery patient has been found to improve childbirth outcomes. Companionship provided psychosocial support and helped avoid a feeling of loneliness and abandonment. The participants stated that companionship was rarely practised in the management of labour and delivery. The study found that the participant health centres did not provide orientation or training on companionship for labouring mothers. When it was provided, it was done so without orientation to companions on how to give support during labour and delivery.

The study done by Sheferaw et al (2017:8) revealed similar finding that health care providers had an encouraging practise in allowing birth champions or support person together with the labour and delivery clients. A study conducted in Kenya by Sudhinaraset et al (2019:13) had mixed experience on the presence of champions during labour and delivery. Some providers agreed to have birth champions, others allowed them under certain circumstances like in the case of emergencies. Others did not allow to have birth championship during labour and delivery.

A study in Ethiopia by Burrowes et al (2017:263) and another study conducted in Teheran at a non-teaching public hospital by Moridi et al (2020:4), explained that championship was not allowed for labour and delivery clients which compromised the autonomy of the clients. The variation of the study with Iranian study findings could be explained possibly by sociodemographic and economic variation of the two studies. The variation with Burrowes et al's (2017) study findings could be explained by the fact that compassionate respectful and caring (CRC) training had been given extensively by the MOH to regional health bureaus, zonal health department, woreda health offices and health facilities after the study time period.

A systematic review conducted in low, middle- and high-income countries by Bohren et al (2019:21-23) found that championship supported and encouraged the labouring mother and assisted her in ambulation as well as in changing of position during labour and delivery and required minimal training on how to serve as a birth champion.

Orientation or giving training on how to provide birth championship in labour and delivery clients were not practised in the assessed health centres health care providers.

5.4.3.2 Ensuring client comfort

It is well understood that health care providers advised clients to ambulate and to rest in the preferred positions. The actual practise of assuming different position of their preferred side was a rare practise due to the clients' preferences and gap in advising clients by the health care providers.

Moreover, health care providers did not allow the clients to give birth in their preferred position but insisted that they assume a lithotomy position in active first stage and particularly in the second and third stage of labour.

The study conducted by Burrowes et al (2017:263) revealed similar result findings that the health care providers denied the clients to give birth in their preferred position during the delivery of the baby.

Study findings of restricting the client preference on the birth position preference by the client was contradicting with the study findings conducted by Sheferaw et al (2017:8). Sheferaw et al (2017) documented that health centres' health care providers were better in giving option for the birthing position of the client preference. The variation could be explained by the methodological difference in the data collection.

5.4.3.3 Providing friendly service

One of the quality parameters in intrapartum care is to provide service in a friendly way.

The interview conducted with health care providers and mentors/supervisors/managers of health centres revealed two contradicting reflections on friendly service provision. The health care providers confirmed that the care they provided was friendly which helped the mother and newborn to have positive outcome. However, the mentors and supervisors revealed that the health care providers were not providing the services in a friendly way.

An assessment conducted by Moridi et al (2020:4) and Shimoda et al (2018:4) stated that the presence of friendly service to clients eases the clients tension created due to concerns with their health and newborn health.

5.4.3.4 Maintain client privacy

Maintaining client privacy is one of the basic principles of respectful maternity care. The participants indicated that maintaining patients' privacy was extremely difficult, and not always possible, because of health centres' infrastructural challenges. In many cases there were no screens and two patients were in the same room.

A study conducted by Sudhinaraset et al (2019:15) revealed that the audio-visual privacy of labour and delivery clients was breached. The breach was due to the infrastructure challenges of the health centres.

A study conducted in Tanzania by Dynes et al (2018:9) and Shimoda et al (2018:4) revealed that audio-visual privacy was maintained for the clients.

5.4.3.5 Communication and counselling skills

Communication and counselling skills promote positive labour and delivery experiences and outcomes. The study found that participants who communicated with patients in a locally understandable language helped build labour and delivery mothers' confidence. The participants stated that having good communication and counselling skills enabled better childbirth experience and improved client satisfaction.

An assessment conducted in Tanzania by Shimoda et al (2018:4) on interpersonal communication revealed that establishing excellent interpersonal communication between midwives and clients had a significant contribution in creating comfort and relaxation for patients. Similarly, another study done by Chodazaza et al (2020:4) in Malawi demonstrated that communication had a significant impact on client safety.

Whereas a study done by Yang (2017:22) at eight facilities in Nigeria and Uganda and a study done by Rosen et al (2015:7) revealed that the interpersonal communication among the providers and clients were inadequate.

5.4.3.6 Partograph and its benefit

A partograph is a tool that supports monitoring the progress of labour and taking appropriate action for the wellbeing of the mother and baby. Regarding clinical service providers' practise, the participants found that some health care providers at the health centres did not practise the national guideline recommendations to safeguard the mother and newborn. They had gaps in utilising partographs consistently, failure to monitor the vital signs of the mother and newborn according to the recommendations.

The study findings of health care providers partograph utilisation were in line with the study findings cited by Yang et al (2017:5) which was done in Nigeria and Uganda which revealed a gap in utilisation of a partograph. In addition to the above studies other studies also documented the benefit of partograph in monitoring labour and delivery (Hagos 2020:4; Hailu et al 2018:3; Iyengar et al 2014:1471-2393; Nesbitt 2013:5; Worku et al 2013:4).

Dynes et al (2018:8) and Yang et al (2017:20) revealed that partograph utilisation was inadequate and not filled out in a timely manner. It was also documented that the partograph was filled after the labour progress faced some challenges or completed if there was a diagnosis of poor progress of labour, retrospectively.

5.4.4 Quality care routine task and its prioritisation

Quality is a continuous process in health care by key service providers in the health system. Routine care started before the onset of labour for pregnant women who were staying in the waiting room and continued until their discharge from the health centre. This task needs prioritisation and was not practised regularly at the selected health centres.

The study conducted in Tanzania by Shimoda et al (2018:7) revealed that the care they were providing by the health care providers were not prioritised and well organised.

5.4.5 Monitoring maternal and foetal wellbeing

Monitoring of maternal and foetal health condition is one of the critical recommendations made by the Ministry of Health and the World Health Organization.

The study showed two contradicting points with two categories of study participants. The health care providers were confident that they were monitoring maternal and foetal conditions per the MOH and WHO recommendations. Whereas mentors and supervisors were not supporting what health care providers said based on their encounters during supportive supervision and mentoring sessions. The mentors and supervisors raised sample gaps such as the foetal and maternal vital signs were not monitored regularly rather measured in a haphazard way.

A study conducted in Addis Ababa city public health facilities by Hagoes et al (2020:4) found that health care providers monitored the blood pressure of mothers, uterine contractions, status of membrane and foetal heartbeat regularly for the majority of the clients.

5.4.6 Infection prevention practise

The Ministry of Health has developed an infection prevention guideline to improve the quality and safety of health service delivery. The infection prevention practises include instrument processing, and safe disposal of liquid, solid and sharp wastes.

Medical equipment was used for labour and delivery management and the equipment was properly processed according to the WHO and Ministry of Health recommendations.

A study conducted in six health facilities of Nigeria by Buxton et al (2019:428-434) found that all instruments used to manage delivery services were sterilised or cleaned with high-level chemical disinfectant before being used with subsequent clients.

Medical waste generated by the health facilities was safely collected, separated, stored and lastly disposed of in order to safeguard the clients and the general population from different nosocomial infections. The study found that some health care providers did not practise separation of wastes as well as safe collection and disposal of wastes

A study conducted in Nigeria public health facilities by Buxton et al (2019:428-434) found that half of the health facilities did not separate the wastes as non-infectious, infectious and hazardous wastes.

5.4.7 Capacity building

Capacity building is one of the enabling factors in which the quality of health service delivery can be improved. Capacity building can be provided using different modalities. The study explored the participants' views and experiences of selected capacity building events (training, mentoring and supportive supervision).

5.4.8 Supportive supervision

Supportive supervision was conducted by the Ministry of Health, Regional Health Bureau and District Health Offices mainly to improve the volume of services while hospitals and some district health offices conducted supportive supervision and mentorship for health centres to improve the quality of service delivery as well as the volume of service delivery. The participants indicated that the frequency of supportive supervision was not adequate and that there were technical skill and experience gaps.

In their study in Amhara regional state, Ethiopia, Yigzaw et al (2017:261) found that supportive supervision provided to the health care providers was inadequate to improve the quality of health service delivery nor to improve technical competency of health care providers.

5.4.9 Mentorship

Mentoring is one of the capacity building modalities to improve the technical competency of health care providers. The participants indicated that mentoring for maternal health programmes, particularly for management of labour and delivery clients, was not regularly practised. In addition, the mentorship programme was primarily for HIV/AIDS patients and PMTCT was one of the components for ANC, delivery and PNC services of health centres. The participants indicated that few mentorship programmes for intrapartum care were available at health centre level.

A study conducted in Bahir, India of two comparative groups of primary health care centres having received mentoring with one group and the others not having received mentoring by the mentors. This quasi-experimental study found that the quality of intrapartum care received from mentored primary health centres was better than that of non-mentored primary health centres (Ahmed, Srivastava, Warren et al 2019:5).

5.4.10 Training

The participants stated that training in different clinical services had been facilitated and conducted at Bahir Dar, Dangilla, Debremarkose, Addis Ababa, Adama and other towns and cities. The training sessions made service providers competent and confident to

provide quality intrapartum care services. The participants found that some newly employed health care workers who had no skill and experiences on BEMOC could not be capacitated in a short period of time. The participants indicated that refresher training was not scheduled on an annual basis and there was no system of regular refresher training except integrated refresher training for health extension workers. Moreover, basic and refresher training for labour and delivery service providers had decreased with reduced partner support and no strong system in place to sustain the government capacity building activities and no learning platform available at health centre level.

A systematic review conducted in lower- and middle-income countries by Munabi-Babigumira et al (2017:26) revealed that the clinical competency of health care providers was limited due to gaps in pre-service training or in-service training. There might not be scheduled skills-based pre-service and/or in- service trainings to capacitate health care providers.

5.4.11 Supply chain

The study explored the participants' views and experiences of the availability of medical equipment, drugs and supplies in the labour and delivery rooms of the health centres. The participants revealed that they struggled to provide basic medical equipment, drugs and supplies at their labour and delivery room of the health centres.

Some participants indicated that the logistical aspect had been addressed with the logistics management system through Ethiopian Pharmaceutical and Supply Agency (EPSA) for health centres at the urban sites while rural supplies were the responsibility of district health offices to deliver timely logistics for rural health centres.

The assessment result was in line with the systematic qualitative review of low- and middle-income countries (Munabi-Babigumira et al 2017:26).

5.4.12 Challenges faced by mentors and supervisors/managers to provide intrapartum care

The study explored the challenges of shortage of material resources, gaps in the availability of infrastructure and human resources, logistical challenges and loose referral.

5.4.13 Shortage of material resources

Material resources are a prerequisite to provide quality intrapartum care at health centre level. The participants indicated that there were drug and supply stock-outs or shortages, including surgical gloves, magnesium sulphate, injectable antibiotics and hydralazine.

The systematic review for lower- and middle-income countries to assess the availability of drugs and supplies by Munabi-Babigumira et al (2017:10) found that there were insufficient stock and/or stock out of some drugs such as hydralazine, magnesium sulphate, oxytocin, misoprostol, and gloves.

5.4.14 Gaps in availability of infrastructure and human resources

The study revealed that human resource shortage was registered in some of health centres having more caseloads.

The assessment findings in lower- and middle-income countries revealed that the proportion health care providers to cases of labour and delivery clients were not proportional/shortage of health care providers reported (Chodzaza et al 2020:4, Munabi-Babigumira et al 2017:26, Yang 2017:22).

The technical competency of some health care providers was sub-optimal and still some health care providers were being reluctant to engage in quality improvements initiatives which were initiated by the Ministry of Health.

The clinical mentors and supervisors are expected to have better experiences, skill and knowledge on the subject matter. The study investigated that some of the mentors and supervisors had no the required skill, experiences and knowledge to mentor and coach health care providers.

The health care providers managed labour and delivery clients so there was burn out of health care providers. The study found that there was burnout of health care providers with no burnout management strategies in placed that might resulted in some health care providers reluctant for quality improvement activities.

The capacity building training for BEMOC and infection prevention were inadequate and some of the health care providers were not trained. This created significant challenges to availing quality intrapartum care with incompetent health care providers. There was no system of refresher training to refresh and update health care providers with recent and up -to-date scientific knowledge.

Health centres were expected to do planning for quality like the annual activities planning. Most health centre participants were not practising the quality planning as part of annual plans or a separate plan. The planning had been undertaken by few of the study participants but even then, it was planning for infection prevention was a committee work no other plan as stated.

The study explored that the system of referral was in place but the challenge is getting the feedback of the clients referred with some sort of diagnosis and final outcome of the clients. The study revealed that there was no system of feedback loop.

The systematic review made by Munabi-Babigumira, et al (2017:28) documented referral systems might be lost if the referral feedback loop had a problem in which the higher units of the referral facilities do not give feedback on the referred client findings, diagnosis and outcome which discourages the health care providers at the referring unit.

5.4.15 Logistics challenge

Health centres supply chain management system is managed by the country rules and regulations for logistics management. The logistics management for labour and delivery room study participants were stated as follows: Initially the labour and delivery room health care provider requests the store supplies and drugs through internal facility reporting and resupply form (IFRR) on biweekly bases. The refilling of drugs and supplies is made by the drug store pharmacists of the health centre after getting approval by store head and head of the health centre per the requesting form and issuing a voucher. The health care workers usually inform the pharmacist and head of health centre before encountering a stock out of supplies and drugs. The storekeeper/pharmacist would notify about an impending stock out of drugs or supplies with lead time to the supervisor. Some health care providers had different systems of supply chain management system experiences.

The logistics management of the health centres were managed by logistics management information system (LMIS) and used the Integrated pharmaceuticals logistics system (IPLS).

5.5 CONCLUSION

This chapter discussed the qualitative findings from the interviews conducted with mentors and supervisors.

Chapter 6 discusses the integration of the quantitative and qualitative findings.

CHAPTER 6

INTEGRATION OF QUANTITATIVE AND QUALITATIVE FINDINGS

6.1 INTRODUCTION

This chapter presents a synthesis of the quantitative and qualitative data, with a primary purpose of triangulating and merging the data obtained from both methods to enable a comprehensive and integrated understanding of the results. Data sources shared various and independent findings that are compared in this chapter for the purpose of validation, complementarity and interpretation.

The merging is by use of side-by-side discussion in which first the quantitative result was discussed and then the qualitative strand. The discussion through integration highlighted the convergence or divergence of selected quality intrapartum care parameters.

6.2 PURPOSE OF THE STUDY

The purpose of the study was to assess the quality of care, providers' practise of respectful maternity care, and clients' satisfaction with intrapartum care at health centres and to develop strategies to improve the quality of intrapartum care at health centre level.

In order to achieve the purpose, the objectives of the study were to:

- Develop strategies to improve the quality of intrapartum care at health centre level in West Gojjam Zone, Amhara Region.
- Assess women's perspectives on the perceived quality of intrapartum care received in West Gojjam Zone, Amhara Region.
- Determine the practise of health care providers regarding respectful maternity care and its determining factors during normal childbirth in West Gojjam Zone, Amhara Region.
- Investigate the quality of the care provided to women during the intrapartum period during normal childbirth.
- Explore the views and challenges of health care providers and supervisors in the implementation of quality intrapartum care provision during normal childbirth.

Accordingly, the study wished to answer the following research questions:

- What strategies can be used to enhance the quality of intrapartum care in West Gojjam Zone, Amhara Region?
- What is the perceived quality of intrapartum care received by women in West Gojjam Zone, Amhara Region?
- Do service providers practise respectful maternity care during intrapartum care service provision in West Gojjam Zone, Amhara Region?
- What is the quality of intrapartum care provision in West Gojjam Zone, Amhara Region?
- What are the views and challenges of health care providers and supervisors in the implementation of quality intrapartum care monitoring during normal childbirth?

6.3 RESEARCH DESIGN, METHODOLOGY AND INTEGRATION

The researcher selected a convergent parallel mixed methods research design to offer equal weight to both qualitative and quantitative approaches (Andrew & Halcomb 2009:36). Convergent parallel mixed methods studies collect quantitative and qualitative data concurrently (Creswell & Creswell 2018:388). Quantitative data were collected in strands 1 to 3 and qualitative data were collected in strand 4 of the study. In this study, the quantitative data formed the base to proceed with the qualitative stage (Creswell & Creswell 2018:389). Chapter 3 presented an overview of the research integration and a data collection, analysis and integration flow chart (see Chapter 3, Figure 3.1). The quantitative and qualitative data collection, interpretation and analysis were done separately, and the results merged or integrated afterwards. Figure 6.1 illustrates the research design, data collection and analysis, and integration flow.

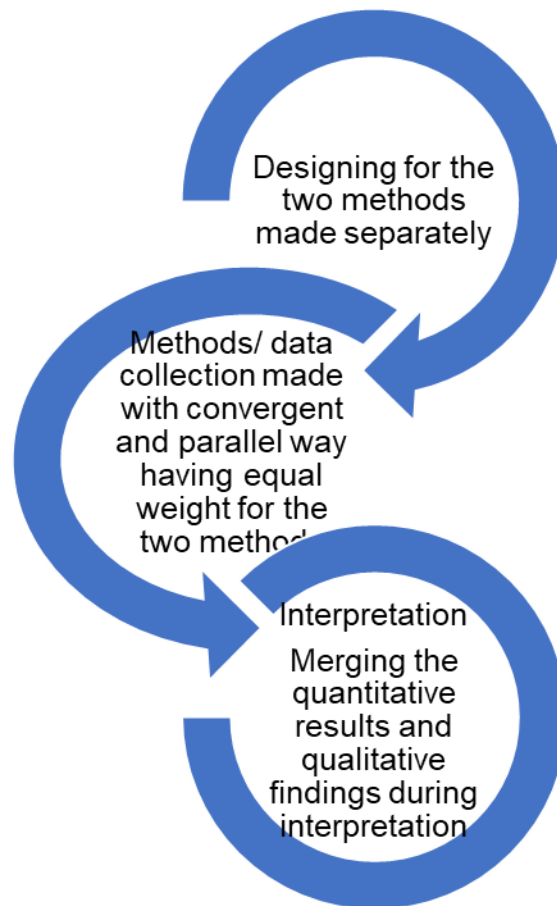


Figure 6.1 Research design, data collection and analysis, and merging flow

6.4 QUANTITATIVE AND QUALITATIVE DATA-COLLECTION METHODS AND SOURCES

The quantitative data collection were done in three strands. In strand 1, data was collected by means of observation, using a structured checklist, to investigate the participant facilities' readiness and availability of human resources, supplies and equipment to provide quality intrapartum services. Strand 2 assessed the quality of care provision during labour and delivery by means of direct non-participatory observation of labour and delivery management from the start of true labour until the delivery of the placenta without interference. Data were collected using the structured checklist.

Strand 3 investigated the quality of the care provided to women during the intrapartum period during normal childbirth at the selected health centres. The study assessed post-natal participants' perceptions of the quality of intrapartum care received at the facilities. Data were collected using a structured administered interview questionnaire.

The qualitative data were collected by means of in-depth interviews with 24 selected participants until data saturation was reached. The purpose was to obtain rich data and a deeper understanding of intrapartum care activities, capacity building and supplies provision activities to ensure quality intrapartum care at health centre level. An interview guide was used for qualitative data collection. Figure 6.2 depicts the data-collection methods and sources.

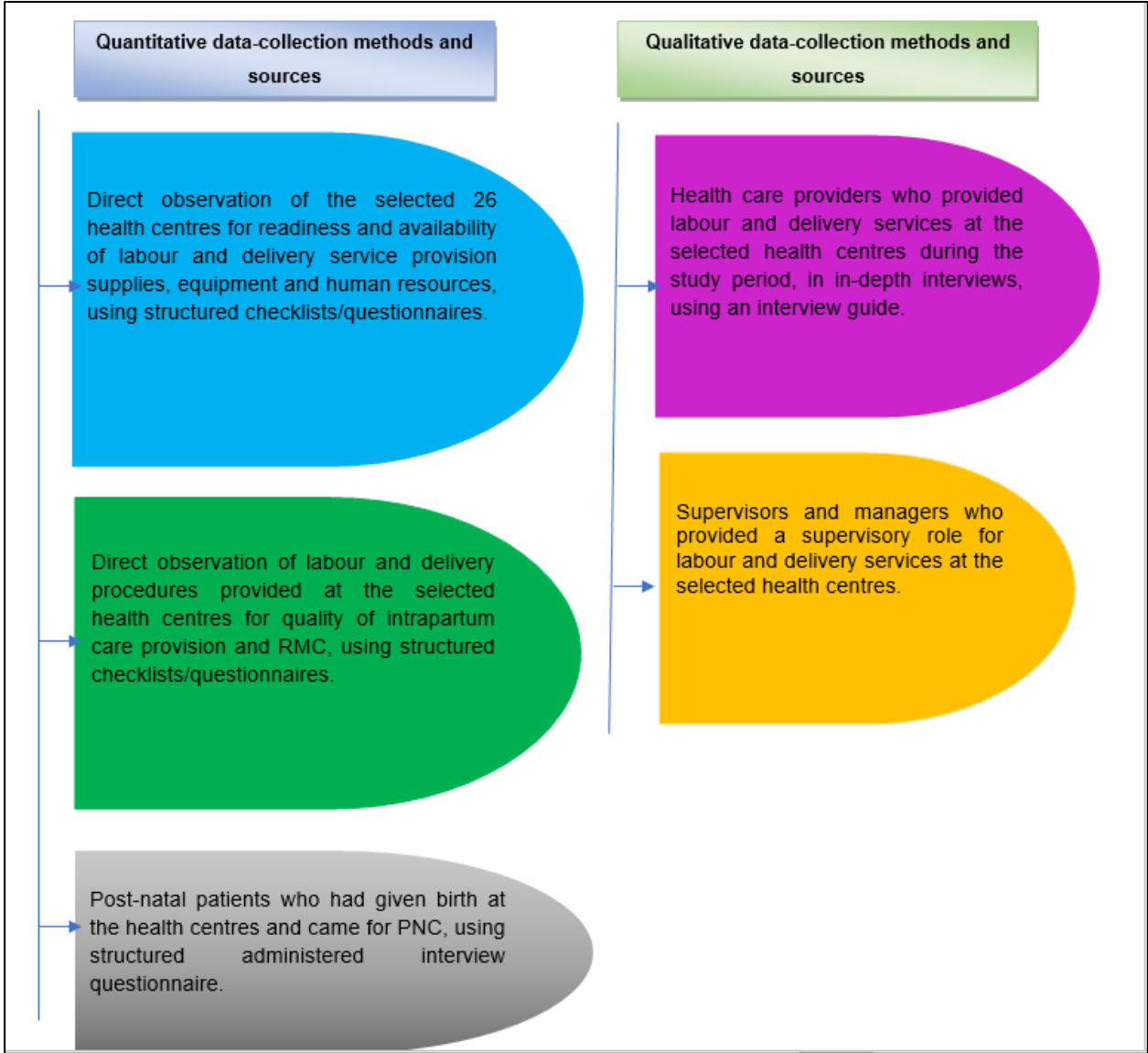


Figure 6.2 Quantitative and qualitative data-collection methods and sources

**6.5 DATA ORGANISATION, TRIANGULATION, ANALYSIS AND INTER-
PRETATION**

The researcher organised, analysed, triangulated and interpreted the quantitative and qualitative data in order to gain an in-depth understanding of the study findings. Figure 6.3 depicts the process of data organisation, comparison, triangulation, analysis and interpretation.

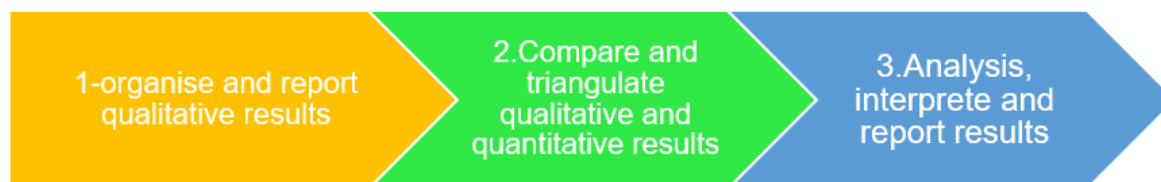


Figure 6.3 Organisation, triangulation, analysis and interpretation of quantitative and qualitative data

6.6 COMPARISON AND INTEGRATION OF QUANTITATIVE AND QUALITATIVE FINDINGS

6.6.1 Health facilities' readiness to provide quality intrapartum care

In order to provide quality intrapartum care, the primary task is to have the essential infrastructure, equipment, drugs and supplies available at the point of care. The study assessed the availability of the equipment, drugs and supplies.

6.6.1.1 Availability of water and incinerators

The quantitative findings indicated that of the selected health centres, 88.5% (n=23) had water in the labour and delivery rooms but 11.5% (n=3) did not. In the qualitative assessment, participants described the challenge of water availability.

Incinerators are among the equipment essential for health centres in order to dispose of infectious and hazardous medical waste properly by burning. Of the health centres, 96.2% (n=25) had functional incinerators in their compounds but 3.8% (n=1) did not.

The standard precaution of infection prevention recommends safe handling and disposal of sharp medical equipment. The study assessed the availability of safety boxes or sharp-resistant containers in the labour and delivery rooms and found that 96.2% (n=25) of the health centres had safety boxes to handle sharp medical waste.

The participants indicated that sharps wastes needed careful handling and disposal. In some health centres, the collected and stored medical wastes were disposed of according to the national guidelines, but the disposal was not practised uniformly. Some participants stated that there were irregularities in the implementation of the disposal of sharp wastes while one described experience and challenges they had at their health centre.

Figure 6.4 presents the quantitative and qualitative findings on water and incinerator availability and waste disposal.

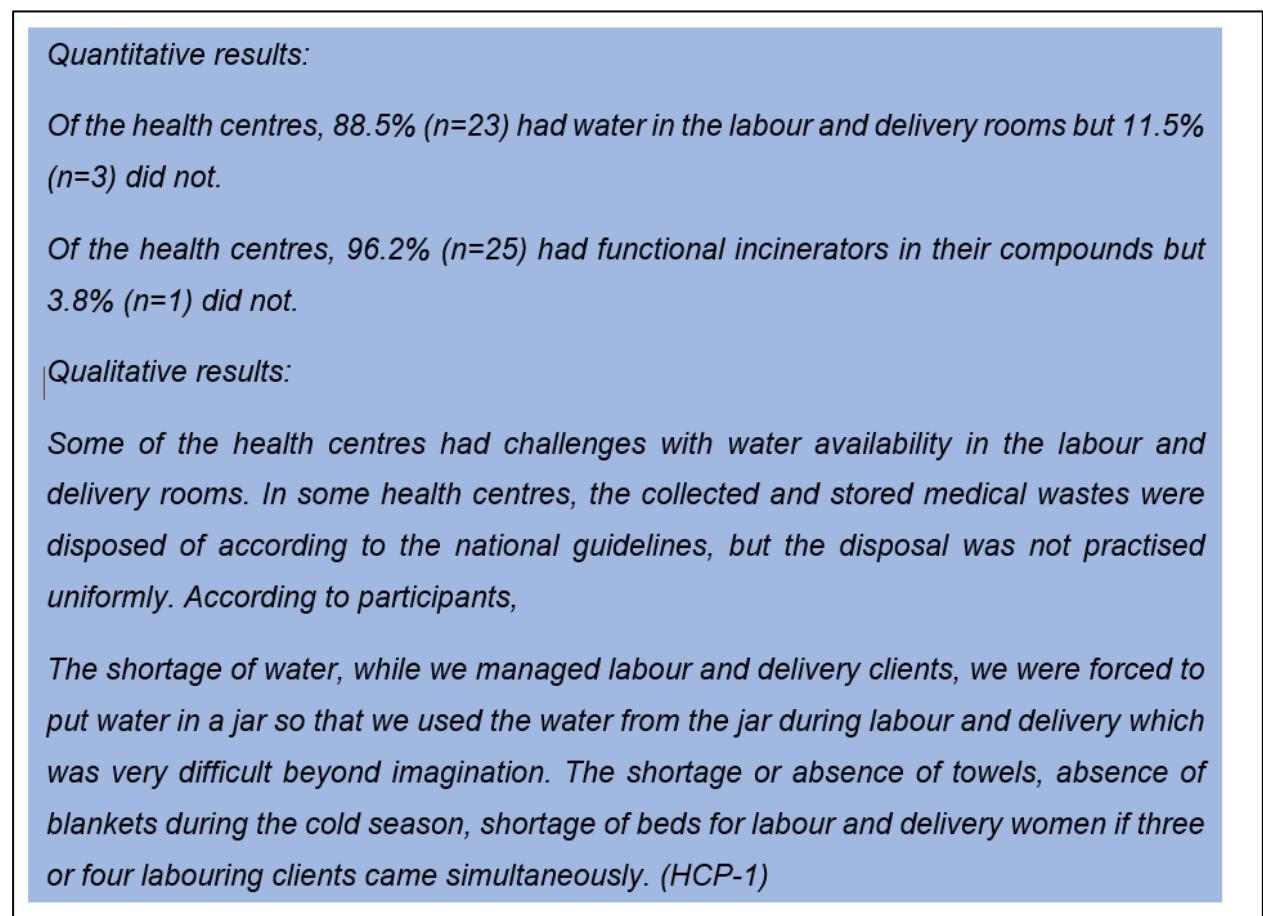


Figure 6.4 Quantitative and qualitative findings on water and incinerator availability and waste disposal

6.6.1.2 Availability of medical equipment and supplies

The quantitative findings indicated that all the health centres (100%; n=26) had delivery beds to manage delivery services; had adequate delivery packs; vacuum extractors and infant weight scales. Of the health centres, 69.2% (n=18) had suction machines and

30.8% (n=8) did not; 26.9% (n=7) had examination lights while 73.1% (n=19) had no examination lights; 57.7% (n=15) had sphygmomanometers and 42.3% (n=11) did not, and 50% (n=13) had thermometers while 50% (n=13) did not.

The qualitative findings indicated that the participants struggled to obtain basic medical equipment, drugs and supplies and faced shortages and stock-outs of essential drugs and supplies, including surgical gloves and rubber sheets.

Quantitative results:

Of the health centres (100%; n=26) had; delivery beds, adequate delivery coach, delivery pack/set, vacuum extractor, and infant weight scale.

Of the health centres, 69.2% (n=18) had suction machine and 30.8% (n=8) did not; 26.9%(n=7) had examination light while 73.1%(n=19) did not have examination light; 57.7% (n=15) had sphygmomanometer and 42.3% (n=11) did not; 50% (n=13) had thermometer while 50% (n=13) did not (table 4.1).

Qualitative findings:

Some health centres struggled to obtain basic medical equipment and faced shortages and/or stock-outs of drugs and supplies. According to participants, *I have been visiting health facilities on a regular basis and one of the key areas of support in the health centre is the availability of the drugs and supplies. I managed to communicate and provide supplies and drugs to the health centres as much as possible. (SM-10)*

Rubber sheets, as you know, used to cover labour and delivery beds ... used one rubber sheet for every client ... are expected to be decontaminated after each procedure by cleaners. But rubber sheets were in short supply and on top of that we also had cleaners who were males and less interested to work as a cleaner as well as old age to order them. Hence, we are in a very difficult situation to provide infection prevention as we would like and we reported this issue to the head of health centre and woreda health offices ... no solution so far ... we hoped to get a solution to work with minimal acceptable quality of care. (HCP-11)

The shortage of water, while we managed labour and delivery clients, we were forced to put water in a jar so that we used the water from the jar during labour and delivery which was very difficult beyond imagination. The shortage or absence of towels, absence of blankets during the cold season, shortage of beds for labour and delivery women if three or four labouring clients came simultaneously. (HCP-1)

Figure 6.5 Quantitative and qualitative findings on availability of medical equipment

6.6.1.3 Availability of medical supplies

The availability of medical supplies is important for quality intrapartum care provision. The quantitative findings indicated that of the health centres, 92.3% (n=24) had disinfectant and 7.7% (n=2) did not; 96.2% (n=25) had IV fluids and 3.8% (n=1) did not; 96.2% (n=25) had IV cannulae and 3.8% (n=1) did not; 46.2% (n=12) had Oxytocin and 53.8% (n=14) did not; 76.9% (n=20) had injectable magnesium sulphate and 23.1% (n=6) did not; 80.8% (n=21) had IV/IM antibiotics and 11.5% (n=3) did not, and 88.5% (n=23) had partographs and 11.5% (n=3) did not.

The qualitative findings indicated the participants' views and experience of the availability of medical supplies in the health centres.

Quantitative findings:

The quantitative findings indicated that of the health centres, 92.3% (n=24) had disinfectant and 7.7% (n=2) did not; 96.2% (n=25) had IV fluid and 3.8% (n=1) did not; 96.2% (n=25) had IV cannulae and 3.8% (n=1) did not; 46.2% (n=12) had Oxytocin and 53.8% (n=14) did not; 76.9% (n=20) had injectable magnesium sulphate and 23.1% (n=6) did not; 80.8% (n=21) had IV/IM antibiotics

Qualitative findings:

The qualitative findings reflected the participants' experiences. According to participants,

I have been visiting health facilities on a regular basis and one of the key areas of support in the health centre is the availability of the drugs and supplies. I managed to communicate and provide supplies and drugs to the health centres as much as possible. (SM-10)

While I made supportive supervision, one of my tasks is to see the stock status of each commodity and facilities those under-stock or stock-out supplies to be refilled (SM-6)

When I did supportive supervision, I worried a lot with some critical supplies stock outs and health centre teams also complained a lot about supplies and drug stock outs. The major complaint was the timely delivery of drugs and supplies by the Ethiopian Pharmaceutical Supply Agency (EPSA). EPSA was not providing requested drugs and supplies on time according to the complaint I received during my visit to the health centres. (SM-8)

Figure 6.6 Quantitative and qualitative findings on availability of drugs and medical supplies

6.6.1.4 Availability of human resources

Available professionally capable and trained health care providers are essential for the provision of quality intrapartum care. The health centres' labour and delivery room human resources availability and professional mix were assessed. The study found that Bachelor of Science (BSc) midwives, Diploma midwives and clinical nurses were the professionals assigned to provide labour and delivery services at the health centres.

Of the health centres, 77% (n=20) had either one or two Diploma midwives, and 23.1% (n=6) had three Diploma midwives. Clinical nurses were only available in 23.1% (n=6) of the health centres, with one clinical nurse per health centre.

Trained human resource availability is a prerequisite to providing services and competency of the available human resource is essential to provide quality intrapartum care. The participants discussed staff burnout, reluctance to address quality improvement activities, and capacity building gaps to make health care providers competent to provide quality intrapartum care. Figure 6.7 integrates quantitative and qualitative findings on availability of human resources

Quantitative findings:

Of the health centres, 77% (n=20) had either one or two Diploma midwives, and 23.1% (n=6) had three Diploma midwives. Clinical nurses were only available in 23.1% (n=6) of the health centres, with one clinical nurse per health centre.

Qualitative findings:

The qualitative findings emphasised the need for more health care providers.

According to participants,

As mentor of a health centre, I remember two major challenges: shortage of human resources and water. One health centre labour and delivery room health care provider who managed the antenatal and post-natal unit of the health centre which make my mentorship programme horrible. Especially I did not forget one incident which happened two years before, I travelled to the health centre to provide mentorship to a health care provider in the labour and delivery room, but the health care provider had the triple responsibilities of managing ANC, PNC, labour and delivery. Hence, I was just supporting him and capacitating him for the three components, but he was too busy to participate in my mentorship programme and ended up without meeting the intended objective of my visit. The second challenge at health centre level was the absence of water in the labour and delivery room which made the clinical service provision and the mentorship programme very tough. (SM-5)

In the government health system, there was no system of stress and burnout management. That might be the reason for some health care providers becoming reluctant. (SM-10)

The capacity building training was not planned and delivered for newly joined health care workers as a system of induction to the job. (SM-3)

Figure 6.7 Quantitative and qualitative findings on availability of human resources

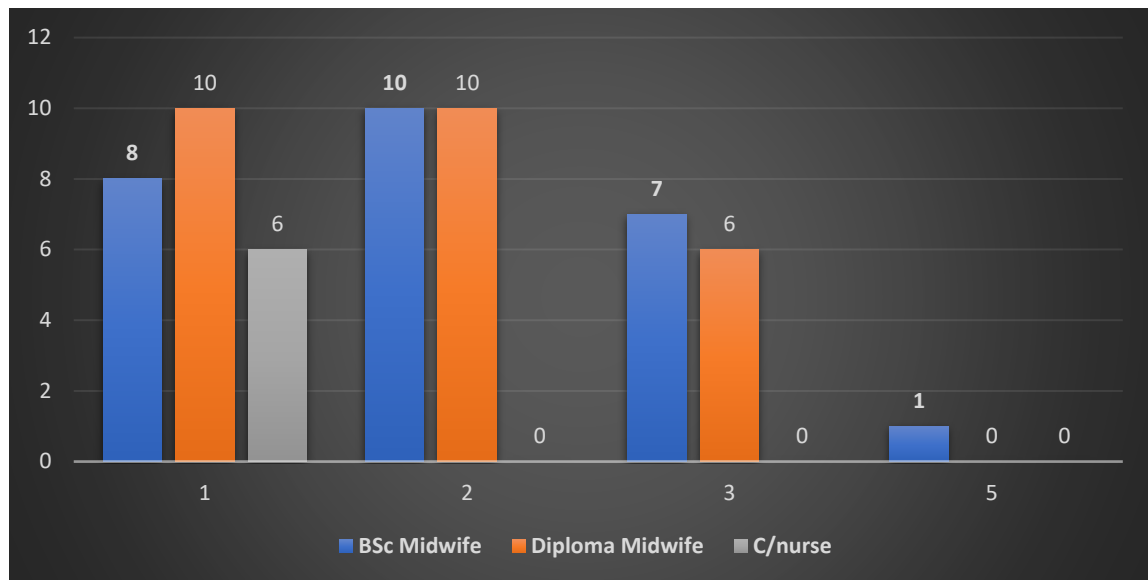


Figure 6.8 Health care providers' distribution in the labour and delivery rooms of the participant health centres

6.6.1.5 Availability of capacity building

Capacity building is pivotal to improve and maintain competent health care providers and quality intrapartum care provision. The study examined capacity building in various areas. The quantitative findings indicated that of the health centres, 80.8% (n=21) had received basic BEMOC training; 15.4% (n=4) had received monthly drills or simulation exercises; 3.8% (n=1) had received refresher training and 96.2% (n=25) had not; 15.4% (n=4) had received monthly drills or simulation exercises and 84.6% (n=22) had not.

The qualitative findings indicated the participants' views and experiences of capacity building in the health centres, including gaps in receiving regular capacity building training as well as refresher training in BEMOC and IP. Figure 6.9 integrates the quantitative and qualitative findings.

Quantitative findings:

The quantitative findings indicated that of the health centres, 80.8% (n=21) had received basic BEMOC training and 19.2% (n=5) had not; 80.8% (n=21) had received IP training and 19.2% (n=5) had not; 3.8% (n=1) had received refresher training and 96.2% (n=25) had not; 15.4% (n=4) had received monthly drills or simulation exercises and 84.6% (n=22), had not;

The quantitative findings indicated that of the health centres, 80.8% (n=21) had received training in BEMOC and 19.2% (n=5) had not; 80.8% (n=21) had received IP training and 19.2% (n=5) had not; 3.8% (n=1) had received refresher training and 96.2% (n=25) had not, and 15.4% (n=4) had received monthly drills or simulation exercises and 84.6% (n=22) had not.

Qualitative findings:

The participants indicated that it was critical to receive regular capacity building training as well as refresher training in basic emergency maternal and obstetric care (BEMOC) and infection prevention. Gaps in technical competency and experience hindered capacity building and optimal care provision. According to participants,

The health care system is a dynamic one which needs regular updating with training and other opportunities. We are here with limited technology access; if we do not get capacity building events, the quality-of-service delivery would be jeopardised. (HCP-10)

I am training of trainer (TOT) certified for integrated refresher training of the health extension workers which has comprehensive essential health service interventions and conducted on an annual basis. The refresher training had got a chance to the health extension workers to refresh their knowledge and to share experiences among themselves. This experience will benefit maternal health service providers if the government designs and implements an integrated refresher training for different components of maternal health programme in addition to labour and delivery services on an annual basis. (SM-12)

Figure 6.9 Quantitative and qualitative findings on availability of capacity building training on BEMOC and infection prevention

6.6.1.6 Availability of supportive supervision and clinical protocols

Supportive supervision is an indispensable component of quality intrapartum care provision. An important aspect of supportive supervision is the availability of job aids and guidelines. The study assessed the availability and regularity of supportive supervision to the participant health centres.

The study found that of the health centres, 38.5% (n=10) had received regular supportive supervision and 61.5% (n=16) had not; 57.7% (n=15) had clinical protocols on intrapartum care and 42.3% (n=11) did not, and 15.4% (n=4) had infection prevention protocols and 84.6% (n=22) did not.

The qualitative participants indicated that the frequency of supportive supervision was not adequate and that there were technical skills and experience gaps. Figure 6.10 presents the integrated quantitative and qualitative findings on supportive supervision.

Quantitative findings:

Of the health centres, 38.5% (n=10) had received regular supportive supervision and 61.5% (n=16) had not; 57.7% (n=15) had clinical protocols on intrapartum care and 42.3% (n=11) did not, and 15.4% (n=4) had infection prevention protocols and 84.6% (n=22) did not.

Qualitative findings:

The qualitative participants indicated that the frequency of supportive supervision was not adequate and that there were gaps in technical skills and experience. According to participants,

I have been working at the district health office for the last more than 13 years with maternal and child health programme coordinator in coordination of planning, implementation, monitoring and evaluation of maternal health activities with health centres and health extension workers. The planning was mainly addressed with woreda-based plan which was also cascaded down to woreda and health centres to plan the comprehensive plan on annual basis and we made implementation, supportive supervision and review meeting of its performance status on regular basis but not for quality separately. The plan had some proxy quality indicators for maternal health services but not the clinical quality of maternal health services. (SM-10)

I have observed health care workers, who had a gap in technical competency and negligence on top of limited human resources, available in the labour and delivery room. (HCP-6)

Figure 6.10 Quantitative and qualitative findings on availability of supportive supervision

6.6.2 Planning for quality intrapartum care provision

Planning is a prerequisite for providing quality intrapartum care. The study did not collect quantitative data on planning. The qualitative findings on planning are provided next.

According to participants,

“I have been working at this health centre for more than five years in particular at the maternity unit of the health centre. I observed the health centre infection prevention committee observing the cleanliness of the compound and each

department on Monday morning. The Monday morning visit is sometimes interrupted for unknown reasons for a couple of months and re-initiated the visit mostly if the mentors or *woreda* supervisors planning to come. To tell you frankly, I did not observe any plan for quality at the health centre level although we were expected to do planning for quality like any other activity, with the significant benefits it had". (HCP-7)

"I have been working at the district health office for the last 13 years in the maternal and child health program coordinating of planning, implementation, monitoring and evaluation of maternal health activities with health centres and health extension workers. The planning was mainly addressed with *woreda* based plan which was also cascaded down to *woreda* and health centres to plan the comprehensive plan on annual basis and we held implementation, supportive supervision and review meetings of its performance status on a regular basis but not for quality separately. The plan had some proxy quality indicators for maternal health services but not the clinical quality of maternal health services". (SM-10)

6.6.3 Intrapartum quality care provision

The study assessed intrapartum quality care provision, including vital sign assessment.

6.6.3.1 Vital sign assessment

The study examined the vital sign measurement and found that 91% (n=254) of the labouring patients were assessed during admission, and 89.6% (n=250) of the labouring patients and foetal status had been monitored with vital sign measurement.

Quantitative results	Qualitative results
<p>The findings indicated that 91% (n=254) of the labouring patients were assessed during admission, and 89.6% (n=250) of the labouring patients and foetal status was monitored with measurement of the vital signs.</p>	<p>Maternal and foetal well-being monitoring is essential in intrapartum care.</p> <p>According to participants,</p> <p>“Health care providers were expected to monitor the vital signs of mother and foetus through partograph. In the actual practise I was doing that for my clients as much as possible.” (HCP-12).</p> <p>“I monitor my clients’ vital signs per their clinical status and risk factors. I managed more frequently vital signs monitoring for those clients I suspected of having poor clinical conditions and less frequent vital sign measurement for good clinical status and low risk factors”. (HCP-3)</p>

Figure 6.11 Quantitative and qualitative findings for vital sign assessment

6.6.3.2 Partograph utilisation

Partograph utilisation was assessed. The quantitative findings indicated that most of the participants were managed with the use of a partograph. The qualitative findings reflected the participants’ views and experiences.

Quantitative results	Qualitative results
<p>The study assessed partograph utilisation for 279 patients. The findings indicated that of the participants, 73.5% (n=205) were managed by using a partograph; the timely filling of the partograph was done for 55.9% (n=156), and the proper filling of the partograph according to the information required was done for 68% (n=189) of the participants.</p>	<p>Regarding partograph utilisation, participants stated:</p> <p>“Some health care providers of the health centres were not practising the national guideline recommendation to safeguard the mother and newborn. They had gap in utilisation of partograph consistently, failure to monitor the vital signs of the mother and newborn per the recommendations.” (SM-3)</p> <p>“Partograph ... graphical representation, which helps us in monitoring the maternal, foetal and progress of labour so the quality of service will be good if we are using it properly. If we do not follow labouring mothers with a partograph, the rate of unnecessary referrals would be high, and we would end up losing mother and newborn unnecessarily.” (HCP-9).</p> <p>“Health care workers who did not use partograph for labour management are considered as traditional birth attendant.” (HCP-4)</p>

Figure 6.12 Quantitative and qualitative findings on partograph utilisation

6.6.3.3 Infection prevention practises

The infection prevention practises were investigated. The findings are presented next.

Quantitative results	Qualitative results
<p>The study examined the cleanliness of the health centres' labour rooms and delivery beds as part of infection prevention practise. The findings indicated that 34.6% (n=9) of the labour rooms were kept clean and 65.4% (n=17) were not, and 38.5% (n=10) of the delivery beds were kept clean and 61.5% (n=16) were not.</p>	<p>The qualitative findings indicated the participants' views and experience.</p> <p>According to participants,</p> <p>“Our health centre had an infection prevention committee and regularly did supervision on every Monday. The most frequently raised complaint was failed to separate wastes, in particular medical and sharp wastes, which was very ... strange and ... very surprising ... might be ... unusual to see this type of fault again and again regardless of the risks to others like the cleaners.” (HCP-10)</p> <p>“We collected medical waste in medical waste bins, and cleaners transported and disposed it accordingly at the incinerator through burning.” (HCP-9)</p> <p>“We are collecting three types of wastes at the health centre, stored them in temporary storage area which was high risk of disseminating infection and because of an offensive smell. The sharp waste was then transferred to the incinerator to burn but the incinerator was not protected so that kids were accessing it. The accessibility of sharp waste by kids was really worrisome to infect the innocent with our negligence ... that was raised lots of times in different meetings of health centre and district health office management but no improvement.” (HCP-5)</p>

Figure 6.13 Quantitative and qualitative findings on infection prevention practises

6.6.3.4 Ensuring patient safety and comfort in the provision of intrapartum care and RMC provision

The study investigated the extent of ensuring client safety and comfort during intrapartum care, and adherence to RMC practises during intrapartum care.

Parameters	Quantitative results	Qualitative results
Client comfort	Of the participants, 60.7% (n=150) had a comfortable place to sit while waiting; 91.5% (n=226) had a comfortable side to rest, and some had a comfortable side to lie part of the time.	"I have managed lots of labour and delivery clients for the last more than five years. I did not give any option to give birth." (HCP-5)
Friendly service	Of the participants, 87.9% (n=217) had received friendly service from reception and 89.9% (n=222) had received friendly service from the HCPs.	<p>"I treat my clients starting from the beginning with greeting her by her name. The reaction of my client when I call her by her name is so important and creates further fertile ground for further communication. Next to this I manage every communication and action in a friendly way to create satisfaction for my clients." (HCP-7)</p> <p>"I manage clients as friendly as possible, but it becomes very tough during the second stage of labour if clients were not cooperative. I am forced to react with the clients if things went wrong." (HCP-6)</p>
Privacy	Of the participants, 68.8% (192) had a drape to provide privacy; 87.5% (n=244) said their privacy had been maintained; 84.9% (n=237) said their confidentiality was maintained.	<p>"Clients who come to the health centre are usually tense and scared about everything that we act and do. Hence, as a health care provider in the labour and delivery room, I try to protect the visual privacy of the clients by covering the client's private areas with cloths. I also ... use a screen if there are two mothers in labour at the same time since ... as you see ... only one room for first stage and one room for second stage of labour. ... I could not do anything about audio privacy since there is no separate room for every client and sounds of clients are sometimes audible inside the labour room. As clients hear others in pain, they start to be scared and I try to reassure them but remain concerned as a health care provider." (HCP-11)</p> <p>"I managed clients in labour and delivery. I had one room for labour and one room for delivery. I used screens and drapes to maintain the visual privacy of clients. Moreover, I did not allow anybody to enter the room without my knowledge and permission." (HCP-5)</p>
Championship	Of the participants, 82.1% (n=229) had a support person or companion during the time of labour and delivery	<p>"I have been requested by the mothers and husbands of labouring mothers to accompany labouring clients. I rejected their request in the second stage of labour. I prefer to work with my colleagues as support rather than let the attendants disturb me in managing the labour and delivery." (HCP-11)</p> <p>"As a health care provider, we usually counsel labour and delivery clients to have a relative, in particular their mother or husband, together with them during labour and delivery ... but most of them are not happy to have their husband with them and prefer to be alone with the health care providers ... We usually push them to have the mother or husband with them to be on the safe side as a health care provider of a health centre." (HCP-9)</p>

Figure 6.14 Quantitative and qualitative findings on client safety and comfort

6.6.3.5 Communication and counselling

Communication and counselling skills are central to quality intrapartum care provision. The study explored communication and counselling between the participant health care providers and clients. Of the patients, 80% received communication and counselling. The participant health care providers tried to communicate with clients in a locally understandable language, most of the time. However, this was not always possible when there were two or more cases as well as other overlapping tasks. Participants stated communication and counselling experience as,

“I communicate with my clients clearly and in understandable language which fosters the care giving process smoothly.” (HCP-3)

“I usually communicate with my clients as much as they can understand what I am saying and repeat my words, and then ask them to repeat what I said. This might not be applicable to all clients since sometimes we have lots of clients waiting for me. So, I am forced to manage clients as quickly as possible without giving them enough time for understanding.” (HCP-8)

6.6.3.6 Availability of ambulance and referral system

Labour and delivery service might need emergency referrals during the provision of care. Health centres make referrals to primary hospitals. The referral of obstetric emergencies requires/necessitates a 24-hour a day standby ambulance service. The quantitative findings indicated that 93.5% (n=24) of the health facilities had a referral system in place with feedback loop, and 96.2% (n=25) of the health centres had ambulance services to transfer emergency cases to referral hospitals.

The qualitative findings indicated that there were referral systems and ambulances. However, a major challenge was getting feedback on clients referred with some diagnosis and the final outcome. Most of the participants revealed that they had no system of feedback loop for the clients they had referred to hospitals.

A participant the view and experience as,

“The referral system was strong while it was supported by partners. We had a session to discuss about the referral and an outcome. Currently this is interrupted and we rarely receive feedback for our clients in particular with contradicting diagnosis to blame.” (HCP-10)

6.6.3.7 Challenges encountered during intrapartum care provision

The research explored the challenges encountered in the provision of quality intrapartum care.

6.6.3.7.1 Shortage of material resources

The study found shortages and stock-outs of medical supplies and drugs. The quantitative findings indicated that of the health centres, 46.2% (n=12) had Oxytocin and 53.8% (n=14) did not; 76.9% (n=20) had injectable magnesium sulphate and 23.1% (n=6) did not, and 80.8% (n=21) had injectable antibiotics and 19.2% (n=5) did not.

The qualitative findings indicated participants' views and experiences.

Quantitative findings:

Of the health centres, 46.2% (n=12) had Oxytocin and 53.8% (n=14) did not; 76.9% (n=20) had injectable magnesium sulphate and 23.1% (n=6) did not, and 80.8% (n=21) had injectable antibiotics and 19.2% (n=5) did not.

Qualitative findings:

The participants expressed their experiences and views. According to participants,

While I made supportive supervision, I worried a lot with some critical supplies stock out and health centre teams also complained a lot about supplies and drugs stock outs. The major complaint was the timely delivery of drugs and supplies by the Ethiopian Pharmaceutical Supply Agency (EPSA). EPSA was not providing requested drugs and supplies on time according to the complaint I received during my visit to the health centres. (SM-08)

Rubber sheets, as you know, used to cover labour and delivery beds ... used one rubber sheet for every client ... are expected to be decontaminated after each procedure by cleaners. But rubber sheets were in short supply and on top of that we also had cleaners who were males and less interested to work as a cleaner as well as old age to order them. Hence, we are in a very difficult situation to provide infection prevention as we would like and we reported this issue to the head of health centre and woreda health offices ... no solution so far ... we hoped to get a solution to work with minimal acceptable quality of care. (HCP-11)

Figure 6.15 Quantitative and qualitative findings on material resources shortage

6.6.3.7.2 Logistical challenges

The study examined the logistical challenges the participants faced. The merged findings are presented next.

Quantitative findings:

The quantitative findings indicated that of the health centres, 36% (n=9) practised supplies and drugs management by using bin cards and stock cards. The study found no refrigerators at any of the health centres labour and delivery room.

Qualitative findings:

Some participants raised the logistical aspect as a critical shortcoming in most health centres. According to participants,

The logistics delivery system of urban health centres is managed with Ethiopian Pharmaceutical and Supply Agency (EPSA) whereas the rural supplies are the responsibility of district health offices to deliver timely logistics for rural health centres. (SM-11)

In most instances, we practised the logistics as the storekeeper/pharmacist would notify us of the stock out drugs or supplies with a lead time to the health centre head/supervisor. The head of the health centres in communication with woreda health office or EPSA provided those requested drugs as timely as possible. (SM-13)

The logistical management has mixed experiences at various health centres. Some health centres kept emergency drugs, two or three gloves and fluids at the delivery room which were regularly refilled by prescription, based on client utilisation. The clients were receiving IV fluids and gloves with no cost at the dispensary room of the health centres through prescription-based refilling. Some health centres used the internal facility reporting and resupplying form (IFRR) to refill the supplies and drugs on a regular basis. Still others did not use it, rather they said that the IFRR is usually used for family planning and ANC commodities but not for labour and delivery services. The utilised supplies and consumables were refilled per client, based on the prescription provided by the health care providers. The attendants who accompanied the labouring mothers collected and refilled the supplies and drugs from the health centre pharmacy. As mentors, we are working to standardise it across all health centres. (SM-02)

Figure 6.16 Challenges of supply chain management system

6.6.3.7.3 Gaps in availability of infrastructure and human resources

The availability of infrastructure and human resources was examined. The merged findings are presented next.

Qualitative results

“Whenever I visited one health centre, most of the time I found health care providers sitting together and discussing some issues in particular on the afternoon.” (SM-7).

“In the government health system, there was no system of stress and burn out management, that might be the reason why some health care providers became reluctant.” (SM-10)

Quantitative results

The quantitative result findings documented that 21.5% of the health centres had no water whereas 5% of health centres had no functional incinerator (Table 4.1).

Quantitative results

Of the health centres, 88.5% (n=23) had water and 11.5% (n=3) did not; 96.2% had incinerators and 3.8% (n=1) did not; 50.0% (n=13) had thermometers and 30.0% (n=13) did not; 26.9% (n=7) had examination lights and 73.1% (n=19) did not; 69.2% (n=18) had fetoscopes and 30.8% (n=8) did not. Of the health centres, 77% (n=20) had either one or two Diploma midwives, and 23.1% (n=6) had three Diploma midwives. Clinical nurses were only available in 23.1% (n=6) of the health centres, with one clinical nurse per health centre.

Qualitative results

The availability of infrastructure is important. Some participants described the challenge of water availability and other medical equipment for the health centre and challenges with human resources. According to participants,

The shortage of water, while we managed labour and delivery clients, we were forced to put water in a jar so that we used the water from the jar during labour and delivery which was very difficult beyond imagination. The shortage or absence of towels, absence of blankets during the cold season, shortage of beds for labour and delivery women if three or four labouring clients came simultaneously. (HCP-1)

The health centres had a relatively high delivery client flow, but we are three and not in a position to manage the labour and delivery services. (HCP-10)

I have observed health care workers, who had a gap in technical competency and negligence on top of limited human resources, available in the labour and delivery room. (HCP-6)

Figure 6.17 Challenges of infrastructure and human resources

6.6.3.7.4 *Loose referral system*

The referral system had been breached for several reasons, such as clients' preference to go to higher facilities, lack of supplies and equipment, loss of confidence in some health care providers and negligence of some health care providers. The integrated quantitative and qualitative findings are presented next.

One of the indicators for quality intrapartum care is the referral system; therefore, the study assessed the referral system of the health centres. The study found that 93.2% (n=260) of the health centres had no need of referral system, and referrals were made for 6.8% (n=19) patients. Of these, timely referral was made for 73.7% (n=14). Of the health centres, 96.2% (n=25) had standby ambulance services on a 24-hour basis for seven days a week to transport/facilitate referral for labour and delivery clients in particular. Per the comments of study participants, they had referral system for the shortage and run out of supplies and drugs as well as cases which were not manageable at the health centres level with the already available 24 hours and 7 days in a week ambulance services. The challenges of late referral and almost no referral feedback for those referred clients outcome from the referral receiving hospitals.se

Quantitative findings

The quantitative findings indicated that 6.8% (n=19) participant patients had been referred and 93.2% (n=260) had no need of referral ; timely referral had been made for 73.7% (n=14)patients; a system of referral was in place for 100% (n=19) of the patients, and a feedback system was in place for 89.5% (n=17) of the patients and not for 11.5% (n=2) patients.

Qualitative findings:

The participants described their views and experiences of the referral system. According to participants,

My support to the health care providers in the health centres articulated mainly on technical issues, but technical support without the availability of drugs, supplies and equipment is meaningless. Therefore, I frequently discussed with heads of health centres, woreda health office heads and EPSA regional providers to provide stock out drugs and supplies. (SM-11)
In the government health system, there was no system of stress and burnout management. That might be the reason for some health care providers becoming reluctant. (SM-10)

Figure 6.18 Challenges of loose referral system

6.8 CONCLUSION

This chapter described and integrated the quantitative and qualitative findings. Chapter 7 discusses the strategies developed to improve intrapartum care in health centres in West Gojjam Zone, Amhara Region.

CHAPTER 7

STRATEGIES TO IMPROVE THE QUALITY OF INTRAPARTUM CARE AT HEALTH CENTRES IN WEST GOJJAM ZONE OF AMHARA REGION, ETHIOPIA

7.1 INTRODUCTION

The chapter discusses the strategies developed to improve the quality of intrapartum care provision at health centre level in West Gojjam Zone, Amhara region, Ethiopia.

7.2 STRATEGY DEVELOPMENT

The aim of the strategies was to overcome the gaps identified during the study. The strategies were developed by means of the Delphi technique with a panel of experts.

7.2.1 Gaps in quality intrapartum care provision

The study identified the following gaps in intrapartum care provision:

- Stock-outs or shortages of supplies, drugs and equipment.
- Poor cleanliness of labour and delivery rooms, shortage of incinerators, and unsafe waste disposal.
- Inadequate staffing of health centres.
- Gaps in technical competency, training, supportive supervision, and mentoring.
- Gaps in respectful maternity care (RMC) practise; verbal and physical abuse.
- Gaps in timely and consistent utilisation of partographs.
- Loose referral system and inadequate referral feedback system.

7.2.2 Purpose of the strategies

The strategies should assist regional health bureaus, health centre managers, supervisors, mentors and health care providers at health centres to improve the quality

of intrapartum care and provide respectful maternity care. In addition, the strategies should assist policies makers in developing and implementing quality intrapartum care and respectful maternity care policy and education.

The strategies were developed as practicable and relevant interventions to improve the quality of intrapartum care provision at health centres, by addressing the gaps identified in the structure, process and outcomes, such as infrastructure, medical equipment, drugs, supplies, human resources, capacity building, RMC, interpersonal communication, and client satisfaction.

7.3 METHOD OF STRATEGY DEVELOPMENT

The researcher applied the Delphi technique to review, refine and reach consensus on strategies to improve the quality of intrapartum care provided at health centres.

7.3.1 Delphi process of strategy development

The Delphi method is a process used to arrive at a group opinion and decision by surveying a panel of experts (Keeney et al 2011:14). The experts respond to several rounds of questionnaires, and the responses are aggregated and shared with the group. After receiving feedback, experts review and rank their responses in the light of feedback (Keeney et al 2011:14). The goal is to reach consensus. The researcher invited ten experts who had experience and knowledge of quality intrapartum care. The panel consisted of one each from the Federal Ministry of Health, Amhara regional health bureau and West Gojjam Zone Health Department; one each from two non-governmental organisations (NGOs) working in maternal and child health services, and one each from five selected *woreda* health offices and health centres.

The researcher developed draft strategies based on the research findings and circulated them to the experts for their opinions. Based on the feedback received, the researcher then revised the strategies and circulated them again. This was done three times. The researcher wanted the experts to buy in and own the strategies. Finally, the experts reached consensus on the strategies (Keeney et al 2011:24).

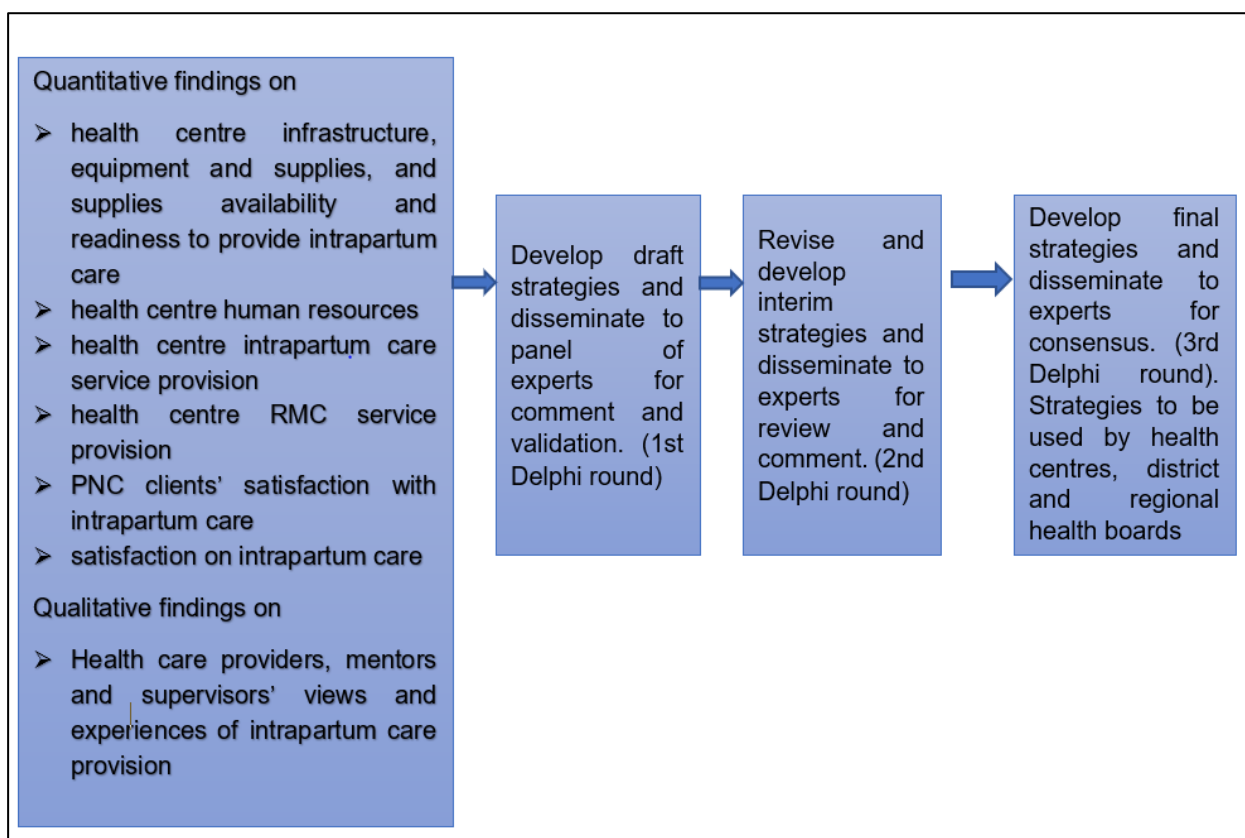


Figure 7.1 Strategy development process

The Delphi experts' sociodemographic profile is presented in Table 7.1.

Table 7.1 Delphi panel experts' sociodemographic profile

SN	Delphi panel expert	Age	Sex	Educational level	Work experience (years)
1	Expert 1	37	Male	MPH	12
2	Expert 2	40	Male	MPH	18
3	Expert 3	28	Male	BSc	8
4	Expert 4	32	Male	MPH	10
5	Expert 5	36	Female	MPH	12
6	Expert 6	38	Male	PhD	15
7	Expert 7	27	Male	MPH	5
8	Expert 8	41	Male	MPH	19
9	Expert 9	33	Female	BSc	9
10	Expert 10	38	Male	MPH	12

The experts reviewed, commented on and made additions to the researcher's draft strategies. The Delphi process consisted of three rounds or strands.

7.3.1.1 First round

In the first round, the researcher disseminated the draft strategies to the experts for comment. The experts reviewed, ranked and commented on the strategies. The strategies were ranked according to a 5-point Likert scale, ranging from 1 - strongly disagree to 5 - strongly agree. The cut-off point for level of consensus or agreement was 75% or 3.75 mean score and above.

7.3.1.2 Second round

In the second round, the researcher revised the strategies according to the first round feedback. The researcher then disseminated the revised strategies to the experts for further review, ranking and feedback.

7.3.1.3 Third round

After the second round, the researcher included the experts' feedback and ranking, computed the means and prioritised (ranked) the strategies. In the third round, the researcher disseminated the prioritised strategies to the experts to rank based on the Likert scale and the maximum mean score was taken as the first strategy in descending order. The percentage of agreement was calculated from the Likert scale ranking.

The aim of the third round was to obtain endorsement of and consensus on the strategies. Figure 7.2 depicts the three rounds.

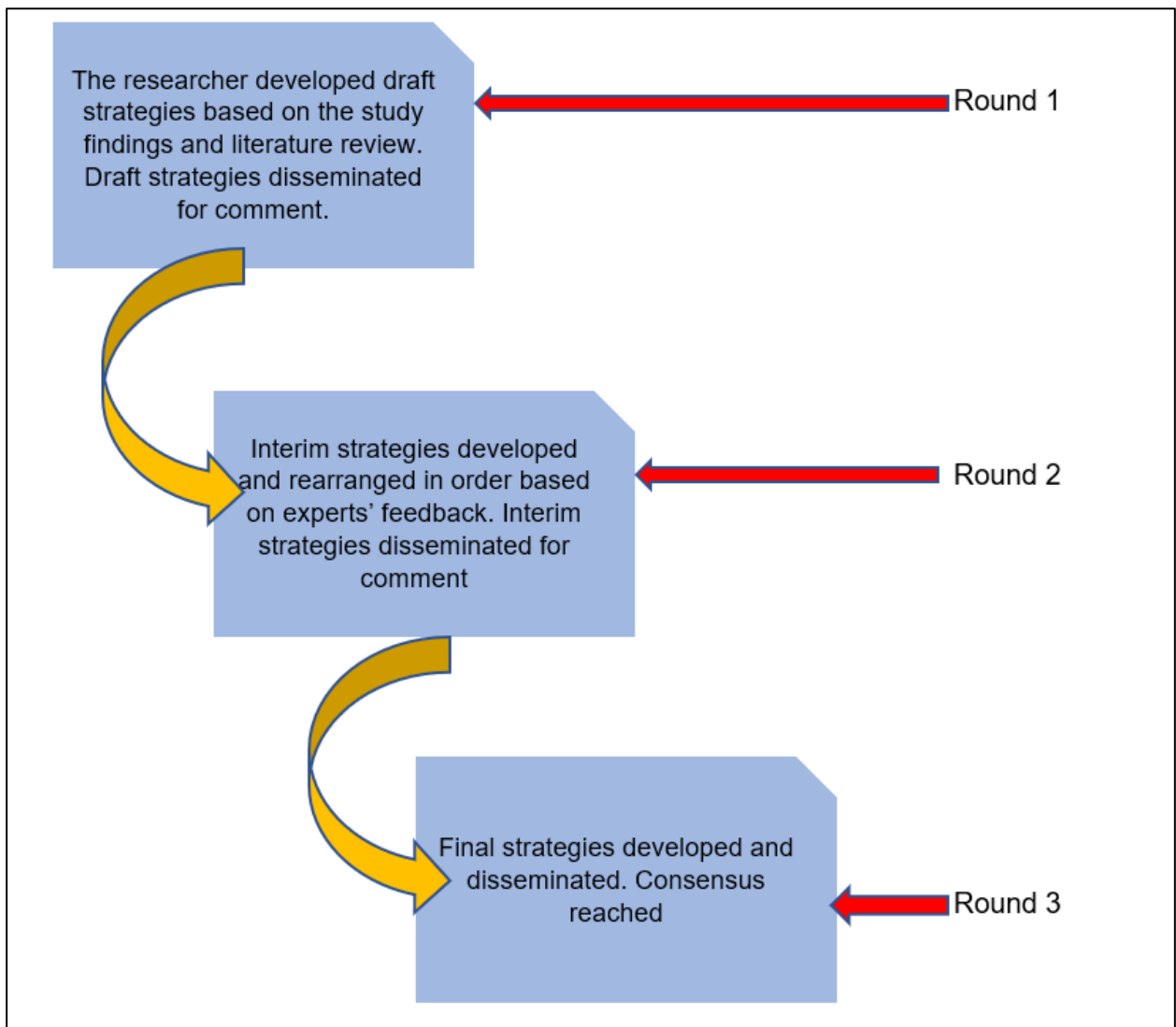


Figure 7.2 Strands of strategy development

7.4 FINAL STRATEGIES

The Delphi technique resulted in the final strategies:

- Strategy 1: Improve the availability of basic amenities and equip health facilities with equipment, drugs and supplies.
- Strategy 2: Improve the technical competency of health care providers on intrapartum care service provision.
- Strategy 3: Enhance client/patient satisfaction level at the point of care in the childbirth process.

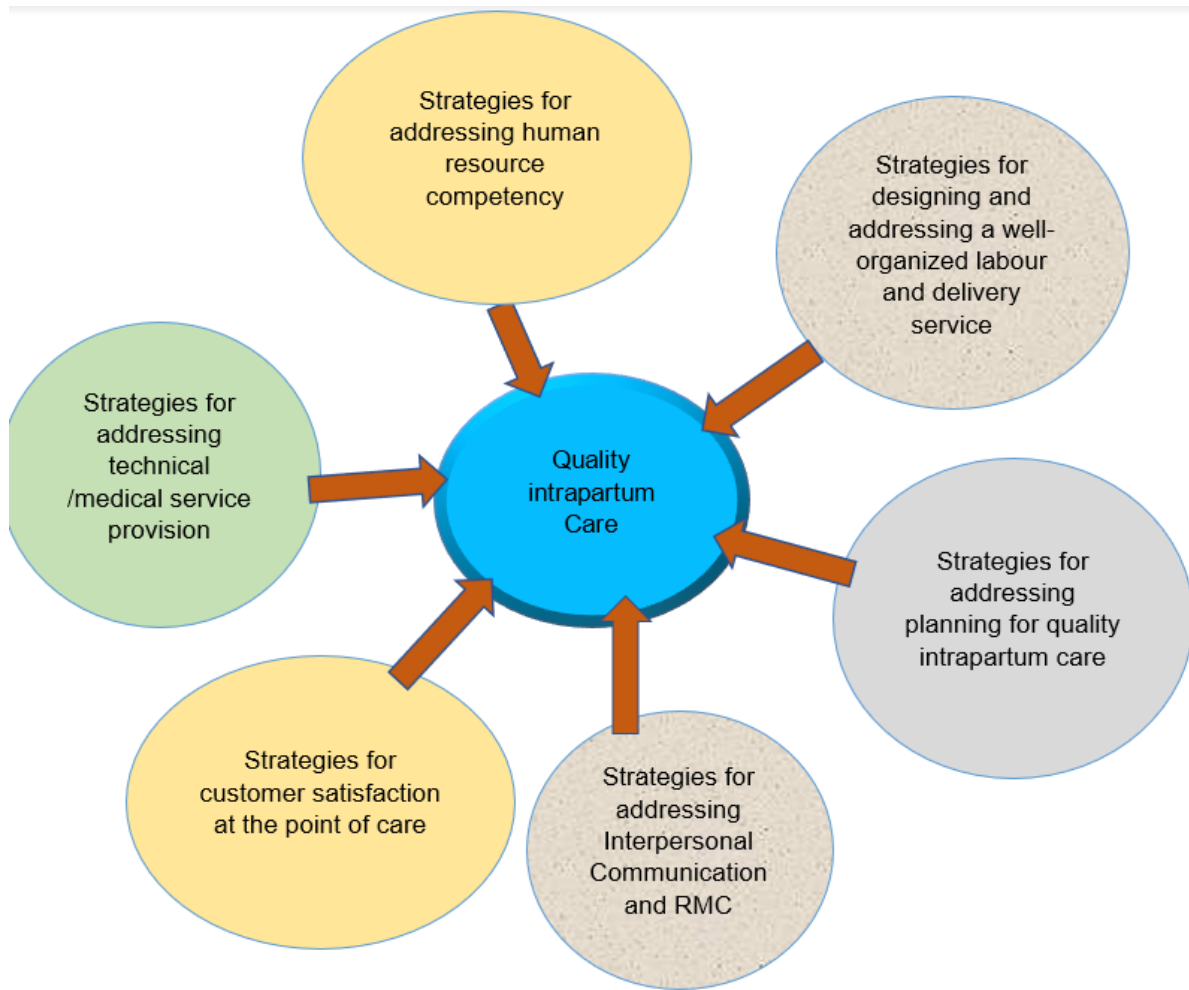
- Strategy 4: Intensify interpersonal communication and respectful maternity care (RMC) service provision under the umbrella of the ethical principles of autonomy, nonmaleficence, beneficence, and justice.
- Strategy 5: Strengthen the intrapartum care referral system of health facilities with improved referral feedback in place.
- Strategy 6: Design organised labour and delivery services to reduce unnecessary client waiting time for services.
- Strategy 7: Strengthen the availability of competent, motivated and skilled human resources for quality intrapartum care provision.

7.5 CLASSIFICATION OF STRATEGIES

The strategies were developed on the basis of the findings and literature reviewed. The strategies address structural issues, namely infrastructure, equipment, supplies, human resources/staff, and competency. In the process of care, the strategies address interpersonal communication, respectful maternity care (RMC), and provision and experience of care. Regarding outcomes, the strategies are intended to boost client satisfaction. The strategies are divided into two categories, namely health care providers, and mentors, supervisors and managers (see Figure 7.3 and Figure 7.4).

7.5.1 Strategies for health care providers

The strategies for health care providers are intended to improve technical aspects, interpersonal communication, respectful maternity care, and referral systems (see Figure 7.3).



**Figure 7.3 Strategic framework for health care workers to improve quality
intrapartum care**

7.5.1.1 Strategies for human resource competency

The availability of competent human resources is vital for the provision of quality intrapartum care. The Ministry of Health developed and implemented a continuous professional development strategy, which advises health care providers to obtain and develop different forms of capacity building through their own effort. Therefore, these strategies are intended to operationalise the national initiative at health centre level through health care providers in the labour and delivery rooms of health centres (see Table 7.2).

Table 7.2 Strategies for human resource competencies of health centres

SN	Strategy	Operationalisation
1	Design a system of on-the-job training	Conduct on-the-job training by trained health care providers, particularly for newly employed staff.
2	Strengthen the morning session to health centres	The morning session is an opportunity to transfer knowledge and skills of health care providers. The strategy should strengthen the morning session as a means of boosting health care providers' competency.
3	Strengthen peer-to-peer skills transfer	More experienced and senior labour and delivery health care providers should transfer skills and knowledge to junior and less skilled health care providers.

7.5.1.2 Strategies for planning for quality intrapartum care

The Ministry of Health has team level and individual level plans for all employees in the health system. The strategies for health care providers advocate for and work to include quality intrapartum care as an entity in individual and team plans to be implemented and monitored regularly.

Table 7.3 Strategies to improve planning for quality intrapartum care by health care providers of health centres

SN	Strategy	Operationalisation
1	Capacity building on planning, benefit of planning for quality, and perform exercises on planning for quality.	Conduct training on planning for quality intrapartum care, planning for quality components, and benefits of planning for quality.
2	Improve the planning practise of health care workers and labour and delivery teams.	Support health care providers and team members of labour and delivery rooms to include quality intrapartum care in the planning of the health centre

7.5.1.3 Strategies for interpersonal communication and RMC

Interpersonal communication has a pivotal role in improving the outcome of labour and delivery services as well as the level of client satisfaction with the services provided. Respectful maternity care (RMC) is critical to boost client satisfaction, quality of

intrapartum care and better outcomes for patients/mothers and newborns. The strategies address interpersonal communication and RMC services in quality intrapartum care.

Ashcroft, Dawson, Draper and McMillan (2007:30-33) emphasise the four universal ethical principles for the provision of maternal care:

- Respect for the autonomy of labour and delivery mothers.
- Nonmaleficence, which holds that there is an obligation not to inflict harm.
- Beneficence, which holds that there is an obligation to act for the benefit of the patient and prevent harm, remove conditions that will cause harm, and contribute to their welfare.
- Justice, which holds that all clients should be treated equally and fairly and their privacy protected.

Table 7.4 lists the strategies for interpersonal communication and RMC.

Table 7.4 Strategies for interpersonal communication and RMC for quality intrapartum care

SN	Strategy	Operationalisation
1	Strengthen interpersonal communication skills of health care providers	Capacitate health care providers on basic communication skills; supervise and mentor the practise of basic communication skills during health service provision.
2	Ensure privacy and confidentiality during service provision	Work to ensure maintenance of the privacy and confidentiality of every client regardless of class or origin in communities.
3	Ensure the involvement of champions/support persons/ doulas in labour and delivery	Design a system of providing orientation training to all companions on how to accompanying labouring mothers and give psychosocial support to the labouring mothers and other necessary support to the health care providers. Supervise and encourage health care providers to allow a companion in the labour and delivery room of the health centres.
4	Strengthen the competency of health care providers in addressing concerns and questions of clients	Capacitate and supervise health care providers on how to understand clients concerns or questions as well as how to respond them
5	Ensure client comfort and safety	Ensure the maintenance of client comfort and safety throughout the labour and delivery process.

7.5.1.4 Strategies for technical /medical service provision

Technical competency in medical service execution is vital for quality intrapartum provision. Technical competency accompanied by early detection of clients with problems and timely a referral and referral feedback mechanism is essential. Thus, this strategy addresses the technical competency improvement and referral systems of health centres.

Table 7.5 Strategies for technical/medical service provision for quality intrapartum care

SN	Strategy	Operationalisation
1	Ensure vital signs assessment on admission and periodically.	Carry out routine assessment of vital signs for every labour and delivery client according to MOH and WHO recommendations.
2	Strengthen the proper utilisation of partograph.	Motivate the availability and consistent utilisation of a partograph.
3	Ensure the administration of Oxytocin, TTC eye ointment, and Vitamin K.	Monitor and follow the regular application of Oxytocin, TTC eye ointment, and Vitamin K for every newborn.
4	Ensure uterine atony assessment for every client immediately after delivery of placenta.	Carry out assessments to rule out uterine atony for every client after the delivery of the placenta.
5	Strengthen skin-to-skin contact and immediate initiation of breast feeding.	Initiate immediate skin-to-skin contact of mother with the newborn. Encourage and strengthen immediate initiation of breast feeding within one hour of delivery.
6	Ensure application of drape over clients' private areas and dry the newborn.	Make certain the health care providers apply drapes over clients' private areas and drying newborns with towels or gauze immediately after delivery.

7.5.1.5 Strategies for customer satisfaction at the point of care

Customer satisfaction is one of the outcome indicators of quality intrapartum care. The study assessed labour and delivery clients' satisfaction.

Table 7.6 Strategies for client satisfaction with quality intrapartum care provision at health centres

SN	Strategy	Operationalisation
1	Assess client waiting times and reasons for delays in providing service.	Regularly assess client waiting times and causes of delays in getting service. Work on improvement activities to shorten client waiting times and tackle the underlying causes of waiting. Inform clients of reasons for delays and waiting.
2	Develop different messages on how to ambulate and rest in a comfortable position.	Develop and distribute information, education and communication materials in the form of leaflets or brochures. Provide and disseminate IEC materials for clients.
3	Capacity building on how to treat clients.	Train health care providers, managers and support staff on how to treat clients.

7.5.1.6 Strategies for designing well-organised labour and delivery services

The study identified client waiting times and delays before receiving services. Delays could be caused by workflow arrangements. The strategies should improve workflow and service delivery.

Table 7.7 Strategies for designing well-organised labour and delivery services

SN	Strategy	Operationalisation
1	Assess and identify workflow-related obstacles which cause clients' delay in receiving service.	Conduct quick assessments to identify workflow bottlenecks in waiting time.
2	Design and organise the workflow to reduce waiting time and improve workflow.	Redesign and reorganise workflow arrangements according to assessment findings.

7.4.1.6 Strategies for referral systems for intrapartum care

The identification and early referral of clients at health centres to higher health facilities contribute significantly to improving mother and newborn outcomes. The strategies should improve the referral system from health centres to primary hospitals.

Table 7.8 Strategies for referral systems for intrapartum care

SN	Strategy	Operationalisation
1	Strengthen early identification and timely referred of intrapartum care complications.	Work to improve the identification and timely referral of clients from health centres to primary hospitals for better diagnosis and management.
2	Improve the feedback loop between primary hospitals and health centres for referral clients.	Raise the issue of feedback from primary hospitals to care providers of health centres during mentorship meetings.

7.5.2 Strategies for mentors, supervisors and managers of intrapartum care

The strategies for mentors, supervisors and managers of health centres are intended to improve the infrastructure, equipment, drug, supplies and supply chain management; staffing; capacity building and human resources competency; planning for quality intrapartum care, and availability of training materials, guidelines and protocols of intrapartum care (see Figure 7.4).

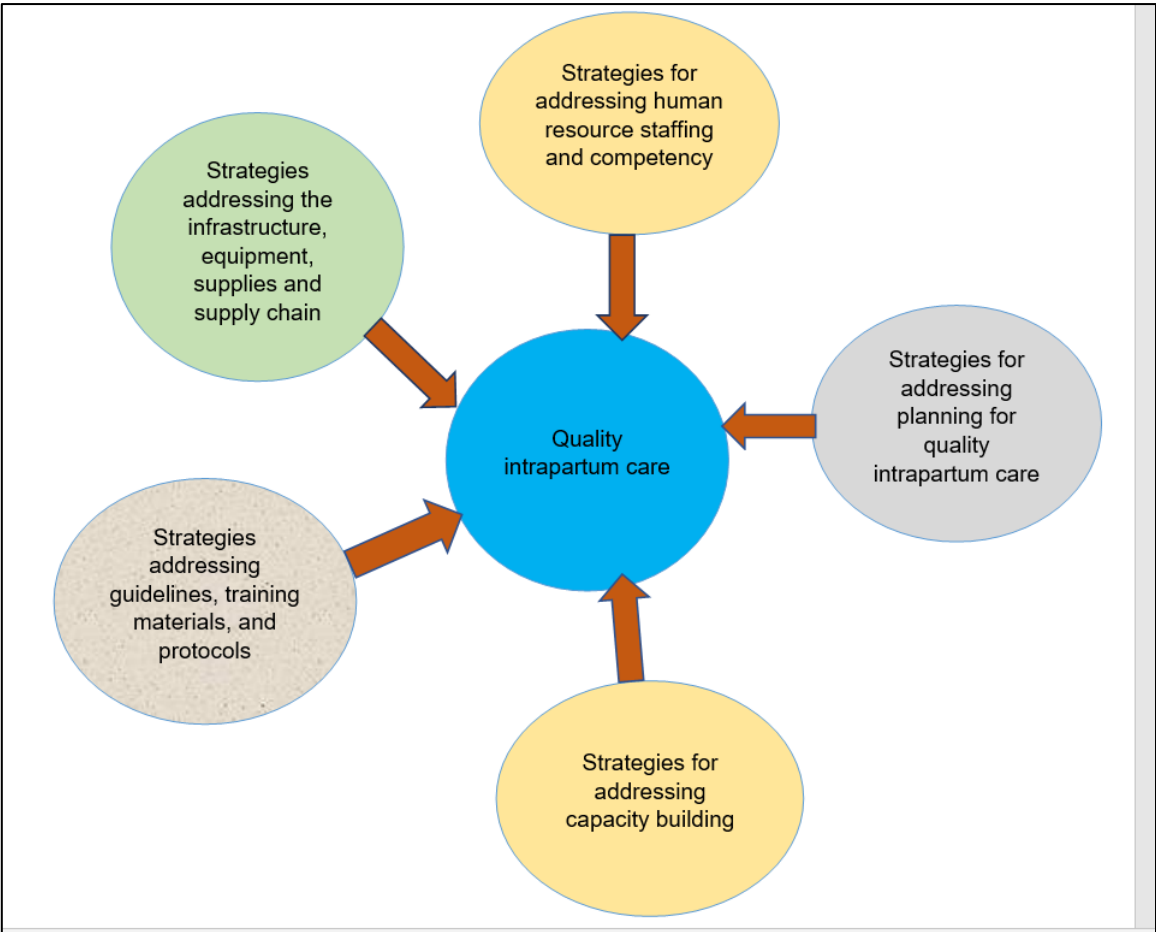


Figure 7.4 Strategic framework for mentors, supervisors and managers to improve quality intrapartum care

7.5.2.1 Strategies for infrastructure, medical equipment, supplies and supply chain management

Infrastructure, medical equipment, supplies and supply chain management are critical for the provision of quality intrapartum care, particularly in rural areas. One of the priorities of the Ministry of Health is to address the gaps in these areas (MoH 2020:47-56). The strategies should therefore help in improving infrastructure, medical equipment, supplies and supply chain management and consequently the quality of labour and delivery services at health centres.

Table 7.9 Strategies to improve infrastructure, medical equipment, supplies and supply chain management of health centres by mentors, supervisors and managers

SN	Strategy	Operationalisation
1	Improve the availability of basic amenities for intrapartum care.	Advocate for and negotiate with administrators to provide buildings, electricity, water and incinerators for health centres to improve the quality of intrapartum care.
2	Improve the availability of medical equipment, drugs and supplies.	Conduct annual assessments and submit procurement plans for equipment, drugs and supplies. Strengthen budgeting, procurement and timely availability of medical equipment, drugs and supplies according to the annual procurement plan.
3	Strengthen stock management.	Strengthen the stock management systems of health centres through capacity building, using bin cards and stock cards to apply first expiry, first use, procurement of drugs and supplies with lead time for their uninterrupted availability.

7.5.2.2 Strategies for human resources, staffing and competency

Human resources development and competence is a major task of health systems to provide quality health services. Quality in labour and delivery service provision is fundamental to the reduction of maternal and newborn morbidity and mortality. Accordingly, the strategies are intended to enhance and boost human resources, staffing

and competency to improve the quality of intrapartum care provision at health centres significantly.

Table 7.10 Strategies to for human resources, staffing and competency of health centres

SN	Strategy	Operationalisation
1	Train and deploy human resources.	Design a system of pre-service training with quality education linked to deployment to health centres to fill the human resource gaps.
2	Provide capacity building training.	Design and introduce a system of ongoing capacity building training for health care workers at health centre level, including on-the-job training; refresher training, and simulation drills and exercises. Facilitate a learning platform at health centres morning sessions to address capacity gaps.
3	Conduct supportive supervision and mentoring sessions at health centres.	Provide periodic and regular supportive supervision from primary hospitals and district health offices to health centres to assess the quality of intrapartum care provision and provide the necessary support in all dimensions of quality care. Strengthen mentorship activities given by primary hospitals to health centres with skillful, competent and passionate mentors on quality intrapartum care.

7.5.2.3 Strategies for planning for quality intrapartum care

The strategic and comprehensive plan of the Ministry of Health lacks precise indications of how to address the quality of intrapartum care. The strategies should therefore assist in inculcating quality intrapartum care as a core component of planning at all levels of the health system, particularly district health offices and health centres.

Table 7.11 Strategies for planning for quality intrapartum care by district health offices and health centres

SN	Strategy	Operationalisation
1	Provide capacity building on planning and benefits of planning for quality.	Conduct training on planning for quality intrapartum care, components of quality, and benefits of planning for quality.
2	Advocate for the management of the Ministry of Health to include quality intrapartum planning as a component of annual comprehensive planning.	Hold advocacy meetings with management of the health sector to consider planning for quality as a component of the annual comprehensive planning at all levels, particularly at health facility and health centres.
3	Provide supportive supervision and mentoring on planning for quality intrapartum care.	Do regular supportive supervision on a quarterly basis to assess the status of planning for quality and monitoring of the quality improvement activities of the health centres.

7.5.2.4 Strategies for guidelines, training materials and protocols

Job aids, guidelines, training materials and protocols on how to manage intrapartum care enable quality intrapartum care service provision by health care providers. There is a need to address the availability of these materials at health centre level in order to improve the quality of intrapartum care provision.

Table 7.12 Strategies to improve availability of guidelines, training materials, and protocols for quality intrapartum care

SN	Strategy	Operationalisation
1	Strengthen the availability of guidelines, training materials and protocols at health centre labour and delivery rooms.	Produce and disseminate guidelines and diagnosis and treatment protocols on labour and delivery. Ensure the availability of all training materials developed by the MOH and partners at health centre labour and delivery rooms.
2	Develop and introduce a system of placing guidelines, training materials and protocols at health centre level.	Design a dedicated corner or area to place guidelines, training materials and protocols in the labour and delivery units of health centres.

7.5.2.5 Strategies for capacity building training

Capacity building is essential for increasing competency. Mentors, supervisors and managers should implement and strengthen capacity building initiatives in order to increase staff competency. The strategy will be delivered through mentorship, supportive supervision, and facilitation at capacity building training events

Table 7.13 Strategies for capacity building training of health care providers

SN	Strategy	Operationalisation
1	Strengthen mentoring of health care providers by mentors.	Reactivate and strengthen the mentorship programme.
2	Improve supportive supervision visits on a regular basis.	Conduct regular supportive supervision visits to health centres.
3	Strengthen capacity building training for health care providers.	Provide capacity building training for health care providers at health centres.

7.6 SECOND ROUND DELPHI STRATEGIES AS INTERIM STRATEGIES

The researcher disseminated the revised strategies to the experts as interim strategies in the second round. The objective of the interim strategies was for the Delphi panel to rate and comment on the strategic priorities for the improvement of quality intrapartum care. The Delphi experts gave their rating in the second round and based on their rating and comments the revised strategies were re-circulated. Lastly, the strategies agreed upon were presented as a final strategy to be implemented by health care providers, mentors and supervisors at health centre level.

The revised strategies were stated as follows:

7.6.1 Strategy 1: Improve the availability of basic amenities, medical equipment, drugs and supplies

- Ensure the availability of basic amenities at health centre level like infrastructure, water, electricity, placenta pit, incinerators and solid as well as liquid waste disposal systems at health centres.
- Conduct an inventory of all health centres labour and delivery rooms for available and functional medical equipment.
- Procure and distribute essential medical equipment according to inventory findings at health centres.
- Follow up health facilities' use of bin cards and stock cards regularly, apply first expiry, first use principle, and request drugs and supplies with lead time taken into account.
- Provide all essential drugs and supplies at health centre level and work to prevent stock-outs of essential drugs and supplies.

7.6.2 Strategy 2: Strengthen the availability of competent, motivated and skillful human resources

- Adapt and implement the national quality and safety strategy, taking into account the provision of quality intrapartum care.
- Reorganise and revitalise the quality improvement committees of health centres to work on quality improvement as a whole.
- Develop terms of reference for quality improvement committees, which state their roles and responsibilities, scope and key deliverables.
- Provide orientation of quality improvement committees on their major duties, quality improvement and benefits of quality improvement at health centre level.
- Organise orientation and training programmes for all staff on the process of continuous quality improvement.
- Design a system of rewarding with non-monetary rewards best performance in quality improvement to create a model for other health centres to follow.
- Organise and conduct regular mentorships with competent, skillful and experienced health care providers of the primary hospitals.

7.6.3 Strategy 3: Improve the planning for quality intrapartum care practises

Planning for quality intrapartum care is one of the initial steps in implementing quality intrapartum care improvement interventions. The main interventions to operationalise the planning for quality intrapartum care strategy are as follows:

- Advocate for inclusion of planning for quality intrapartum care as a component of the annual comprehensive planning process of the health centres.
- Capacitate the quality improvement committees, health care providers, mentors, supervisors and managers on planning, benefits of planning for quality, and carry out exercises in planning for quality.
- Revise the annual planning template of the health sector to accommodate the quality intrapartum improvement interventions as one component of planning.
- Provide supportive supervision and mentorship of health centres for initiation of quality intrapartum planning as a routine task.

7.6.4 Strategy 4: Develop and distribute guidelines, training materials and protocols

The availability of guidelines, training materials and protocols is pivotal in improving the quality of intrapartum care service provision. Therefore, the following interventions should be taken to improve the quality of intrapartum care.

- Produce and distribute adequate numbers of guidelines, training materials and protocols to health centres.
- Allocate space in the health centres to display the materials in a reading room and be accessible to health care workers at the health centres.
- Develop a culture and system of placing all guidelines and training materials at the health centres to be used by health centre team members.

7.6.5 Strategy 5: Intensify interpersonal communication and respectful maternity care

- Capacitate health care providers and support staff of the health centres on basic interpersonal communication skills.
- Produce and disseminate communication materials for health care providers and support staff of health centres.
- Create an enabling environment to ensure the audio-visual privacy of labour and delivery clients.
- Maintain the confidentiality of clients, and support and monitor health care providers to ensure the confidentiality of client information.
- Provide orientation training to labour and delivery companions on how to give psychosocial support to clients as well as how to support health care providers when necessary and required.
- Encourage and support health care providers to allow labour and delivery clients to be accompanied by an attendant.
- Capacitate health care providers to respond to client concerns and questions as well as to addressing these systematically in the local language.
- Ensure clients' comfort and safety, by creating an enabling and conducive environment by providing comfortable and safe delivery services.
- Improve the competency of health care workers to provide caring, respectful and compassionate service.
- Conduct supportive supervision and monitoring of labour and delivery service provision to ensure good interpersonal communication as well as respectful maternity care throughout the childbirth process at the health centres.

7.6.6 Strategy 6: Improve intrapartum care service providers' technical competency

The technical competency of health care providers with timely referral of clients is crucial to reduce mother and newborn mortality. The following strategies are recommended to improve intrapartum care service provider technical competency:

- Ensure initial thorough vital signs assessment and regular updating of the mother and newborn vital signs according to the MOH and WHO recommendations.
- Produce and distribute adequate supplies of partographs; orient health care providers when to start filling partograph, how to fill it properly as well as the meaning of alert and action lines of the partograph.
- Conduct regular supportive supervision and monitoring of proper utilisation of partographs.
- Capacitate health care providers on active third stage management of labour; how to prevent, diagnose and manage post-partum haemorrhage.
- Improve the technical competency and follow up on how to apply controlled cord traction (CCT).
- Ensure the administration of Oxytocin, Tetracycline eye ointment (TTC), and Vitamin K through capacity building, supportive supervision and mentoring.
- Ensure clinical competency on how to do uterine atony assessment for every client immediately after delivery of the placenta
- Strengthen skin-to-skin contact and immediate initiation of breast feeding through orientation training of health care workers and mentoring and supportive supervision of labour and delivery service personnel.
- Ensure application of drapes over patients' private areas and dry newborns by conducting monitoring visits to health facilities.
- Ensure referrals from health centres to primary hospitals are done in a timely manner and obtain feedback on client outcomes.

7.6.7 Strategy 7: Enhance client/patient satisfaction level at the point of care

Client satisfaction is one of the outcome indicators of quality intrapartum care provision. In order to boost patients' satisfaction with intrapartum care and childbirth service, the following strategies are recommended:

- Ensure timely service provision to labour and delivery clients, explore and address reasons for unnecessary delays in providing services.
- Develop different messages on how to ambulate and rest on comfortable side
- Capacity building for team members on how to treat clients; provide service in a friendly way and obtain clients' feedback on a daily basis. The quality improvement

committee and health care providers should review client feedback, take action on clients' concerns in order to ensure improvement.

7.6.8 Strategy 8: Design well-organised labour and delivery services

- Identify problems and delays in client flow arrangements.
- Discuss workflow arrangements and challenges with health care providers.
- Re-organise the workflow of labouring mother service visits to improve the efficiency and effectiveness of service delivery.
- Regularly assess the workflow situation and take corrective action for identified gaps.

7.6.9 Strategy 9: Strengthen the referral system of health facilities intrapartum care

- Capacitate health care workers on early detection of obstetric complications and early referral.
- Conduct regular early and timely referrals of clients to higher health facilities.
- Follow up the referrals and obtain feedback on the outcomes of referred clients.

7.7 FINAL DELPHI RANKING AND CONSENSUS ON STRATEGIES

The third round of the Delphi method produced the final prioritisation and endorsement of the strategies.

Table 7.14 Delphi ranking of the strategies and interventions

Strategy	Interventions	Experts level of agreement with strategy and its level of agreement (1-strongly disagree, 2-disagree, 3 Neutral, 4 Agree and 5-Strongly agree)										Total	Mean	% of agreement	% of agreement for strategy	Rank of strategy
		Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6	Expert 7	Expert 8	Expert 9	Expert 10					
Improve the availabilities of basic amenities, medical and well equip health facilities with equipment, drugs and supplies	Ensure the availability of basic amenities at the health centres like infrastructure, water, electricity, placenta pit, incinerator and solid as well as liquid waste disposal system.	4	4	4	5	4	5	4	4		5	39	4.3	86.7	84.9	1
	Conduct an inventory of all health facilities labour and delivery rooms for available and functional medical equipment.	4	4	4	4	4	4	4	4		4	36	4.0	80.0		
	Procure and distribute essential medical equipment per the inventory findings of the health centres	5	4	5	4	5	4	4	5		5	41	4.6	91.1		
	Supervise health centres to use bin cards and stock cards regularly, apply first expiry first use principles and request drugs and supplies with lead time taken into account	4	4	3	4	4	3	4	4		5	35	3.9	77.8		
	Avail all the essential drugs and supplies at the health centres and work to prevent stockout of essential drugs and supplies	5	4	5	4	4	4	5	4		5	40	4.4	88.9		
Strengthen the availability of competent, motivated and skillful human resources for Intrapartum quality care provision	Adapt and implement the national quality and safety strategy, taking into account the provision of quality intrapartum care.	4	4	4	5	4	4	4	4		4	37	4.1	82.2	78.1	7
	Reorganise and revitalise the quality improvement committees of the health centres to work on quality improvement as a whole	4	4	4	4	4	3	4	4		5	36	4.0	80.0		
	Develop a term of reference for the quality improvement committee which state the roles and responsibilities, scope and key deliverables of the committees	4	4	3	4	4	3	4	4		4	34	3.8	75.6		
	Orient the quality improvement committees on their major duties, quality improvement and benefits of quality improvement at health centres level	4	3	4	4	4	4	4	4		4	35	3.9	77.8		
	Organise orientation and training programmes for all staff on the process of continuous quality improvement.	3	4	4	3	4	3	4	4		4	33	3.7	73.3		
	Design a system of non-monetary rewards for best performce on quality improvement and create a model quality improved health centre to be followed other health centres.	4	4	4	4	4	4	3	4		4	35	3.9	77.8		
	Organise and conduct regular mentorships using competent, skillful and experienced health care providers of the primary hospitals	4	4	4	5	4	4	5	3		3	36	4.0	80.0		
Improve the planning for quality intrapartum care practises	Planning for quality intrapartum care is one of the initial steps to implement quality intrapartum care improvement interventions. The major interventions to operationalise the planning for quality intrapartum care strategy are as follows:	4	4	3	4	4	4	4	4		4	35	3.9	77.8	73.8	8
	Advocate for inclusion of planning for quality intrapartum care as a component of an annual comprehensive planning process of the health centres	4	3	3	4	3	4	4	3		4	32	3.6	71.1		
	Capacitate the quality improvement committees, health care providers, mentors, supervisors and managers on planning, benefits of planning for quality and perform demonstrations of planning.	4	4	4	4	3	4	4	3		4	34	3.8	75.6		

	Revise the annual planning template of the health sector to accommodate the quality intrapartum improvement interventions as one planning component	3	4	3	4	3	4	3	3		4	31	3.4	68.9		
	Supportive supervision and mentorship of health facilities for initiation of quality intrapartum planning as the routine tasks of the health centres	3	4	4	4	3	4	4	4		4	34	3.8	75.6		
Develop and distribution of guidelines, training materials and protocols	The availability of guidelines, training materials and protocols is paramount in improving the quality of intrapartum care service provision. Therefore, these interventions must be taken in order to improve the quality intrapartum care	3	3	3	4	3	2	3	4		3	28	3.1	62.2	63.33	9
	Production and distribute adequate numbers of guidelines, training materials and protocols to health centres	4	4	2	3	4	2	3	3		3	28	3.1	62.2		
	Allocate space at the health centres to place all the materials in a reading room accessible to health care workers at the health centres	3	3	3	4	3	3	4	3		3	29	3.2	64.4		
	Develop a culture and system of placing all the guidelines and training materials at the health centres to be used by the health centres team members as property of the health centres	3	3	3	3	4	3	4	3		3	29	3.2	64.4		
Intensify the Interpersonal Communication and Respectful Maternity Care (RMC) service provision	Capacitate health care providers and other support staff of the health centres on basic interpersonal communication skills	4	4	4	5	4	5	4	4		4	38	4.2	84.4	80.0	4
	Produce and disseminate communication materials for health care providers and other support staff of health centres	4	3	4	4	3	4	4	4		4	34	3.8	75.6		
	Ensure the audio-visual privacy of every labour and delivery clients, create an enabling environment to ensure audio-visual privacy of client	4	4	4	5	4	4	4	4		4	37	4.1	82.2		
	Work to maintain the confidentiality of clients, support and monitor health care providers to ensure the confidentiality of clients' information	4	4	4	4	4	4	4	4		4	36	4.0	80.0		
	Provide orientation training to labour and delivery champions on how to give psychosocial support to labour and delivery client as well as how to support health care providers when the need arises to do so	4	4	5	4	4	4	4	5		4	38	4.2	84.4		
	Encourage and support health care providers to allow labour and delivery clients to be accompanied by their attendants as a champion	4	4	4	4	4	4	4	4		4	36	4.0	80.0		
	Capacitate health care providers in understanding clients concerns and questions as well as how to address the concerns and questions systematically in a local language.	4	4	3	4	3	4	4	4		4	34	3.8	75.6		
	Ensure the clients comfort and safety, creating an enabling and conducive environment to avail comfortable and safe delivery services	3	4	3	4	4	4	4	4		4	34	3.8	75.6		
	Improve the competency of health care workers to avail services which encompass caring, respect and compassion	5	3	4	4	5	4	4	4		4	37	4.1	82.2		
	Conduct supportive supervision and monitoring of the labour and delivery services provision to ensure excellent interpersonal communication skills as well as the availability of respectful maternity care throughout the childbearing process at the health centres.	4	4	3	4	5	5	4	4		3	36	4.0	80.0		

Improve the technical competency of health care providers on intrapartum care service provision	The technical competency of health care providers with timely referral of clients that can not be managed at health centres level is a crucial event for saving the lives of mothers and new-borns. The study explored the health care workers technical competency and came up with some shortcomings which need a strategy for improvement. Thus, these are the strategic interventions to avail quality intrapartum care:	4	4	4	5	5	4	4	4		4	38	4.2	84.4	82.9	2
	Ensure initial thorough vital signs assessment and regular updating of the mother and new-born vital signs per MOH and WHO recommendation	4	5	4	4	5	5	4	4		4	39	4.3	86.7		
	Production and distribution of adequate supplies of partographs, orient health care providers when to start filling a partograph, how to fill it properly as well as the meanings of alert and action lines of the partograph	5	4	5	4	5	5	5	4		4	41	4.6	91.1		
	Conduct regular supportive supervision and monitoring of proper utilisation of partograph	4	5	4	3	4	5	5	5		5	40	4.4	88.9		
	Capacitate health care providers on active third stage management of labour and how to prevent, diagnose and manage post-partum haemorrhage.	5	4	4	4	5	4	4	4		5	39	4.3	86.7		
	Improve the technical competency and supervise how to apply controlled cord traction	4	5	4	4	4	5	4	4		4	38	4.2	84.4		
	Ensure the administration of oxytocin, Tetracycline eye ointment t (TTC), and Vitamin K administration through capacity building, supportive supervision and mentoring	4	4	4	4	4	4	4	4		4	36	4.0	80.0		
	Ensure clinical competency on how to perform uterine atony assessment for every client immediately after delivery of the placenta	4	4	5	4	4	4	4	4		4	37	4.1	82.2		
	Strengthen skin- to- skin contact and immediate initiation of breast feeding through orientation training of health care workers, mentoring and supportive supervision of labour and delivery service	4	4	4	4	4	3	4	3		4	34	3.8	75.6		
	Ensure application of drapes on the private parts and dry new-borns through monitoring visits of health centres	3	4	3	4	4	3	4	3		3	31	3.4	68.9		
Enhance customer satisfaction at the point of care in the childbearing process	Ensure timely service provision for labour and delivery clients, explore and address the reasons for unnecessary delays of clients to receive services.	4	4	4	5	4	4	4	4		5	38	4.2	84.4	80.7	3
	Develop different messages which address how to ambulate and rest in comfortable position.	4	4	4	4	4	4	4	4		4	36	4.0	80.0		
	Capacity building on how to handle customers for health care providers, avail services in a friendly way to clients by all team members of the health centres, collect customers feedback on a daily basis, review of the feedback by the quality improvement committees of health centres and health care providers, take action on the customers concerns for regular improvement of based the feedback.	4	3	4	4	4	4	4	4		4	35	3.9	77.8		
Design a well-organised labour and delivery service to reduce unnecessary client waiting time ces	Identify bottlenecks to client flow arrangements	4	4	5	4	4	4	4	4		4	37	4.1	82.2	78.9	6
	Conduct discussion sessions with health care providers about workflow arrangements and their challenges	4	4	4	4	4	4	4	4		4	36	4.0	80.0		
	Re-organise the workflow for the labouring mothers to improve the efficiency and effectiveness of the service delivery	4	4	4	4	3	4	4	4		4	35	3.9	77.8		

	Regularly assess the workflow situation and take corrective action to address identified gaps	4	4	4	4	4	4	4	4	3		3	34	3.8	75.6		
Strengthen the referral system of health facilities intrapartum care with improved referral feedback in placed	Capacitate health care workers on early detection of obstetric complications and early referral	4	4	4	4	4	4	4	4	4		4	36	4.0	80.0	79.4	5
	Conduct regular early and timely referral of clients to higher health facilities in the health system tiers	4	3	4	4	4	4	4	4	4		4	35	3.9	77.8		
	Track the referral systems and receive feedback from the higher health facilities about the outcomes of referred clients	4	4	4	4	4	4	4	4	4		4	36	4.0	80.0		
	Ensure that referrals from health centres to primary hospitals are timely manner and receive feedback on the outcomes of the referred clients.	4	4	4	4	4	4	4	4	4		4	36	4.0	80.0		

7.8 CONCLUSION

This chapter discussed the strategies developed to improve quality intrapartum care at health centres. The strategies were based on the findings of the study. Chapter 8 concludes the study and makes recommendations for practise and encourage further study.

CHAPTER 8

SUMMARY, LIMITATIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

This chapter summarises the study, discusses the limitations and contribution of the study, and makes recommendations for practise and further research.

8.2 SUMMARY

Maternal mortality in Ethiopia remains among the highest in the world. Although Ethiopia has significantly reduced maternal and child mortality, improved the family planning utilisation and maternal health indicators, 412 mothers per 100,000 live births still die from pregnancy-related causes. In response, the government of Ethiopia considered maternal health a priority in its health sector transformation plans. In order to reduce maternal mortality, there is a need to improve the institutional delivery rate. Uptake of institutional delivery would improve if the quality of the services provided were acceptable to the community. In their study in Amhara region, Yigzaw et al (2017:7) found that a lack of capacity building training on labour management for service providers of health facilities resulted in inadequate performance improvement.

The purpose of the study was to assess the quality of intrapartum care service, providers' practise of respectful maternity care, and clients' satisfaction with the intrapartum care at health centres and to develop strategies to improve the quality of intrapartum care at health centre level. The researcher conducted a literature review to familiarise himself with existing research on the topic, contextualise the study, and answer the research questions.

The researcher used a mixed methods design in which the quantitative data were collected in three strands and the qualitative data was collected in one strand from 26 selected health centres in West Gojjam Zone, Amhara Region.

The quantitative data helped the researcher to understand the patient satisfaction level, availability of essential drugs and supplies for the provision of quality intrapartum care; assess the level of technical competency, and assess the quality of intrapartum care with direct non-participatory observation.

Direct observation of the health facilities was conducted for general cleanliness of the facilities, availability and functionality of electricity, water, toilets and incinerators, and liquid and solid waste disposal. The availability of infection prevention supplies, drugs and equipment was checked. The availability of trained human resources for the provision of quality intrapartum care was assessed. Data were collected by means of a structured questionnaire.

Directly observed intrapartum care service providers' technical competency and respectful maternity care provision during intrapartum care was assessed with a structured questionnaire.

Data were collected by means of administered questionnaires on client satisfaction. The participants were post-natal clients, who had given birth at the health centres.

Qualitative data was collected by means of in-depth interviews with health care providers, mentors and supervisors until data saturation was achieved. The purpose was to obtain rich data and a deeper understanding of intrapartum care activities, capacity building and supplies provision and challenges encountered to ensure quality intrapartum care at health centre level.

Finally, the researcher developed the quality improvement strategies based on the findings by means of a Delphi method consultation with a panel of ten experts at the Ministry of Health, regional health bureaus and zone health departments, as well as *woreda* health office level in strand 5.

8.3 FINDINGS

The study identified the following gaps in intrapartum care provision:

- Poor cleanliness of labour and delivery rooms, shortage of incinerators, and unsafe waste disposal.
- Shortages of equipment, supplies and drugs.
- Inadequate staffing of health centres.
- Inadequate timely and consistent utilisation of partographs.
- Gaps in technical competency, training, supportive supervision, and mentoring.
- Gaps in respectful maternity care (RMC) practise; verbal and physical abuse.
- Loose referral system and inadequate referral feedback system.

8.3.1 Cleanliness of labour and delivery rooms, water availability, shortage of incinerators, and unsafe waste disposal

The study found that 34.6% of labour and delivery rooms cleanliness and 38.5% of delivery beds were clean. Of the health centres, 11.5% did not have water available in the labour and delivery rooms. This compromised the quality of intrapartum care. The shortage of water while managing labour and delivery clients forced the service providers to put water in a jar for use during labour and delivery which was very difficult.

Of the health centres, 96.2% had incinerators and 11.5% did not. However, some incinerators were not protected which allowed unauthorised access to hazardous waste. Some health centres stored waste in temporary storage areas which were at high risk of disseminating infection because of offensive smell.

8.3.2 Medical equipment for quality intrapartum care service provision

The findings indicated that of the health centres, 100% had sterilisation equipment, vacuum extractors and infant weight scales; 96.2% had delivery sets; 26.9% had examination lights, and 69.2% had suction machines. Regarding vital signs assessment apparatus, 50% had thermometers; 57.7% had sphygmomanometers, and 69.2% had fetoscopes.

8.3.3 Supplies and drugs

The availability of supplies and drugs are important for quality intrapartum service provision. The study found that 92.3% of the health centres had disinfectant for infection

prevention; 46.2% had Oxytocin; 76.9% had injectable magnesium sulphate; 80.8% had antibiotics IV/IM; 88.5% had partographs; 57.7% had clean towels, and 84.6% had safe waste disposal. The supervisors and mentors referred to shortages and stock-outs of Oxytocin and other supplies and drugs.

8.3.4 Human resources density and technical competency for quality intrapartum care service provision

Of the health centres, 77% (n=20) had one or two Diploma midwives, and 23.1% (n=6) had three Diploma midwives. Clinical nurses were only available in 23.1% (n=6) of the health centres, with one clinical nurse per health centre. The MOH recommends three midwives per health centre.

Proper and timely use of the partograph determines the quality of intrapartum service provision. The study found that of the clients, 73.5% were managed by using a partograph; the timely filling of the partograph was done for 55.9% and the proper filling of the partograph according to the information required was done for 68% of the clients

Regarding the health care providers' active management of the third stage of labour, 94.6% of the clients had been managed with controlled cord traction; 95.7% had been given an Oxytocin injection after the delivery of the placenta, and 94.6% had undergone uterine atony assessment. In 72.4% of the clients, the placenta had been clamped with cord clamping by the health care providers.

Of the newborns, 98.9% were dried with cloths; 90.3% were wrapped with towels/cloths, 55.4% received injectable Vitamin K; 78.1% were treated with tetracycline (TTC) eye ointment; 96.1% were put in skin-to-skin contact (SSC) with the mother to prevent hypothermia, and immediate breastfeeding was initiated for 95%.

8.3.5 Respectful maternity care service provision

The study explored respectful maternity care, including greeting patients, consented care, information, being accompanied by a companion or support person, and having questions answered. Health care providers' RMC service provision was observed by means of a structured checklist.

The clients were asked how they were treated upon arrival at reception of the health centre. Of the clients, 87.9% stated that they were received and managed in a friendly way.

Of the clients, 89.9% received friendly service from the health care providers; 36.9% were given information about their care; 90.0% were informed of the findings of tests; 80.3% were informed of what to expect next during labour and delivery; 79.9% were asked whether they had any questions, and 78.8% had their questions or concerns addressed by the health service providers; 78.9% were advised to take light food and fluid during labour; 82.1% had a companion or support person; 68.8% had a drape to provide privacy; 87.5% said their privacy had been maintained; 84.9% said their confidentiality was maintained, and 34.1% experienced some abuse and disrespect during labour and delivery care.

8.3.6 Client satisfaction with intrapartum care

The study explored the overall client satisfaction and found that 74.9% of the clients were satisfied with the maternal health service and 25.1% were not.

The clients were asked how they were treated upon arrival at Reception of the health centre. Of the clients, 87.9% stated that they were received and managed in a friendly way; 71.7% had to wait before they were examined by the clinicians and 28.3% did not have to wait. Of the clients who had to wait, 57.5% were not informed of the reason for the delay, and 42.5% were informed of the reason.

Of the clients, 64.8% were informed what to expect and 35.2% were not informed; 87.9% received friendly service and 12.1% did not; 85.8% were advised to ambulate and 14.2% were not; 85.4% were treated with courtesy and respect and 14.6% were not. Regarding any form of abuse during intrapartum care, 16.6% of the clients had experienced verbal abuse and 5.3% had experienced physical abuse.

8.3.7 Supportive supervision, mentorship and capacity building

Supportive supervision: There was infrequent supportive supervision, which did not capacitate health care providers to improve the quality of intrapartum care.

Mentorship: There was no specific mentorship programme for labour and delivery services. Mentorship was currently included with HIV/AIDS services, especially PMTCT services. Mentorship programmes had been strong when supported by partners, but were currently infrequently provided.

Training: Capacity building through in-service and on-the-job training consisted mainly of Basic Emergency Management of Obstetric Care (BEMOC) and infection prevention training. Refresher training, simulation exercises and drills were not regularly provided, and clinical protocols were not always available.

8.3.9 Challenges in quality intrapartum care provision

Structural challenges encountered included unavailability of water; shortages of equipment; human resources shortages; inadequate capacity building, and shortages or stock-outs of supplies and drugs. Process and procedure challenges included poor interpersonal communication, work overload and overlapping tasks, poor referral system, infrequent utilisation of partographs, and infrequent allowance of companionship and giving birth in clients' preferred birth position.

8.4 LIMITATIONS OF THE STUDY

The limitations of a study refer to restrictions or problems in a study that may decrease the generalisability of the findings (Polit & Beck 2008:539). The study was restricted to 26 rural health centres in West Gojjam Zone, Amhara Region therefore the findings cannot be generalised to other health centres or the whole country. Moreover, the research has developed a strategy which needs testing of an intervention program to access if the strategic model will improve on the quality of health care.

8.5 CONTRIBUTION OF THE STUDY

In all the government plans and strategies, improving quality remained the priority area of transformation of the health sector. In order to track this, various studies have been conducted at hospital level to assess the quality of maternal health services but little assessment has been done at primary health care (PHC) centres, which the majority of clients access. Moreover, most uncomplicated maternal health services are provided at rural health centre level. The findings of the study should assist the government, health centres, districts, zones and regional health bureaus to tackle the identified gaps in order to transform the quality of intrapartum care service provision at primary health care centres. In addition, clients should benefit by subsequent government action to improve the quality of intrapartum care and RMC by the implementation of the strategies. The views and experience of health care providers, mentors and supervisors in intrapartum care provision at health centre level in the rural areas of the country have not been explored before. The strategies should facilitate quality intrapartum care and respectful maternity care provision in health centres in West Gojjam Zone and other rural areas. The strategies should assist the reduction of maternal and newborn mortality in Ethiopia.

8.6 RECOMMENDATIONS

Based on the findings, the researcher makes the following recommendations:

8.6.1 Infrastructure, medical equipment, supplies and drugs

The Ministry of Health, Regional Health Bureaus and District Health Offices should ensure the availability, security and protection of incinerators; the prevention of access to infectious and hazardous waste; safe waste disposal, and the availability of water and adequate medical equipment at health centres, including examination lights, suction machines, thermometers, sphygmomanometers, fetoscopes and partographs; adequate provision of supplies and drugs, including rubber sheets, newborn drying and wrapping towels/cloths, Oxytocin, Magnesium sulphate, injectable antibiotics, and TTC eye ointment

Health centre management should ensure and regularly check the proper utilisation of incinerators; prevention of unauthorised access to incinerators and infectious/hazardous waste; availability of water, and stocks of supplies and drugs.

8.6.2 Staffing and competency

The Ministry of Health, Regional Health Bureaus, Zonal Health Departments and District Health Offices should deploy midwife nurses to health centres to meet the national standards requirement.

The Regional Health Bureaus and District Health Offices should provide regular basic and refresher training for intrapartum care providers on BEMOC and infection prevention; ensure on-the-job training and availability of clinical protocols at health centres; strengthen and update mentorship programmes and deploy competent and experienced mentors to health centres and ensure regular supportive supervision for ongoing quality improvement.

8.6.3 Interpersonal communication and RMC

The District Health Offices and Health Centre managers and supervisors should ensure the availability of clinical protocols and regular assessment of intrapartum care provision. Health centre managers, supervisors and health care providers should ensure friendly service; information on waiting time, progress of labour, patient concerns and questions; provide consented care; maintain client privacy and confidentiality and provide quality intrapartum care and respectful maternity care.

8.6.4 Quality intrapartum care and RMC provision

All intrapartum care providers at the health centres should monitor client and foetal vital signs on admission and at regular intervals; make timely and proper use of the partograph for all true labour starting from 4cm cervical dilatation; orientate clients and companions on the benefits and key actions of companionship; assess uterine atony for every client immediately after delivery of the placenta for the prevention of postpartum haemorrhage;

ensure patient privacy by covering with drapes; administer injectable Vitamin K and tetracycline eye ointment to newborns, and dry and wrap newborns.

8.6.5 Further research

Further research should be conducted on the following topics:

- Challenges in the provision of quality intrapartum care and RMC in urban health centres and hospitals
- Health care providers' perceptions and experiences of respectful maternity care in rural health centres
- Service providers' perceptions and experiences of referral guidelines and pre-referral management of labouring clients in rural health centres
- Community perceptions and experiences of intrapartum care provided at rural health centres

8.7 CONCLUSION

This chapter concluded the study by briefly describing its contribution and limitations and made recommendations for practise and further research. The researcher is of the opinion that the implementation of the strategies should contribute to quality intrapartum care, promote respectful maternity care, and help reduce the maternal and infant mortality rate in Ethiopia.

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ANNEXURES

ANNEXURE 1: Ethical clearance, Department of Health Studies, UNISA



RESEARCH ETHICS COMMITTEE: DEPARTMENT OF HEALTH STUDIES REC-012714-039 (NHERC)

06 May 2019

Dear Ayele Andarge Abie

Decision: Approval

HS HDC/908/2019

Student: Ayele Andarge Abie

Student No.: 64030865

Supervisor: Prof JM Mathibe-Neke

Qualification: PHD

Joint Supervisor:

Name: Ayele Andarge Abie

Proposal: Quality of Intrapartum care at Health Centres of West Gojjam Zone, Amhara Region, Ethiopia

Qualification: PHD

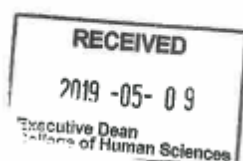
Risk Level: Medium risk

Thank you for the application for research ethics approval from the Research Ethics Committee: Department of Health Studies, for the above mentioned research. Final approval is granted from 06 May 2019 to 06 May 2024.

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the Research Ethics Committee: Department of Health Studies on 06/05/2019

The proposed research may now commence with the proviso that:

- 1) The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*
- 2) Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the Research Ethics Review Committee, Department of Health Studies. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*



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3) The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.

4) You are required to submit an annual report by 30 January of each year that indicates that the study is active. Reports should be submitted to the administrator HSREC@unisa.ac.za. Should the reports not be forthcoming the ethical permission might be revoked until such time as the reports are presented.

Note:

The reference numbers [top middle and right corner of this communiqué] should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the Research Ethics Committee: Department of Health Studies.

Kind regards,



Prof JE Maritz
CHAIRPERSON
maritje@unisa.ac.za




Prof A Phillips
DEAN OF COLLEGE OF HUMAN SCIENCES



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ANNEXURE 1: Support letter from UNISA Addis Ababa Coordination office to Amhara Regional Health Bureau


UNISA | university of south africa

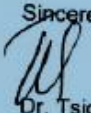
28 AUGUST, 2019
UNISA-ET/KA/ST/29/28-08-19

Amhara Region Public Health Institute (ARPHI)
Bahir Dar


Dear Madam/Sir,

The University of South Africa (UNISA) extends warm greetings. By this letter, we want to confirm that Mr. Andarge Abie Ayele (student number 64030865) is a PhD student in the Department of Health Studies at UNISA. Currently, he is at the stage of data collection on his doctoral research entitled "*Quality of Intrapartum Care at Health Centers of West Gojjam Zone, Amhara Region, Ethiopia*".

This is therefore to kindly request you to assist the student by permitting him to conduct the study and also by giving him a letter of support to selected Health Centers in the target area. Attached, please find the ethical clearance that he has received from the Department of Health Studies. We would like to thank you in advance for all the assistance that you will provide to the student.

Sincerely,

Dr. Tsige GebreMeskel Aberra
Director

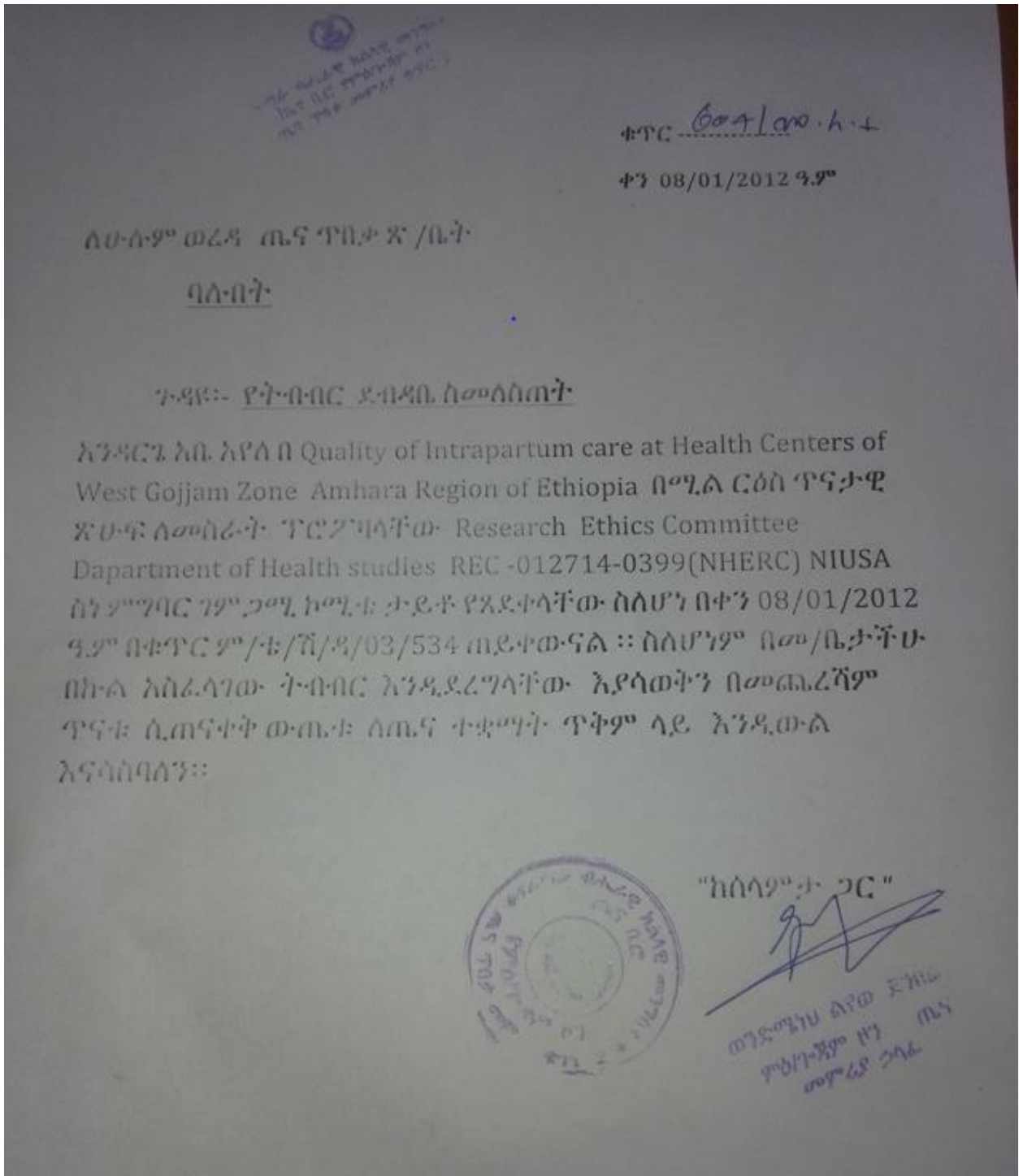
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ANNEXURE 2: Support letter from Amhara Regional Health Bureau, Amhara Public Health Institute to West Gojjam Zone Health Department



ANNEXURE 3: Support letter from West Gojjam Zone Health Department to Woreda Health Offices and Health Centres



ANNEXURE 4: Informed consent form for immediate post-partum clients, English Version

Good morning/Good afternoon

My name _____ I am a data collector for the research to assess the quality of intrapartum care at health centres of West Gojjam Zone. The purpose of this study is to put an effort in the improvements of intrapartum care in West Gojjam Zone, which will also help in improving the regional and national intrapartum care practises at health centre level by exploring the client's perspective, providers opinion, technical competency of health service providers and supplies availability in the provision of quality intrapartum care. I would like to request you to participate in this study to give us your experience in getting quality of intrapartum care. The information you provide to us will remain confidential, used for research purpose only and we will not collect any name and other identification to keep it anonymous. Your participation in this research is completely on voluntary bases, will take your time a maximum of 15-20 minutes and if you do not want to participate in the research, you can also ask me to stop and discontinue your participation at any time of the interview. The participation in this study will not cost anything and will not affect your beneficiary from the service you are getting at the health centre as usual. If you have any question about the research any time you can contact the principal investigator, Mr Andarge Abie, his cell phone address is +251967131921 or the Research Ethics Administrator of the URERC (012 429 3677 or urerc@unisa.ac.za).

Therefore, could you agree to participate in this study 1. Yes 2. No

Statement of data collector's obtaining informed consent

I, the undersigned data collector fully explained the purpose of the research explicitly including the risk and benefit of the study. I enable the participant to reach an informed decision.

Name _____ Signature _____ Date _____

ANNEXURE 5: Informed consent form for immediate post-partum clients, Amharic Version

የፈቃደኝነት መግለጫ ፎርም

ጤና ይስጥልኝ

እኔ ስሜ _____ ይባላል በአማራ ክልል ምዕራብ ጎጃም ዞን ጤና መምሪያ ስር በሚገኙ በጤና ጣቢያዎች ላይ የሚሰጠውን የወሊድ አገልግሎት ጥራት ጥናት መረጃ ሰብሳቢ ነኝ። የዚህ ጥናት ዋና ጥቅም በምዕራብ ጎጃም ዞን በሚገኙ ጤና ጣቢያዎች ላይ የወሊድ አገልግሎት ያገኙ የህብረተሰብ ክፍሎችን ያገኙትን አገልግሎት ጥራት እና እርካታ በመጠየቅ ጥራቱን ለማሻሻል በሚደረገው ጥራት አስተዋፅኦ በማድረግ በምዕራብ ጎጃም ዞን ብሎም በአማራ ክልል እና በሀገር አቀፍ ደረጃ በጤና ጣቢያ የሚሰጠውን የወሊድ አገልግሎት ጥራት ለማሻሻል ያገለግላል። እርስዎ በዚህ ጥናት ላይ በመሳተፍ በወሊድ አገልግሎት ጥራት ላይ ያለዎትን አስተያየት በመስጠት የበኩሎዎን አስተዋጽኦ እንዲያበረክቱ በትህትና እጥይቃለሁ። እርስዎ የሚሰጡት መረጃ ለጥናቱ አላማ ብቻ የሚያገለግል ሲሆን ሚስጢራዊነቱ የተጠመቀ ሲሆን ምንም አይነት ስም እና እርስዎን የሚገልፅ ነገር አንጠቀምም። የእርስዎ በዚህ ጥናት ላይ መሳተፍ በፈቃደኝነት ላይ የተመሰረተ ሲሆን ተስማምተው ከጀመሩ በኋላ ለማቋረጥ ከፈለጉ በማንኛውም ስዓት ማቋረጥ የሚችሉ ሲሆን የሚወስደው ጊዜ በአማካኝ ከ20-30 ደቂቃ ሊሆን ይችላል። ከዚህ ጥናት ላይ መሳተፍ ምንም አይነት ወጭ የማይጠይቅ ሲሆን ከሚያገኙት አገልግሎት ጋርም በምንም በልኩ አይገናኝም። ከዚህ ጥናት ጋር ተያያዥ የሆነ ጥያቄ ካለዎት በማንኛውም ጊዜ የጥናቱን መሪ አቶ አንዳርጌ አቤን በስልክ ቁጥር 0967131921 ወይም “the Research Ethics Administrator of the URERC (012 429 3677 or urerc@unisa.ac.za)” ማነጋገር ይችላሉ።

ስለዚህ በዚህ ጥራት ለመሳተፍ ፈቃደኛ ነዎት 1. አዎ ፈቃደኛ ነኝ 2. ፈቃደኛ አይደለሁም

የመረጃ ሰብሳቢዎ ተሳታፊዎችን ፈቃደኝነት ስለመጠየቅ

እኔ ከዚህ በታች የፈረምኩት የመረጃ ሰብሳቢ ባለሙያ ከዚህ ጥናት ላይ የተሳተፈችውን ደንበኛ ስለጥራት ምንነት፣ ጥቅም በጥናቱ መሳተፍ ያለውን ጥቅም እና ጉዳት በማስረዳት በመረጃ ላይ የተመሰረተ ውሳኔ እንድትወስን ማድረጌን በፈርማዎ አረጋግጣለሁ

ሙሉ ስም _____ ፊርማ _____ . ቀን _____

ANNEXURE 6: Informed consent form for Intrapartum clients, English Version

Good morning/Good afternoon

My name _____ I am a data collector for the research to assess the quality of intrapartum care at health centres of West Gojjam Zone. The purpose of this study is to put an effort in the improvements of intrapartum care in West Gojjam Zone, which will also help in improving the regional and national intrapartum care practises at health centre level by exploring the client's perspective, providers opinion, technical competency of health service providers and supplies availability in the provision of quality intrapartum care. I would like to request you to participate in this study to observe quality of intrapartum care and respectful maternity care. The information collected through the observation will remain confidential, used for research purpose only and we will not collect any name and other identification to keep it anonymous. Your participation in this research is completely on voluntary bases, will be part of your labour and delivery process and if you do not want to participate in the research, you can also ask me to stop and discontinue your participation at any time of the observation. The participation in this study will not cost anything and will not affect your beneficiary from the service you are getting at the health centre as usual. If you have any question about the research any time you can contact the principal investigator, Mr Andarge Abie, his cell phone address is +251967131921 or the Research Ethics Administrator of the URERC (012 429 3677 or urerc@unisa.ac.za).

Therefore, could you agree to participate in this study 1. Yes 2. No

Statement of data collector's obtaining informed consent

I, the undersigned data collector fully explained the purpose of the research explicitly including the risk and benefit of the study. I enable the participant to reach an informed decision.

Name _____ Signature _____ Date _____

ANNEXURE 7: Informed consent form for Intrapartum clients, Amharic Version

የፈቃደኝነት መግለጫ ፎርም

ጤና ይስጥልኝ

እኔ ስሜ _____ ይባላል በአማራ ክልል ምዕራብ ጎጃም ዞን ጤና መምሪያ ስር በሚገኙ በጤና ጣቢያዎች ላይ የሚሰጠውን የወሊድ አገልግሎት ጥራት ጥናት መረጃ ሰብሳቢ ነኝ። የዚህ ጥናት ዋና ጥቅም በምዕራብ ጎጃም ዞን በሚገኙ ጤና ጣቢያዎች ላይ የወሊድ አገልግሎት ያገኙ የህብረተሰብ ክፍሎችን ያገኙትን አገልግሎት ጥራት እና እርካታ በመጠየቅ ጥራቱን ለማሻሻል በሚደረገው ጥራት አስተዋፅኦ በማድረግ በምዕራብ ጎጃም ዞን ብሎም በአማራ ክልል እና በሀገር አቀፍ ደረጃ በጤና ጣቢያ የሚሰጠውን የወሊድ አገልግሎት ጥራት ለማሻሻል ያገለግላል። እርስዎ በዚህ ጥናት ላይ በመሳተፍ በወሊድ አገልግሎት ጥራት ላይ ያለዎትን አስተያየት በመስጠት የበኩሎዎን አስተዋጽኦ እንዲያበረክቱ በትህትና እጥይቃለሁ። እርስዎ የሚሰጡት መረጃ ለጥናቱ አላማ ብቻ የሚያገለግል ሲሆን ሚስጢራዊነቱ የተጠመቀ ሲሆን ምንም ዓይነት ስም እና እርስዎን የሚገልጽ ነገር አንጠቀምም። የእርስዎ በዚህ ጥናት ላይ መሳተፍ በፈቃደኝነት ላይ የተመሰረተ ሲሆን ተስማምተው ከጀመሩ በኋላ ለማቋረጥ ከፈለጉ በማንኛውም ስዓት ማቋረጥ የሚችሉ ሲሆን የሚወስደው ጊዜ በአማካኝ ከ20-30 ደቂቃ ሊሆን ይችላል። ከዚህ ጥናት ላይ መሳተፍ ምንም ዓይነት ወጭ የማይጠይቅ ሲሆን ከሚያገኙት አገልግሎት ጋርም በምንም በልኩ አይገናኝም። ከዚህ ጥናት ጋር ተያያዥ የሆነ ጥያቄ ካለዎት በማንኛውም ጊዜ የጥናቱን መሪ አቶ አንዳርጌ አቤን በስልክ ቁጥር 0967131921 ወይም “the Research Ethics Administrator of the URERC (012 429 3677 or urerc@unisa.ac.za)” ማነጋገር ይችላሉ።

ስለዚህ በዚህ ጥራት ለመሳተፍ ፈቃደኛ ነዎት 1. አዎ ፈቃደኛ ነኝ 2. ፈቃደኛ አይደለሁም

የመረጃ ሰብሳቢዎ ተሳታፊዎችን ፈቃደኝነት ስለመጠየቅ

እኔ ከዚህ በታች የፈረምኩት የመረጃ ሰብሳቢ ባለሙያ ከዚህ ጥናት ላይ የተሳተፈችውን ደንበኛ ስለጥራት ምንነት፣ ጥቅም በጥናቱ መሳተፍ ያለውን ጥቅም እና ጉዳት በማስረዳት በመረጃ ላይ የተመሰረተ ውሳኔ እንድትወስን ማድረጌን በፈርማዎ አረጋግጣለሁ

ሙሉ ስም _____ ፊርማ _____ ቀን _____

ANNEXURE 8: Informed consent form for health service providers, supervisors, mentors and managers of health system for in-depth interview, English Version

Good morning/Good afternoon

My name, Mr.Andarge Abie Ayele, I am a principal investigator for the research to assess the quality of intrapartum care at health centres of West Gojjam Zone. The purpose of this study is to put an effort in the improvements of intrapartum care in West Gojjam Zone, which will also help in improving the regional and national intrapartum care practises at health centre level by exploring the client's perspective, providers opinion, technical competency of health service providers and supplies availability in the provision of quality intrapartum care. I would like to request you to participate in this study to give us your experience in providing quality of intrapartum care and I will write in the note book and also record your voice for the research purpose only to capture your idea correctly. The information you provide to us will remain confidential, used for research purpose only and we will not collect any name and other identification to keep it anonymous. Your participation in this research is completely on voluntary bases, will take your time a maximum of 30 minutes and if you do not want to participate in the research, you can also ask me to stop and discontinue your participation at any time of the in-depth interview. The participation in this study will not associated with your job security and income. If you have any question about the research any time you can contact Mr Andarge Abie his cell phone address is +251967131921 or the Research Ethics Administrator of the URERC (012 429 3677 or urerc@unisa.ac.za)

Therefore, could you agree to participate in this study 1. Yes 2. No

Name _____ Signature _____ Date _____

ANNEXURE 9: Health centres observation checklist

Observation checklist of health centres readiness for quality intrapartum care service provision at health centres level, Health Centre code _____				
SN	Question	Response (please circle the observation X mark)		Remark
		Yes	No	
1	The health facility has thermometers in the room	X	X	
2	The health facility has sphygmomanometers, in the room	X	X	
3	The health facility has fetal stethoscopes in the room	X	X	
4	The health facility has urine dipsticks in the room	X	X	
5	The health centre has delivery coach and bed per the labouring mother	X	X	
6	The health centre has adequate delivery kit for normal childbirth	X	X	
7	The health centre has necessary consumable supplies for normal childbirth (glove, surgical gauze, ...)	X	X	
8	The health centre has IV fluid and canula to manage possible complications	X	X	
9	The health centre has oxytocin or ergometrine with syringe and needle to administer at the third stage of labour	X	X	
10	The health centre has magnesium sulphate to manage pre-eclampsia and eclampsia	X	X	
11	The health facility has written, up-to-date clinical protocols for assessing intrapartum care and action in the labour and childbirth areas of the maternity unit that are consistent with WHO guidelines	X	X	
12	Health facility has health care workers working in labour and delivery room	Midwife C/Nurse Others		Put the number
13	Health-care staff in the labour and childbirth areas of the maternity unit receive in-service training at least once every 12 months in the identification and management	X	X	
14	Health-care staff in the labour and childbirth areas of the maternity unit receive regular refresher sessions at least once every 12 months in the identification and management	X	X	
15	Health-care staff in labour and childbirth areas receive at least monthly drills or simulation exercises in routine care and detection of obstetric complications during labour and childbirth	X	X	
16	Health-care staff in labour and childbirth areas receive at least monthly supportive supervision in routine care and detection of obstetric complications during labour and childbirth	X	X	

Observation checklist of health centres readiness for quality intrapartum care service provision at health centres level, Health Centre code _____

SN	Question	Response (please circle the observation X mark)		Remark
		Yes	No	
17	The health facility has supplies of sterile cord ties (or clamps) available in sufficient quantities at all times for the expected number of births	X	X	
18	The health facility has supplies of scissors (or blades) available in sufficient quantities at all times for the expected number of births	X	X	
19	The health facility has supplies of clean towels in the labour and childbirth areas for immediate drying of newborns, available in sufficient quantities at all times for the expected number of births	X	X	
20	The health facility has a reliable water source on site and soap and towels (preferably disposable) or alcohol-based hand rub for hand hygiene	X	X	
21	The health facility ensures safe handling, storage and final disposal of infectious waste	X	X	
22	The health facility ensures safe handling, storage (puncture resistant) and final disposal of sharps waste	X	X	
23	The health facility has appropriate sterilizing facilities and disinfectants for instruments	X	X	
24	Does the health service providers apply instrument processing steps	X	X	
25	The health facility has a functioning incinerator or other appropriate method for treatment of infectious waste and used instruments	X	X	
26	The health facility has written, up-to-date guidelines for standard infection control and precautions for transmission	X	X	
27	Health care staff in the childbirth and neonatal areas of the maternity unit receive training in standard infection control and precautions for transmission at least once every 12 months.	X	X	

ANNEXURE 10: Sociodemographic information of labour and delivery clients

SN	Question	Response	Remark
1	Age of client	..... years	
2	Marital status	1. Single 2. Married 3. Divorced 4. Widowed	
3	Religion	1. Orthodox 2. Muslim 3. Proptestnat 4. Catholic 5. Others specify	
4	Educational status	1. Illiterate 2. Can read and write 3. Primary school 4. Secondary school 5. Above secondary school	
5	Occupation	1. Farmer 2. Merchant 3. Civil servant 4. Student 5. Housewife 6. Other specify	
6	Income	..... birr per month	
7	Number of family size	.....

ANNEXURE 11: Direct observation checklist of intrapartum care service provision facility

Direct observation checklist of Intrapartum care service provision				
Facility code				
Client code.....				
SN	Question	Response (please circle the observation X mark)		Remark
		Yes	No	
1	Women are assessed routinely on admission and during labour and childbirth and are given timely, appropriate care	X	X	
2	Does the health care provider use partograph throughout the labour and delivery	X	X	
3	Does the partograph timely filled	X	X	
4	Does the partograph properly filled	X	X	
5	Does the service provider take action with partograph action line if necessary	X	X	
6	Does the service provider apply active third stage management of labour	X	X	
7	Newborn's receive routine care immediately after birth.	X	X	
8	Women with pre-eclampsia or eclampsia promptly receive appropriate interventions, according to WHO guidelines	X	X	
9	Women with postpartum haemorrhage promptly receive appropriate interventions, according to WHO guidelines	X	X	
10	Every woman and new-born is appropriately assessed on admission, during labour and in the early postnatal period to determine whether referral is required, and the decision to refer is made without delay	X	X	
11	Every woman and new-born who are in need of referral are they get timely decision to refer without delay	X	X	
12	For every woman and new-born who requires referral, the referral follows a pre-established plan that can be implemented without delay at any time	X	X	
13	For every woman and new-born referred within or between health facilities, there is appropriate information exchange and feedback to relevant health care staff	X	X	
14	All women and their families receive information about the care they have got	X	X	
15	All women and their families experience coordinated care, with clear, accurate information exchange between relevant health care professionals and clients	X	X	
16	All women and new-borns have privacy around the time of labour and childbirth, and their confidentiality is respected	X	X	
17	All women and new-borns have their confidentiality respected	X	X	

Direct observation checklist of Intrapartum care service provision				
Facility code				
Client code.....				
SN	Question	Response (please circle the observation X mark)		Remark
		Yes	No	
18	Every woman and child have access at all times to at least one skilled birth attendant and support staff for routine care and management of complications.	X	X	
B Direct observation of Intrapartum care respectful maternal care service provision				
1	Greets client in a respectful manner	X	X	
2	Encourages client to have support person	X	X	
3	Explains procedures before proceeding	X	X	
4	Informs client of findings	X	X	
5	Asks client if she has any questions	X	X	
6	Provider actions during labour	X	X	
7	Provider explains what will happen during labour to client	X	X	
8	Provider encourages client to consume food and fluids during labour	X	X	
9	Provider encourages or assists client to ambulate and assume different labour positions	X	X	
10	Provider supports client in friendly way during labour	X	X	
11	Provider drapes client before delivery	X	X	

ANNEXURE 12: Post-natal women interview questionnaire, English Version

Interview checklist to assess client satisfaction on quality of Intrapartum care provided at health centres of West Gojjam Zone (assessment will be done with trained senior Midwife nurse) for immediate post-natal clients of the health centres

Code of Health Centre.....Client Code.....

SN	Question	Response	Remark
1	Age of client	..... Years	
2	Marital Status	1. Single 2. Married 3. Divorced 4. Widowed	
3	Religion	1. Orthodox 2. Muslim 3. Proptestnat 4. Catholic 5. Others specify	
4	Educational status	1. Illiterate 2. Can read and write 3. Primary school 4. Secondary school 5. Above secondary school	
5	Occupation	1. Farmer 2. Merchant 3. Cvil servant 4. Student 5. Housewife 6. Other specify	
6	Income	..... birr per month	
7	Number of family size	.....
8	How many babies did you give birth before this delivery (including dead and alive)	.....
9	Did you have to wait on arrival before you were seen by a nurse/midwife/Health officer?	1. Yes 2. No 3. Do not remember	
10	How long did you have to wait on arrival before you were seen by a nurse/midwife/Health officer?	1. Less than 15 minutes 2. 16-30 minutes 3. 31-60 minutes 4. More than 1 hour 5. Do not Rrmember	

SN	Question	Response	Remark
11	Were you able to find a comfortable place to sit during the waiting period?	1. Yes 2. No 3. Do not remember	
12	While you were waiting, did the staff keep you informed about the reason for the delay?	1. Yes 2. No 3. Do not remember	
13	Were the front desk staff friendly	1. Yes certainly 2. Yes some how 4. No	
14	While waiting did the health care providers treat you with courtesy and respect?	1. Never 2. Sometimes 3. Usually 4. Always	
15	How long did your labour last?	1. Less than 8 hours 2. Hours or longer, but less than 12 hours 3. 12 hours or longer, but less than 18 hours 4. 8 hours or longer	
16	During your labour, were you able to move around?	1. Yes, most of the time 2. Yes, some of the time 3. No, not at all 4. No, because it was not possible to move around	
17	During your labour, were you able to choose the position that made you most comfortable?	1. Yes, most of the time 2. Yes, some of the time 3. No, not at all 4. No, because it was not possible to move around	

ANNEXURE 13: Post-natal women interview questionnaire, Amharic Version

የምዕራብ ንጅጃም ዞን ስር የሚገኙ ጤና ጣቢያዎች ጥራቱን የጠበቀ የወሊድ አገልግሎት ለመስጠት ያላቸውን ዝግጁነት የመመልከቻ ቸክሊስት

የጤና ጣቢያው ኮድ.....

ተ.ቁ	መጠይቅ	ምላሽ(እባክዎ ምላሹን የኤክስ ምልክት ያክቡ		ምርመራ
		አዎ	የለም	
1	ጤና ጣቢያው የማዋለጃ ክፍል ውስጥ የሰውነት ሙቀት መለኪያ ቴርሞ ሜትር አለው	X	X	
2	ጤና ጣቢያው የማዋለጃ ክፍል ውስጥ የደም ግፊት መለኪያ መሳሪያ (እስፊግኖማኖሜትር) አለው	X	X	
3	ጤና ጣቢያው የማዋለጃ ክፍል ውስጥ የጽንሱን የልብ ትርታ ለመለካት የሚያገለግል መሳሪያ (ፊቶስኮፕ) አለው	X	X	
4	ጤና ጣቢያው የማዋለጃ ክፍል ውስጥ ለሽንት ምርመራ የሚያገለግል ዩሪን ዲፕስቲክ አለው	X	X	
5	ጤና ጣቢያው የማዋለጃ ክፍል ውስጥ የማዋለጃ አልጋ አለ	X	X	
6	ጤና ጣቢያው የማዋለጃ ክፍል ውስጥ የማዋለጃ የሚያገለግል የዴሊቨሪ ሴት ለኖርማል ሌበር የሚያገለግል አለ	X	X	
7	ጤና ጣቢያው የማዋለጃ ክፍል ውስጥ የማዋለጃ የሚያገለግል አላቂ የሆኑ እቃዎች ለምሳሌ ግላብ፣ ጎዝ፣ እና ሌሎችም አሉ	X	X	
8	ጤና ጣቢያው የማዋለጃ ክፍል ውስጥ የማዋለጃ የሚያገለግል የተለያዩ አይ ቪ ፍሉዶች ከካኑላ ጋር አሉ	X	X	
9	ጤና ጣቢያው የማዋለጃ ክፍል ውስጥ ከወሊድ በኋላ የሚያገለግል አክስቶሊን ወይም ኢርጎሜትሪን ከሲሪንጅና ከመርፊ ጋር አለ	X	X	
10	ጤና ጣቢያው የማዋለጃ ክፍል ውስጥ ለኢክላምቫ እና ለፕሪ ኢክላምቫ ህክምና የሚያገለግል ማግንዠም ሳልፊት በበቂ ሁኔታ አለ	X	X	
11	ጤና ጣቢያው የማዋለጃ ክፍል ውስጥ የወላድ እናቶችንና ልጆችን ለመመርመር የሚረዳ በፀሁፍ ያለ ወቅቱን የዋጀ የከሊኒካል ፕሮቶኮል የአለም ጤና ድርጅትን ጋይድ ላይን መሰረት ያደረገ አለው	X	X	
12	ጤና ጣቢያው የማዋለጃ ክፍል የሚሰራ ባለሙያ ብዛት	አዋላጅ ነርስ ከሊኒካል ነርስ..... ሌላ.....		

ተ.ቁ	መጠይቅ	ምላሽ(እባክዎ ምላሹን የኤክስ ምልክት ያክቡ		ምርመራ
		አዎ	የለም	
13	ጤና ጣቢያው በእናቶችና ህፃናት ክፍል ውስጥ የሚሰሩ የጤና ባለሙያዎች የስራ ላይ ስልጠና በምጥና ወሊድ ልዩነትና ህክምና ላይ ባለፉት 12 ወራት ውሰደዋል	X	X	
14	ጤና ጣቢያው በእናቶችና ህፃናት ክፍል ውስጥ የሚሰሩ የጤና ባለሙያዎች የስራ ላይ የማነቃቂያ ስልጠና በምጥና ወሊድ ልዩነትና ህክምና ላይ ባለፉት 12 ወራት ውሰደዋል			
15	ጤና ጣቢያው በእናቶችና ህፃናት ክፍል ውስጥ የሚሰሩ የጤና ባለሙያዎች ቢያንስ በወር አንድ ጊዜ የተግባር ልምምድ በምጥና ወሊድ ሊከሰቱ የሚችሉ ችግሮችን መለየትና ማከም ላይ ያደርጋሉ			
16	ጤና ጣቢያው በእናቶችና ህፃናት ክፍል ውስጥ የሚሰሩ የጤና ባለሙያዎች ቢያንስ በወር አንድ ጊዜ ድጋፋዊ ጉብኝት በምጥና ወሊድ ሊከሰቱ የሚችሉ ችግሮችን መለየትና ማከም ላይ ተደርጓል	X	X	
17	ጤና ጣቢያው በክፍል ውስጥ የእትብት ማሰሪያ የሚያገለግል እስተራይል ኮርድ ታይ ይወለዳሉ ተብሎ በሚጠበቁ ህፃናት ቁጥር ልክ ሁሉም ጤና ጣቢያ ውስጥ አለ	X	X	
18	ጤና ጣቢያው በክፍል ውስጥ መቀስ ወይም ምላጭ በበቂ ቁጥር ሁሉም ጤና ጣቢያ ውስጥ አለ	X	X	
19	ጤና ጣቢያው በእናቶችና ህፃናት ክፍል ውስጥ ነፁህ ፎጣ ህፃናትን ለማድረቅ የሚያገለግል ይወለዳሉ ተብሎ በሚጠበቁ ህፃናት ቁጥር ልክ ሁሉም ጤና ጣቢያ ውስጥ አለ	X	X	
20	ጤና ጣቢያው በእናቶችና ህፃናት ክፍል ውስጥ አስተማማኝ የሆነ ውሀ አቅርቦት ከሳሙና እና ፎጣ ጋር ወይም ከአልኮል የተዘጋጀ የእጅ ንፁህና መጠበቃ አቅርቦት አለ	X	X	
21	ጤና ጣቢያው በካይ የሆኑ ቆሻሻዎችን አያያዝ ፣ክምችት ና አወጋገዱ የተጠበቀ ነው	X	X	
22	ጤና ጣቢያው ጥቅም ላይ የዋሉ ስለታማ እቃዎችን ስለታማ ነገር በማይበሳው ዕቃ ይቀመጣል እና ይወገዳል	X	X	
23	ጤና ጣቢያው ጥቅም ላይ የዋሉትን የህክምና እቃዎች ዲስኢንፌክትና እስትርላይዝ ማድረጊያ ግብዓት አለ	X	X	
24	ጤና ጣቢያው ጥቅም ላይ የዋሉትን የህክምና እቃዎች መልሶ ጥቅም ላይ ለማዋል ተገቢውን የእንስትሩመንት ፕሮሰሲንግ ቅደም ተከተል ተግባራዊ አለ	X	X	
25	ጤና ጣቢያው መቃጠል ያለባቸውን የህክምና ቆሻሻዎች ለማቃጠል የሚያገለግል ኢንሲኒፊሬትር አለ	X	X	

ተ.ቁ	መጠይቅ	ምላሽ(እባክዎ ምላሹን የኤክስ ምልክት ያክቡ		ምርመራ
		አዎ	የለም	
26	ጤና ጣቢያው ብክለትን ለመከላከል የሚያገለግል ወግቱን የዋጀ የተፃፈ የእስታኒደርድ እንፌክሽን እና የዩኒቨርሳል ፕሪኮሽን ጋይድ ላይን አለ	X	X	
27	ጤና ጣቢያው ባለሙያዎች ብክለትን ለመከላከል የሚያገለግል ወግቱን የዋጀ የእስታኒደርድ እንፌክሽን እና የዩኒቨርሳል ፕሪኮሽን ጋይድ ላይን ላይ ስልጠና ቢያንስ በ12 ወር አንድ ጊዜ ወስደዋል	X	X	
የምዕራብ ጎጃም ዞን ስር የሚገኙ ጤና ጣቢያዎች ጥራቱን የጠበቀ የወሊድ አገልግሎት አሰጣጥ ላይ የመመልከቻ ቸክሊስት				
1	ጤና ጣቢያው የሚመጡ ወላድ እናቶች ጤና ጣቢያ ለመውለድ ሲገቡ ተገቢው ምርመራ ወቅቱን ጠብቆ ይደረግላቸዋል	X	X	
2	የጤና ባለሙያዎች በምጥና ወሊድ ወቅት በሙሉ ፓርቶግራፍ ይጠቀማሉ	X	X	
3	የጤና ባለሙያዎች በምጥና ወሊድ ወቅት በሙሉ ፓርቶግራፍ ወቅቱን ጠብቀው ይሞላሉ			
4	የጤና ባለሙያዎች በምጥና ወሊድ ወቅት በሙሉ ፓርቶግራፍ በትክክል ይሞላሉ	X	X	
5	የጤና ባለሙያዎች በምጥና ወሊድ ወቅት በሙሉ ፓርቶግራፍ በመጠቀም አስፈላጊውን እርምጃ ይወስዳሉ	X	X	
6	የጤና ባለሙያዎች አክቲቭ ሰርድ እስቴጅ ማለጀመንት አፍ ሌበር በወሊድ ወቅት ይተገብራሉ	X	X	
7	አዲስ የተወለዱ ህፃናት ወዲያውኑ እንክብካቤ እንደተወለዱ አግኝተዋል	X	X	
8	ኢክላምቫና ፕራ-ኢክላምቫ ያለባቸው እናቶች ፈጣን ህክምና በአለም ጤና ድርጅትና በጤና ሚኒስቴር መሰረት ተሰጥቷል	X	X	
9	የእናቶች ድህረ ወሊድ ደም መፍሰስ(ሄሞሬጅ) አፋጣን የሆነ ህክምና በአለም ጤና ድርጅትና በጤና ሚኒስቴር የህክምና ጋይድ ላይን መሰረት ተደርጓል	X	X	
10	ሁሉም እናቶችና ህፃናት ወደ ጤና ጣቢያ ሲገቡ አስፈላጊው ምርመራ ተደርጎላቸው ሪፈራል የሚያስፈልጋቸው ሳይዘገይ ይላካሉ	X	X	
11	ሁሉም እናቶችና ህፃናት ወደ ጤና ጣቢያ ሲገቡ አስፈላጊው ምርመራ ተደርጎላቸው ሪፈራል የሚያስፈልጋቸው ሪፈር ሲደረጉ የሪፈራል ሰንሰለቱን ጠብቀው ሳይዘገዩ ይላካሉ	X	X	
12	ሁሉም እናቶችና ህፃናት ወደ ጤና ጣቢያ ሲገቡ አስፈላጊው ምርመራ ተደርጎላቸው ሪፈራል የሚያስፈልጋቸው ሪፈር ሲደረጉ የመረጃ ልውውጥና የግብረ መልስ ስርዓት አለ	X	X	

ተ.ቁ	መጠይቅ	ምላሽ(እባክዎ ምላሹን የኤክስ ምልክት ያክቡ		ምርመራ
		አዎ	የለም	
13	ሁሉም አገልገሎት የሚያገኙ እናቶቻችን ቤተሰቦች ስለሚያገኙት አገልግሎት መረጃ ይሰጣቸዋል	X	X	
14	ሁሉም አገልገሎት የሚያገኙ እናቶቻችን ቤተሰቦች ግልፅ እና የጠራ መረጃ በተቀናጀ መልኩ ከመመለከተው ባለሙያ ያገኙ ነበር	X	X	
15	ሁሉም አገልገሎት የሚያገኙ እናቶቻችን ህፃናት ፕራይቪሊጎቻቸው ሁሉም ተጠብቋል	X	X	
16	ሁሉም አገልገሎት የሚያገኙ እናቶቻችን ህፃናት የግል መረጃጅቻቸው ሚስጥራዊነቱ ተጠብቋል	X	X	
17	ሁሉም አገልገሎት የሚያገኙ እናቶቻችን ከወሊድ ጋር ተያይዞ ለሚከሰት አደጋ እርዳታ የሚሰጥ ቢያንስ አንድ የጤና ባለሙያ እና አጋዥ ባለሙያ ሁሉም አለ			
እናቶቻችን ህፃናት የጤና አገልግሎት የሪሶርስ አገልገሎት መሆኑን የመከታተያ ቸክሊስት				
1	እናቶቻችን ባለሙያው አግብሮት በተሞላበት ሰላምታ ሰጥቷል/ሰጥታለች	X	X	
2	እናቶቻችን አጋዥነት አብሯቸው እንዲኖር አበረታቷል/አበረታታለች	X	X	
3	ማንኛውንም ፕሮሲጅር ከመሰራቱ በፊት ለደንበኛዋ ስለ ሚሰራው ስራ ገለፃ ተደርጎላታል	X	X	
4	ለደንበኛዋ የተገኘውን ነገር አሳውቋታል	X	X	
5	ደንበኛዋ ማንኛውም ጥያቄ ካላት እንድትጠይቅ እድል ተሰጥቷታል	X	X	
6	ባለሙያው/ዋ የሚወስደውን እርምጃ ለደንበኛዋ ተነግሯታል	X	X	
7	ባለሙያው/ዋ ለደንበኛዋ በምጥ ወቅት ምን ሊያጋጥም እንደሚችል ተነግሯታል	X	X	
8	ባለሙያው/ዋ ለደንበኛዋ በምጥ ወቅት ምግብና ፈሳሽ እንድትወስድ አበረታተዋታል	X	X	
9	ባለሙያው/ዋ ለደንበኛዋ በምጥ ወቅት እንድትንቀሳቀስና በፈለገችው በኩል እንድትተኛ ተነግሯታል	X	X	
10	ባለሙያው/ዋ ደንበኛዋን ጓደኛዋ በሆነ መልኩ አስተናግደዋታል	X	X	
11	ባለሙያው/ዋ ደንበኛዋን በወሊድ ወቅት ጨርቅ ሸፍለዋታል	X	X	
የወሊድ አገልግሎት በጤና ጣቢያው ያገኙ እናቶቻችን ስለ አገኙት አገልግሎት ጥራት በድህረ-ወሊድ ወቅት የደንበኞችን እርካታ መጠየቂያ ቸክሊስት የጤና ጣቢያው ኮድ.....የደንበኛዋ ኮድ.....				
1	ዕድሜ	.....ዓመት		

ተ.ቁ	መጠይቅ	ምላሽ(እባክዎ ምላሹን የኤክስ ምልክት ያክቡ		ምርመራ
		አዎ	የለም	
2	የትዳር ሁኔታ	1.ያላገባች 2.ያገባች 3.የተፋታች 4.የሞተባት 5.ሌላ.....		
3	ሀይማኖት	1.አርቶዶክስ 2.እስልምና 3.ፕሮቴስታንት 4.ካቶሊክ 5.ሌላ.....		
4	የትምህርት ሁኔታ	1.ያልተማረች 2.ማንበብና መጻፍ የምትችል 3.አንደኛ ደረጃ ትምህርት 4.ሁለተኛ ደረጃ ትምህርት 5.ከሁለተኛ ደረጃ ትምህርት በላይ		
5	ስራ	1.ገበሬ 2.ነጋዴ 3.የመንግስት ሰራተኛ 4.ተማሪ 5. የቤት እመቤት 6.ሌላ.....		
6	ገቢ	.....ብር በወር		
7	የቤተሰብ አባላት ብዛት	.....	
8	ከዚህ እርግዝና በፊት ስንት ወልደሻል(በሀይዎት ያሉትንና የሞተ ካለ ጨምሮ)	.....	
9	ነርስ/አዋላጅ ነርስ ወይም ጤና መኮንን ከማየቱ በፊት ጠብቀሻል	1.አዎ 2.የለም 3.አላስታውስም		

ተ.ቁ	መጠይቅ	ምላሽ(እባክዎ ምላሹን የኤክስ ምልክት ያክቡ		ምርመራ
		አዎ	የለም	
10	ነርስ/አዋላጅ ነርስ ወይም ጤና መኮንን ከማየቱ በፊት ምን ያህል ጊዜ ጠብቀሻል	1. ከ15 ደቂቃ በታች 2. 16-30 ደቂቃ 3. 31-60 ደቂቃ 4. ከአንድ ሰዓት በላይ 5. አላስታውስም		
11	በሚጠብቁበት ጊዜ ምቹ የማረፊያ ቦታ አገኙ	1. አዎ 2. የለም 3. አላስታውስም		
12	በሚጠብቁበት ጊዜ ባለሙያዎች ለምን እንደዘገዩ ምክንያቱን ነግረዎታል	1. አዎ 2. የለም 3. አላስታውስም		
13	የጤና ጣቢያ መዝገብ ቤቶች እንግዳ አቀባበላቸው ጓደኛዎ ነበር	1. አዎ በትክክል 2. አዎ በከፊል 3. የለም		
14	በሚጠብቁበት ጊዜ ባለሙያዎች በጨዋነትና በአክብሮት አስተናገድዎት	1. አዎ በትክክል 2. አዎ በከፊል 3. የለም		
15	የምጥ ጊዜዎ ምን ያህል ጊዜ ቆየ	1. ከ8 ሰዓት በታች 2. ከ8-12 ሰዓት ጊዜ ውስጥ ያልበለጠ 3. 12-18 ሰዓት ጊዜ ውስጥ ያልበለጠ 4. 18 ሰዓትና ከዚያ በላይ		
16	የምጥ ጊዜ ወቅት መንቀሳቀስ ችለሽ ነበር	1. አዎ በብዛት 2. አዎ አልፎ አልፎ 3. የለም ምንም አልተንቀሳቀስኩም 4. የለም ምክንያቱም መንቀሳቀስ አይቻልም ነበር		
17	የምጥ ጊዜ ወቅት፣ የሚመችዎትን በኩል መሆን ተፈቅዶልዎት ነበር	1. አዎ በብዛት 2. አዎ አልፎ አልፎ 3. የለም ምንም		

ተ.ቁ	መጠይቅ	ምላሽ(እባክዎ ምላሹን የኤክስ ምልክት ያክቡ		ምርመራ
		አዎ	የለም	
		4.የለም ምክንያቱም አልቻልኩም ነበር		

ANNEXURE 14: Sociodemographic collection tool for in-depth interview participants

Sociodemographic Information collection sheet for health care providers, mentors, supervisors and managers as well as for Delphi experts

Age of the study participantyears

Sex of study participants MaleFemale

Educational status

1. Diploma
2. BSc
3. MPH/MSc
4. PhD
5. Others specify.....

Work experience..... Years

ANNEXURE 15: In-depth interview guide for health care providers

In-depth interview guide for health service providers (To be conducted by principal investigator)

- A. Could you explain to me what are the routine tasks in quality of Intrapartum care at the health centres level?
- B. How do you plan for quality care at health centres?
- C. What are the activities you are implementing for intrapartum quality care at health centres?
- D. How do you manage supportive supervision and other monitoring of quality improvements at health centres?
- E. How do you follow the technical and logistics aspects of quality improvement activities?
- F. What are the challenges of quality improvement activities at health centres?
- G. How could you address those challenges?

ANNEXURE 16: In-depth interview guide for mentors, supervisors and managers

In-depth interview guide for mentors, supervisors and managers (to be conducted by principal investigator)

- A. Could you explain to me what are the routine tasks in quality of Intrapartum care at the health centres level?
- B. How do you plan for quality care at health centres?
- C. What are the activities you are implementing for intrapartum quality care at health centres?
- D. How do you manage supportive supervision and other monitoring of quality improvements at health centres?
- E. How do you follow the technical and logistics aspects of quality improvement activities?
- F. What are the challenges of quality improvement activities at health centres?
- G. How could you address those challenges?

ANNEXURE 17: Confidentiality agreement form

Confidentiality agreement form and measures

The research information collected from the study participants will be kept confidential through the following key action:

- Names and any other identifying information about study participants will not be collected.
- Keep all the research information shared with me confidential by not discussing or sharing the research information in any form or format (data collection sheet, tapes, and transcripts) with anyone except with the researcher and data collectors.
- Keep all research information in any form or format (data collection sheet, tapes, and transcripts) in highly secured places for 5 years with the hand of researcher.
- There will be a confidentiality agreement between the data collectors and principal investigator with this template.

Confidentiality agreement form for data collectors

I, the undersigned data collector agreed to obeyed with the following four key action points during the data collection period.

- Keep all the research information shared with me confidential by not discussing or sharing the research information in any form or format (data collection sheet, tapes, and transcripts) with anyone except with the researcher
- Keep all research information in any form or format (data collection sheet, tapes, and transcripts) in highly secured place until I delivered to the researcher/ supervisor
- Return all research information in any form or format (e.g., disks, tapes, transcripts) to the *Researcher(s)* when I have completed the data collection
- After consulting with the *Researcher*, erase or destroy all research information in any form or format regarding this research project that is not returnable to the *Researcher if any*

Data collector

Full name _____ Signature _____ .Date _____

Researcher

Full name _____ Signature _____ .Date _____

ANNEXURE 19: Letter from the statistician

Date: 14/01/2022

Cell phone +251913084606

Sudan Street

Ledeta Sub-city

Addis Ababa

Ethiopia

TO WHOM IT MAY CONCERN

I certify that I have done the statistical analysis of Mr Andarge Abie Ayele doctoral dissertation entitled with QUALITY OF INTRAPARTUM CARE AT HEALTH CENTRES OF WEST GOJJAM ZONE, AMHARA REGION, ETHIOPIA.



Ermias Dessie

ANNEXURE 20: Letter from the language editor

Cell/Mobile: 073 782 3923

53 Glover Avenue
Doringkloof
0157 Centurion

15 January 2022

TO WHOM IT MAY CONCERN















I hereby certify that I edited the language usage of Andarge Abie Ayele's doctoral dissertation, **Quality intrapartum care at health centres of West Gojjam Zone, Amhara Region, Ethiopia**

IM

Iauma M Cooper
192-290-4

Cooper

ANNEXURE 21: Turnitin originality report

Complete dissertation/thesis submission for examination	0	Start 16-Feb-2016 12:00AM Due 30-Mar-2022 11:59PM Post 24-Feb-2016 12:00AM	17% 	Submit View 
Revision 1: Complete dissertation/thesis submission for examination	0	Start 01-Aug-2017 12:00AM Due 30-Mar-2022 11:59PM Post 02-Aug-2017 12:00AM		Submit View 
Revision 2: Complete dissertation/thesis submission for examination	0	Start 01-Sep-2017 12:00AM Due 30-Mar-2022 11:59PM Post 02-Sep-2017 12:00AM		Submit View 
Revision 3: Complete dissertation/thesis submission for examination	0	Start 01-Oct-2017 12:00AM Due 30-Mar-2022 11:59PM Post 02-Oct-2017 12:00AM		Submit View 
Chapter 1	0	Start 01-Sep-2017 12:00AM Due 30-Mar-2022 11:59PM Post 02-Sep-2017 12:00AM	24% 	Submit View 
Revision 1: Chapter 1	0	Start 01-Oct-2017 12:00AM Due 30-Mar-2022 11:59PM Post 02-Oct-2017 12:00AM		Submit View 
Revision 2: Chapter 1	0	Start 01-Nov-2017 12:00AM Due 30-Mar-2022 11:59PM Post 02-Nov-2017 12:00AM		Submit View 
Chapter 2	0	Start 01-Sep-2017 12:00AM Due 30-Mar-2022 11:59PM Post 02-Sep-2017 12:00AM	31% 	Submit View 
Revision 1: Chapter 2	0	Start 01-Oct-2017 12:00AM Due 30-Mar-2022 11:59PM Post 02-Oct-2017 12:00AM	19% 	Submit View 
Revision 2: Chapter 2	0	Start 01-Nov-2017 12:00AM Due 30-Mar-2022 11:59PM Post 02-Nov-2017 12:00AM		Submit View 
Chapter 3	0	Start 01-Sep-2017 12:00AM Due 30-Mar-2022 11:59PM Post 02-Sep-2017 12:00AM	11% 	Submit View 

Chapter 3	0	Due	30-Mar-2022	11:59PM	11%		Submit	View	
		Post	02-Sep-2017	12:00AM					
Revision 1: Chapter 3	0	Start	01-Oct-2017	12:00AM			Submit	View	
		Due	30-Mar-2022	11:59PM					
		Post	02-Oct-2017	12:00AM					
Revision 2: Chapter 3	0	Start	01-Nov-2017	12:00AM			Submit	View	
		Due	30-Mar-2022	11:59PM					
		Post	02-Nov-2017	12:00AM					
Chapter 4	0	Start	01-Sep-2017	12:00AM	9%		Submit	View	
		Due	30-Mar-2022	11:59PM					
		Post	02-Sep-2017	12:00AM					
Revision 1: Chapter 4	0	Start	01-Oct-2017	12:00AM			Submit	View	
		Due	30-Mar-2022	11:59PM					
		Post	02-Oct-2017	12:00AM					
Revision 2: Chapter 4	0	Start	01-Nov-2017	12:00AM			Submit	View	
		Due	30-Mar-2022	11:59PM					
		Post	02-Nov-2017	12:00AM					
Chapter 5	0	Start	01-Sep-2017	12:00AM	4%		Submit	View	
		Due	30-Mar-2022	11:59PM					
		Post	02-Sep-2017	12:00AM					
Revision 1: Chapter 5	0	Start	01-Oct-2017	12:00AM			Submit	View	
		Due	30-Mar-2022	11:59PM					
		Post	02-Oct-2017	12:00AM					
Revision 2: Chapter 5	0	Start	01-Nov-2017	12:00AM			Submit	View	
		Due	30-Mar-2022	11:59PM					
		Post	02-Nov-2017	12:00AM					
Chapter 6	0	Start	01-Sep-2017	12:00AM			Submit	View	
		Due	30-Mar-2022	11:59PM					
		Post	02-Sep-2017	12:00AM					
Revision 1: Chapter 6	0	Start	01-Oct-2017	12:00AM	10%		Submit	View	
		Due	30-Mar-2022	11:59PM					
		Post	02-Oct-2017	12:00AM					