

**IMMEDIATE NEWBORN CARE PRACTICE AND ASSOCIATED FACTORS AMONG NEWBORNS DELIVERED AT PUBLIC HEALTH FACILITIES OF DEBRE MARKOS TOWN, NORTH WEST ETHIOPIA**



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**A RESEARCH THESIS SUBMITTED TO FACULTY OF PUBLIC HEALTH, DEPARTMENT OF POPULATION AND FAMILY HEALTH JIMMA UNIVERSITY; IN PARTIAL FULFILLMENT FOR THE REQUIREMENT FOR MASTERS OF PUBLIC HEALTH IN REPRODUCTIVE HEALTH (MPH/RH)**

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**INSTITUTE OF HEALTH,**  
**FACULTY OF PUBLIC HEALTH**  
**IMMEDIATE NEWBORN CARE PRACTICE AND ASSOCIATED**  
**FACTORS AMONG NEWBORNS DELIVERED AT PUBLIC HEALTH**  
**FACILITIES OF DEBRE MARKOS TOWN, NORTH WEST ETHIOPIA**

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AUG, 2020

JIMMA, ETHIOPIA

## **ABSTRACT**

**Background:** Deaths in the first month of life, represent 47% of total deaths among children under five. Mortality among children under five declines globally while it is more and more concentrated in the first days of life. This makes focus on immediate newborn care more critical than ever before. However there is limited studies in Ethiopia in general and in the study area in particular.

**Objective:** The main aim of the study is to assess level of immediate newborn care practice and associated factors among newborns delivered at public health facilities of Debre Markos Town, North West Ethiopia from March 28 to May 27, 2020.

**Methods:** Facility based cross sectional study with quantitative and qualitative method was conducted. The study included all public health facilities in the Town.(1 hospital and 4 health centers).For quantitative study a total 286 mothers with their newborns were included. For qualitative study 10 key-informants were interviewed. Pre-tested, semi-structured questionnaire and observational checklists were used for the data collection. Collected data were entered into Epi-data version 3.1, and exported to SPSS version 22 for analysis. Binary and multivariable logistic regression was done. Independent variables with P-value of  $\leq 0.25$  in bivariable analysis were considered as candidate for multivariable analysis. P-value  $< 0.05$  was used as cut off point for presence of statistical significance.

**Results:** The Level of immediate newborn care practice was 76.9% [(95% CI = (72.0-82.0)].History of ANC follow up(AOR=3.36;95%CI:1.50,7.53), mother's knowledge on ENC(AOR=5.29;95%:2.00,14.00),birth-preparedness(AOR=7.80;95%:3.36,18.06) and availability of drugs, equipment and materials (AOR=6.79;95%CI:3.05,15.12) were found to be independent predictors of the level of immediate newborn care practices.

**Conclusion:** The Level of immediate newborn care practices among newborn neonate was found to be unsatisfactory in this study area with regard to the national target. So it is important to promote immediate newborn care through adequate supply of essential drugs and equipment's, counselling and education on immediate newborn care, promotion of birth preparedness activity and strengthen ANC service for all pregnant women.

**Key words:** immediate newborn care practice, Debre Markos, Ethiopia.

## **ACKNOWLEDGEMENT**

First and for most I would like to thank almighty God for his blessings

I would like to express my gratitude to my advisors D/r Gurmesa Tura and M/r Abebe Habtamu for their continuous support and guidance during this thesis work.

I would also like to thank Jimma University for providing financial support to conduct this research.

I would like extend my gratefulness to Jimma University, collage of Public health, population and family health department for giving me the opportunity to conduct this research.

I would also like to thank Debre Markos Administrative town health department for their cooperation during data collection by giving permission letter to facilities.

I would also like to thank Debre Markos University and staffs for their place and material support for presentation of this thesis work.

It is also glad to thank data collectors, supervisors and the study participants.

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## **ABBREVIATIONS AND ACRONYMS**

ANC.....	Ante-Natal Care
AOR.....	Adjusted Odds Ratio
BCG.....	Bacilli Chalmette Guerin
BSC.....	Bachelor of Science
CI.....	Confidence Interval
EDHS.....	Ethiopian Demographic and Health Survey
EMDHS.....	Ethiopian Mini Demographic and Health Survey
ENAP.....	Every Newborn Action Plan
ENC.....	Essential New born Care
HC.....	Health Center
HIV.....	Human Immunodeficiency Virus
IDI.....	In-Depth Interview
LBW.....	Low Birth Weight
MPH.....	Master of Public Health
NGO.....	Non-Governmental Organization
NMR.....	Neonatal Mortality Rate
OPV.....	Oral Polio Vaccine
PH.....	Public Health
PI.....	Principal Investigator
SBA.....	Skilled Birth Attendant
SDG.....	Sustainable Development Goals
SPSS.....	Statistical Package for Social Sciences
VIF.....	Variance Inflation Factor
WHO.....	World Health Organization

# CHAPTER ONE: INTRODUCTION

## 1.1 Background

The call under the Sustainable Development Goals (SDGs) and Every New born Action Plan (ENAP) to reduce the global neonatal mortality rate to 12 or less per 1000 live births and by 2030 has led to widespread attention on increasing focus of life-saving interventions for new born babies around time of birth(1, 2).

The availability of standard guidelines for the care of newborn babies in health facilities is very important to accelerate the rate of reduction in neonatal mortality(3).However translation of standard guidelines into routine health worker practices requires strong support and systems in health facilities(4, 5).

Essential Newborn Care (ENC) is care that every newborn baby needs regardless of size and place of birth to optimize their survival within first month of life(6).ENC should be applied immediately after birth and continued for at least the first 7 days after birth. ENC includes keeping baby warm, helping baby to breathe, keeping baby clean, helping baby to feed, help the small baby to survive, and protect baby from HIV(7).

Immediate newborn care interventions are part of essential newborn care which protect newborns morbidity and mortality that happened immediately after birth within first hour. Immediate new born care includes clean cord care (washing hands before touching the newborn baby, cutting the umbilical cord with a clean blade, keeping the cord area clean and dry), thermal care (drying and wrapping of the newborn immediately after delivery and delaying the newborn's first bath for at least 24 h, placing the baby on abdomen which is skin to skin contact, covering the newborn baby with a clean towel/cloth and a hat on the head to reduce hypothermia risk), initiation of breastfeeding within the first one hour of birth and make sure the baby receives the first milk(colostrum), management of immediate asphyxia by assisting the newborn baby to take its first breath and by clearing the mouth if it having any difficulty in breathing and management of early sepsis by giving Tetracycline , Bacilli Chalmette Guerin(BCG) and Oral Polio Vaccine (OPV0)(8).

Newborns who receive midwife-led continuity of immediate newborn care immediately after birth are 16% less likely for the risk of neonatal mortality. The vast majority of newborn deaths take place in low and middle-income countries including Ethiopia hence, it is possible to improve survival and health of newborns and end preventable deaths by

promoting skilled care at birth and care of small and sick newborns(9). With the increase in facility births (almost 80% globally), there is a great opportunity for providing immediate newborn care and identifying and managing high risk newborns at health facility. However, few women and newborns stay in the facility for the recommended 24 hours after birth, which is the most critical time. (10).so it is important to strengthen practice of care in the first 24 hours and women's and newborns need to stay sufficiently long in health facilities to receive adequate care of newborns.

## **1.2 Statement of the problem**

Globally deaths in the first month of life, which are mostly preventable by simple and effective interventions represent 47 percent of total deaths among under five children in 2018. Mortality among children under five declines globally while deaths among these children are more and more concentrated in the first days of life. This makes focus on immediate newborn care more critical than ever before. In 2018, an estimated 2.5 million children died in their first month of life, which is approximately 7,000 newborns every day with about one third dying on the first day of life and close to three quarters dying within the first week of life. A Neonatal mortality is decline globally from 37 deaths per 1,000 live births in 1990 to 18 per 1,000 live births in 2018 (5.1 million to 2.5 million). However, this decline of 51 percent is slower than the rate of decline among children aged 1-59 months (63 per cent).As a result, the share of neonatal deaths among all under-five deaths increased from 40 per cent in 1990 to 47 percent in 2018(9, 11-13).

Sub-Saharan Africa region had the highest neonatal mortality rate among all regions of the world in 2018 with 28 deaths per 1,000 live births, followed by Central and Southern Asia region with 25 deaths per 1,000 live births. This indicates that child born in sub-Saharan Africa or in Southern Asia is 10 times more likely to die in the first month than a child born in a high-income country(14).

In Ethiopia the rate of neonatal mortality (NMR) accounts for 41% of under-five deaths (15).The 2019 Ethiopian mini Demographic and Health Survey (EMDHS) results show that the neonatal deaths is 30 per 1,000 live births from 29 per 1,000 live birth in 2016(16). This clearly indicated that, in Ethiopia 1 in every 35 children dies within the first month. There was reduction of neonatal mortality from 49 deaths in 2000 to 29 deaths per 1,000 births in 2016(41%) over the last sixteen years in the country. On the contrary, there was also a significant variation among regions on neonatal mortality. For instance neonatal

mortality in Addis Ababa was 18/1000 live births, where as in (10) Amhara region it was 47/1000 live births. This might indicate that the risk factors responsible for neonatal death varied from place to place which need a local data to address the problem. Amhara regional state is the first top region by neonatal mortality in Ethiopia(17).

The majority of all neonatal deaths that is 75% occurs during the first week of life, and from these around 50% of newborns die within the first 24 hours. Seventy nine percent of newborn deaths can be prevented by targeting the time around birth with proven high impact interventions. Among these interventions immediate care for every newborn baby which include breastfeeding support, clean birth practices, thermal care and newborn resuscitation are very critical for the survival of newborn babies (7, 14, 18, 19).

Appropriate practice of Immediate new born care in health facilities is increasingly recognized as a critical aspect of the unfinished maternal and newborn health agenda, mainly with respect to care around labor and delivery and in the immediate postnatal period(20). It is recognized that high coverage of facility delivery alone is not enough to reduce neonatal mortality and morbidity. To reduce neonatal mortality substantially and move towards elimination of preventable causes of newborn death, increased coverage of health facility delivery should be accompanied by promotion and adherence of appropriate practice of immediate newborn care throughout the continuum of care(21).

Lack of comprehensive skilled care at birth and treatment immediately after birth and in the first days of life causes conditions and diseases associated with deaths of newborn babies in first 28 days of birth (22).

The most common cause of neonatal death are preterm birth, intrapartum-related complications like birth asphyxia or lack of breathing at birth, infections and birth defects in 2018 (23).

Every Newborn Action Plan (ENAP) emphasize to give focus on the time around birth with targeted high impact interventions for reducing not only newborn deaths but also maternal deaths and stillbirths which triple return in investment. Around 3 million new born and women could be saved each year through investing in cares around the time of birth (24).

World health organization (WHO) is working with Ethiopian ministry of health and partners to strengthen and invest in care, particularly around the time of birth and the first

week of life. Since most newborns are dying in this time period. To improve the maternal and newborn care practices from pregnancy to the entire postnatal period, different capacity building trainings were given for midwives, including neonatal nursing, reduce inequities in accordance with the principles of universal health coverage, promote engagement and empower mothers, families and communities to participate, creation of demand newborn care, programmed tracking and accountability to count every newborn and stillbirth. (25).

However Accelerated progress for neonatal survival and promotion of health and wellbeing still requires further strengthening of the care around time of birth and ensuring availability of improved health services since new born death account for an increasing share of under-five deaths, and they are declining at a slower rate than child deaths overall and despite high concern of the government on immediate newborn care, it is a neglected issue at health facilities due to different (21).

Most studies in Ethiopia are conducted in immediate new borne care particularly focusing on service provider (health professionals) perspective and limited studies have been conducted in Ethiopia on immediate new born care by considering factors that affect it other than health professional related variables. Most of the studies have tried to assess only immediate new borne care practice of health professionals not by considering maternal factors and health facility related factors(7, 26-28).Therefore, this study aimed to fill the above gap by assessing the magnitude and factors associated with level of immediate newborn care by adding maternal factors that are not addressed in previous study. In addition the study attempt to assess the perspective of health facilities, service providers, and mothers in relation to the care provided.

Therefore, this research was tried to assess the level and identify associated factors of immediate newborn care practice in Debre Markos Town, North West Ethiopia.

### **1.3 Significance of study**

The result of the study will be helpful to regional health bureau, zonal health department, Town health office, Nongovernmental Organization (NGOs), Town health facilities and other stakeholders to design locally relevant interventions based on the study findings. The study also will be useful for different level managers to better plan and implement immediate newborn care services. The finding of this study will also directly benefit newborns and mothers to improve quality of care of the mothers and new-born.

Finally, it will contribute as an input for further research in this issue for the future.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1. Immediate new born care practice**

Immediate new borne care is a care given to all newborn infants immediately after birth to optimize their chances of survival. There are also additional care of the preterm /or low birth weight newborn which includes administer vitamin k, place the newborn's identification bands, weigh the newborn and warm, record all observations, treatment provided and delay bathing of the baby for 24 hours after birth(7).

Different studies are conducted in different areas on the level of immediate new born care practice, the level of immediate newborn care practice ranges from 15.8% to 75.8% and discussed below.

The study done in the upper Himalayas on Factors associated with newborn care knowledge and practices revealed that he level of immediate newborn care practice was 48.7%(29).

Another study done in Philippines indicated that drying, weighing, eye care and vitamin K injections were performed in more than 90% of newborns. Only 9.6% were allowed skin-to-skin contact. Interventions were inappropriately sequenced, e.g. immediate cord clamping (median 12 sec), delayed drying (96.5%) and early bathing (90.0%). While 68.2% were put to the breast, they were separated two minutes later. Unnecessary suctioning was performed in 94.9%(30).

A cross-sectional observational study done six sub-Saharan African countries including Ethiopia showed 80% of newborns were immediately dried after birth to prevent hypothermia and received clean cord care. Of newborns who did not cry at birth, 89% either recovered on their own or through active steps taken by the provider through resuscitation with initial stimulation and/or ventilation and 11% of newborns died. Assessment of simulated resuscitation using a Neonatal anatomic model showed that less than one-third of providers were able to demonstrate ventilation skills correctly(31).

The study done in Ghana revealed that only 33% of babies were born in facilities capable of providing high quality, basic resuscitation as assessed by a vignette plus the presence of a bag and mask. Promotion of immediate ENC practices in facilities was also inadequate, with coverage of early initiation of breastfeeding and delayed bathing both below 50% for babies born in facilities(32).

Another study done in Ghana indicated that 36.8% of newborns was judged had safe cord care, 34.9% optimal thermal care, and 73.7% (308) were considered to have had adequate neonatal feeding. The overall prevalence of adequate new born care comprising good cord care, optimal thermal care and good neonatal feeding practices was only 15.8%(33).

According to a systematic review and meta-analysis done in Ethiopia on essential newborn care utilization and associated factors the pooled estimate of essential newborn care utilization from 11 studies was 48.77%(34).

According to the study done in south Ethiopia revealed that 38.4% newborns got good practices of essential newborn care, 52.9% of newborn received safe cord care, 71.0% received optimal thermal care and 74.8% had good neonatal feeding(35) while another study done in Jimma zone on knowledge and Practice of Essential Newborn Care and Associated Factors showed that the level of immediate newborn care practice was 51.1%(7).

The study done in Western Ethiopia on essential new-born care practices and associated factors among postnatal women indicated that the level of essential new-born care practice was 44.1%. The overall safe cord care practice of the respondents was 68.3% while the optimal thermal care practices and good neonatal feeding were 78.7%) and 77.2% respectively(36) but another cross-sectional study done in Northern Ethiopia indicated that the prevalence of good immediate new born care practice was 72.77%(26)

According to facility based survey on conducted in Tigray 67.6% newborns received good practice of immediate newborn care during immediate postpartum period (37). While another study done in Wolayita zone public health facilities indicted that 75.8% of newborns were received good practice of immediate newborn care(8).

The study done in Amhara Regional State also indicated that 16.5% of midwives were incompetent to give immediate new born care and 11.1% were outstanding in providing routine intra-partum care including immediate new born care but another study done in governmental health facilities of Bahir Dar city indicated that 59.7% of newborns get good practice of immediate newborn care(28).This indicated that there is a gap on level of practice of care received by newborns rather than in provider side only. Opportunities for performance improvement were inadequate with 31.3% reporting emergency obstetric and newborn care training, and 44.7% quarterly or more frequent supportive supervision (38).

## **2.3. Factors that affect level of immediate new born care practice**

### **2.3.1. Socio –demographic characteristics the of mother**

The important socio-demographic characteristics of the mother that influence the level of immediate newborn care practice in health facility are age of mother at birth, education of mother, residence, marital status and wealth index(39). There could be similar relationships between these maternal factors and level of immediate newborn care practice since beside the health professional mothers has a great role on immediate new born care in health facility like in breast feeding baby, skin to skin contact, preparing towel or blanket for new born as well as covering of the baby. According to a cross sectional study done in Brazil on health facility structure and maternal characteristics related to essential newborn care pregnant women in lower social and economic classes were more likely to not receive continuous social support during delivery and post natal period. (40). Another study done in Wolayita Zone public health facilities indicated that there is significant association between maternal knowledge on ENC and of new born care practice. The study revealed that newborn who had mother with lack of knowledge on essential newborn care component were 2.7 times less likely to receive good practice of immediate newborn care as compared with newborns whose mother had good knowledge on the components of essential newborn care(8). However another a qualitative evidence synthesis done in low- and middle-income countries on factors that influence the provision of intra-partum and postnatal care by skilled birth attendants revealed that there is no any relationship between maternal factors and immediate newborn care(41).so the current study was explore the relationship between maternal factors and immediate newborn care practice clearly.

### **2.3.2 Obstetric and health service related characteristics of the mother**

The important obstetric and health service related characteristic of the mother that affect immediate newborn care practice includes parity, birth preparedness, and history of antenatal care and mode of delivery. There might be association between this important obstetric and health service related characteristic of the mother and immediate new born care practice (8, 37) and this study assess the relationship between this maternal variables and the level of immediate new born care practice as it is not assessed in previously done studies.

A cross sectional study done in Brazil on health facility structure and maternal characteristics revealed that a caesarean section delivery was associated with an absence



of early skin-to-skin contact and breast feeding in first hour after birth which affect level of immediate new born care practice in which mothers with cesarean section is 2.55 times and 3.07 times less likely to breast feed their new born with one hour and to give skin to skin contact respectively this study also indicated that there is relationship between adequate antenatal care and immediate new born care practice in which newborns that had mothers with inadequate antenatal care was 1.17 times less likely to get good practice of immediate newborn care (42).

Another study done in Tigray region showed that there is a relationship between history of ANC and of new born care practice. The study indicated that those mother with history of ANC were 2.8 times more likely to get good practice of care for themselves as well as for their new born compared to mothers who had not history of ANC (37) while another study in Wolyita zone public health facilities on immediate newborn care practice showed that there is association between maternal knowledge and immediate new born care practice hence newborn who had mother with lack of knowledge on essential newborn care component were 2.7 times less likely to receive good practice of immediate newborn care as compared with newborns whose mother had good knowledge on the components of essential newborn care.

### **2.3.3 Health facility related factors**

The health facility has an appropriate physical environment, with adequate water, sanitation and energy supplies, medicines, supplies and equipment for routine maternal and newborn care and management of complications(20). Every health facility should have basic infrastructure and amenities, including water, sanitation, hygiene and electricity, waste disposal, a stock of essential medicines, supplies and equipment to meet the health care needs of the women and newborns in the facility. Areas for labor, childbirth and postnatal care should be hygienic, comfortable and logically designed and organized to maintain continuity of care(23).

According to a cross-sectional study done in Brazil on health facility structure and maternal characteristics related to essential newborn care inadequate drugs and equipment for new born care is associated with level of immediate newborn care practice hence newborns received care with inadequate drugs and equipment is 2.16 times less likely received good practice of immediate newborn care(40).

A cross-sectional observational study done in health institutions of six sub-Saharan African countries including Ethiopia revealed that overall, the availability of ENC supplies was poor, at only 30.8% of all facilities (ranging from 8.2% to 52.7%) sterile or clean cord cutting instruments, suction devices, and tables or firm surfaces for resuscitation were commonly available(31) while another study done in Ghana revealed that that majority of health facilities had adequate infrastructure, but all lacked staff trained in ENC and some essential equipment including incubators and bag and masks as well as drugs(32).

The study done in five districts of Malawi Hospitals had good scores for overall infrastructure, essential drugs, and organization of care than health centers (43).

A cross sectional study done in Ethiopia revealed that 80.6% of newborns were received immediate newborn care with good supply of drugs, materials and medical equipment (8).

The study in Amhara Regional State, North Ethiopia showed the proportion of facilities with more than 75% of the items in each category was 32.6% for drugs, 73.1% for equipment, 65.4% for supplies, 47.9% for infection prevention materials, and 43.6% for records and forms. But use of materials and equipment's for each new born was not assessed (38).

The current study was try to identify whether essential drugs and equipment's needed for immediate newborn care were available and used in the study area so the it was try to fill the above gap.

#### **2.3.4. Health worker related factors**

Types of profession, level of education, work experience, work load, monthly salary, Training and knowledge of health care workers are variables that could be associated with immediate of newborn care practice.(8, 37).The study in done in sub-Saharan African countries indicated that in all countries health worker knowledge and performance of key routine newborn care practices, particularly for immediate skin-to-skin contact and breastfeeding initiation significantly affect practice of immediate new born care(31). According to the study done in Wolayita zone public health facilities training of health professional on ENC is significantly associated with newborn care practice which is newborns who get care by untrained professionals are 1.53 times less likely to get good practice of care compared with newborns who get care by trained health

professionals(8).Another study done in Tigray indicated that working experience of health professional is significantly associated with new born care (37).but health professional related variables that affect practice of immediate new born care is unknown for the study area and it was assessed qualitatively .

## 2.4. Conceptual frame work

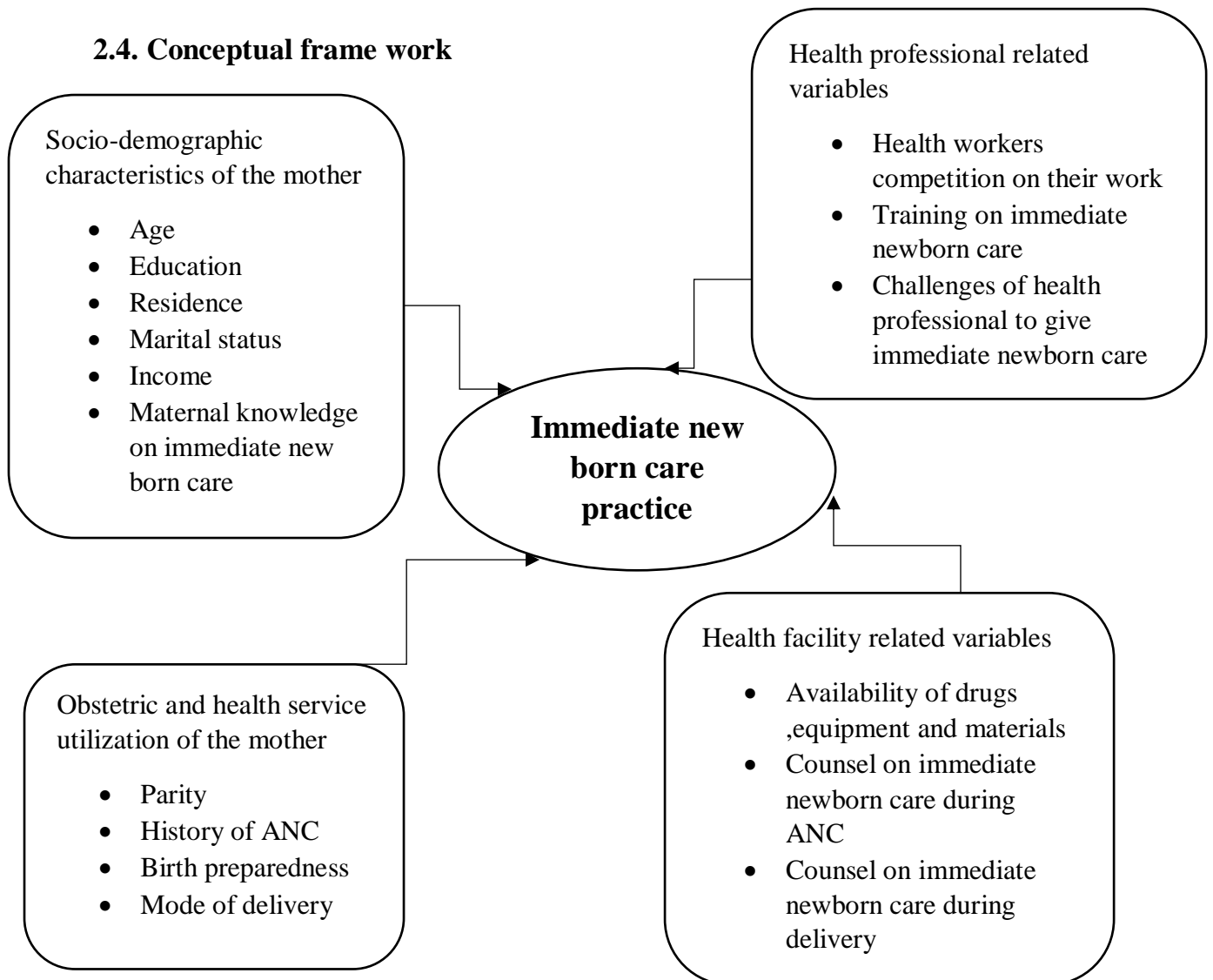


Figure 1: conceptual frame work adapted from different literatures (7, 8, 28, 37, 41, 44) for assessment immediate new born care practice and associated factors among newborns at public health facilities of Debre Markos Town, North West Ethiopia, 2020

## **CHAPTER THREE: OBJECTIVES**

### **3.1. General objective**

- To assess the level of immediate new born care practice and associated factors among newborns at public health facilities of Debre Markos Town, North West Ethiopia.

### **3.2. Specific objectives**

- To assess the level of immediate new born care practice among newborns at public health facilities of Debre Markos Town
- To assess factors associated with level immediate new born care practice at public health facilities of Debre Markos Town

## **CHAPTER FOUR: METHODS AND MATERIALS**

### **4.1 Study area and period**

The study was conducted in Debre Markos Town, a capital city of East Gojam zone North West Ethiopia from March 28 to May 27, 2020. Debre Markos is located 300 km far from the capital city of Ethiopia, Addis Ababa, and 256 km from Bahir Dar a capital city of Amhara National Regional State in South Eastern direction. According to the Town finance and economic office 2017/18 report, the total population of the Town is 101,582 (Male = 49,775, Female 52,806). Regarding with public health institution there is 1 public hospitals and 4 health centers providing immediate newborn care services in the Town. The gynecology and obstetrics unit of this referral hospital have forty five midwives, two gynecologists and two emergency surgeons with greater than 100 deliveries per month. In the four health centers there are twenty eight nurses, eleven health officers and eight midwives in delivery room with average of 40 deliveries per month. In general the average annual delivery in all public health facilities of the Town is 3780 (45).

### **4.2. Study design**

A facility based cross sectional study design with quantitative method supplemented by qualitative method was used.

### **4.3. Population**

#### **4.3.1. Source population**

All new born neonate at public health facilities of Debre Markos Town.

#### **4.3.2. Study population**

##### **For quantitative**

Selected immediate postnatal women and their new born neonate at public health facilities of Debre Markos Town during the study period who fulfill the inclusion criteria.

#### **4.3.3. Study unit**

Each immediate postnatal women and their newborn neonate

##### **For qualitative**

Purposively selected facility heads, delivery ward team leaders and skilled birth attendants in delivery room at public health facilities of Debre Markos Town.

**Inclusion criteria:** - All new born and all immediate postnatal mothers were included in the study.

**Exclusion criteria:** - New born with congenital anomalies, newborns with dead mothers, mothers with dead newborns and critically and mentally ill mothers, were excluded from the study.

#### 4.4. Sample size and sampling procedures

##### 4.4.1. Sample size determination

###### For quantitative

The sample size for first objective was determined by a single population proportion formula by assuming the 76% as proportion of new born who get good practice of immediate new born care from previous study(8), 95% confidence level (CI), 5% margin of error, and sample size was 280.

For the second objective the required sample size was calculated by using EPI INFO version 7 with double population proportion formula; it was calculated by assumption of three variables, which are training of health workers, maternal knowledge and availability of drug, equipment and materials that have statistically significant association with the outcome variable, as factor, 95% confidence interval, and 80% power. The total sample size was 244, 182 & 276 respectively which was less than the sample size of first objective(8).

Table 1: Sample size determination for the second objective for the assessment of immediate new born care practice and associated factors among newborns at public health facilities in Debre Markos Town, Northwest Ethiopia, 2020

Variables	Categori es	Prevalence of newborn care practice	Level of confidenc e	Powe r of study	Non respons e rate	sampl e per group	Total sampl e	Ref
Training of health workers	Yes	P1=80%	95 %	80%	10%	122	244	(8)
	No	P2=67%(1)				122		
Maternal knowledge	Yes	P1=60%(1)	95 %	80%	10%	91	182	
	No	P2=83%				91		
Availabilit y of materials	Good	P1=64%(1)	95 %	80%	10%	138	276	
	Poor	P2=78%				138		

Since sample size for the first objective was greater than the sample size for the second objective so the first objective sample size was considered. From preliminary assessment the source population (annual number of delivery in all public health facilities in the Town was 3780) therefore it was less than 10,000 and  $n/N$  was greater than 5% correction formula was used to adjust the sample size.  $n = n / (1 + n/N) = 280 / (1 + 280/3780) = 260$

By adding 10% non-response rate the final sample size was 286

#### **For qualitative**

Ten in-depth interviews was conducted with purposively selected key informants (two from each health facility). They were head of health facilities, delivery ward team leaders and skill birth attendants in delivery room. Since there was information saturation and repetition of ideas only 10 in-depth interview was conducted

#### **4.4.2. Sampling procedure**

##### **For quantitative**

The study was included all public health facilities in the Town purposely. (1 public hospital and 4 health centers) the sample size was distributed to each facilities by using population proportional allocation. There are one referral hospital and four health centers that give immediate newborn care service in Debre Markos Town. Namely Debre Markos referral hospital, Debre Markos health center, Hidase health center, Wuseta health center, and Gozamin health center. Based on annual delivery report of Debre Markos referral hospital, Debre Markos health center, Hidase health center, Wuseta health center, and Gozamin health center, there were 1704, 564, 552, 504, and 456 women were attended for skilled delivery service in the health facilities respectively, which implies that on average of 315 women received skilled birth services in each month. The sample size was distributed to each facilities by population proportional allocation method. That is  $n_i = n \times N_i / N$ ,  $286 \times 1704 / 3780 = 129$ ,  $286 \times 564 / 3780 = 43$ ,  $286 \times 552 / 3780 = 42$ ,  $286 \times 504 / 3780 = 38$ , and  $286 \times 456 / 3780 = 34$   $n$  = total sample size to be selected,  $N$  = total skilled birth attendant women /month,  $N_i$  = total women skilled birth /month of each health facilities,  $n_i$  = sample size from each health facilities.

After the sample size was proportionally allocated to each facility based on their annual delivery then by consecutive sampling method all mothers with their new born who gave

birth in selected facilities during the study period was included in the study until the sample size achieved. (Refer fig 2 for the details of sampling procedure)

**For qualitative**

Purposive sampling technique was used to select key informants which includes facility heads, delivery ward team leaders, and skilled birth attendants in delivery room.

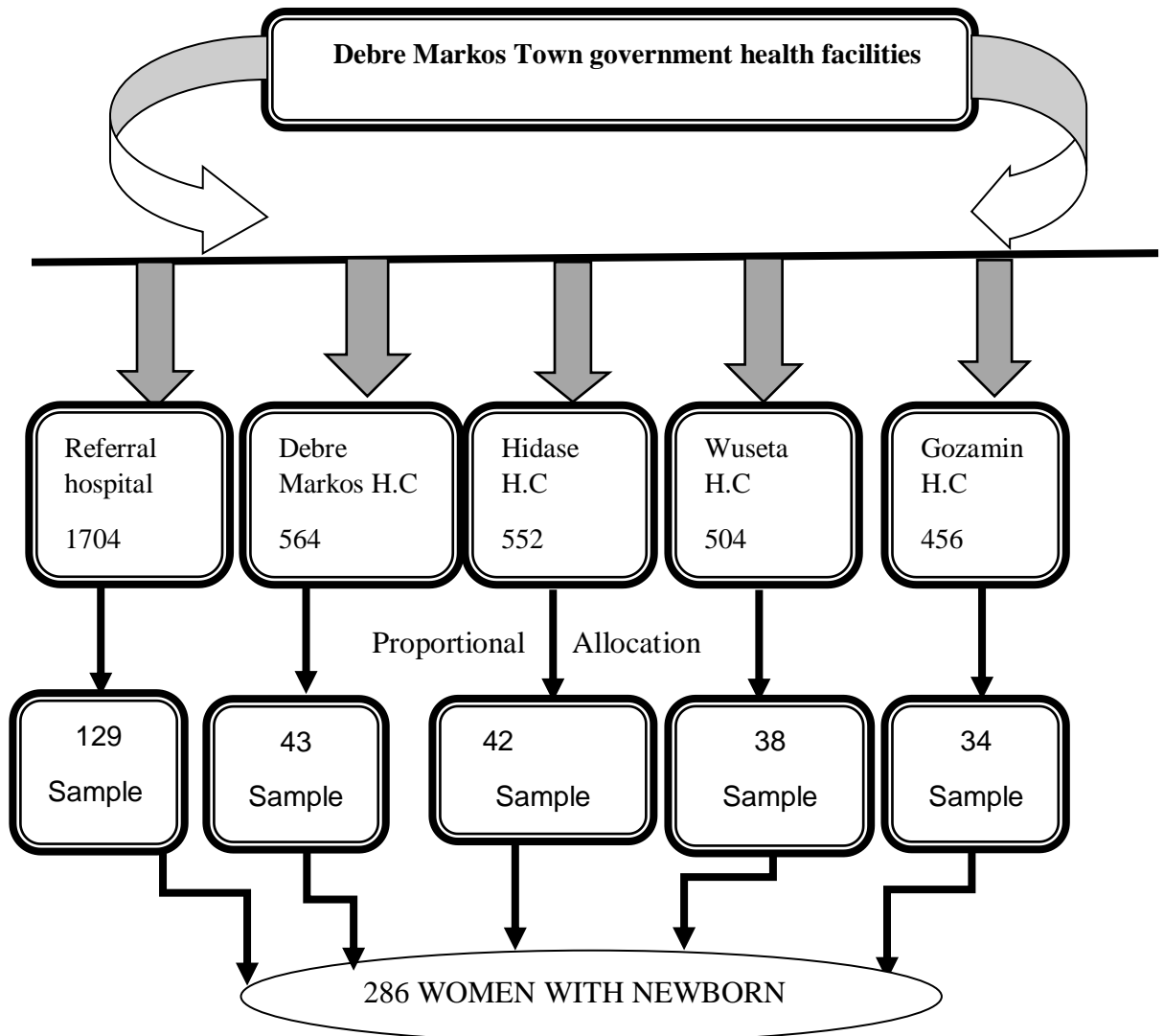


Figure 2: sampling procedure to select study subjects for assessment of immediate new born care practice and associated factors among newborns at public health facilities of Debre Markos Town, North West Ethiopia, 2020

**4.5. Data collection procedures (instruments, personnel, measurements)**

Both quantitative and qualitative methods of data collection were used.



The quantitative part of the study was conducted on level of immediate new born care practice (the outcome variable), Socio-demographic and obstetric characteristics of the mother and Availability and use of drugs, equipment and material

The qualitative part of the study was conducted on Health professional related variables

### **For quantitative**

Questionnaire and consent form was developed in English and translated into ‘Amharic’ which is the local language of the study area, for data collection then translated to English by language expert to assure the consistency. As a technique of data collection the data were collected using interviewer administered pre tested semi-structured questionnaire which was adapted from different literatures(8, 37, 46) for mothers to assess factors that affect practice of immediate new born care and mothers was interviewed after birth. Medical record review of some maternal variables like age, parity, and history ANC was also made. Observational checklists was used to assess level of immediate newborn care practice and availability and use of drugs and materials needed to provide newborn care. All deliveries during day and night time were observed by data collectors.

Five trained public health officers from nearby district health facilities were collected the data, two supervisors who are holders of degree in Public Health (PH) and the research teams including the principal investigator were supervise the process of data collection.

### **For qualitative**

Interview guide was developed after reviewing different literatures(47, 48) and as a technique of data collection the data were collected using in-depth interview (IDI) with facility heads, delivery ward team leaders and skilled birth attendants in delivery room. In-depth interview was made by three experienced data collectors in qualitative research (MPH in health education) from Debre Markos University. Before conducting the discussion, explanation and elaboration on the objective of the study and the need to do the in-depth interview was made and the participants were asked for their willingness for the interview. Interview was done with one modulator, one note taker and one recorder.

New born was observed to assess the level of immediate new born care practice and mothers, facility heads and delivery ward team leaders were and skilled birth attendants were interviewed for the assessment of factors associated with level of immediate new born care practice.

## 4.6. Variables of the study

### 4.6.1. Dependent variables

- ❖ Level of immediate new born care practice (Good/poor)

### 4.6.2. Independent variables

- ❖ Socio-demographic characteristic of the mother: Age, education, residence, marital status , income, knowledge on components of immediate new born care, Maternal knowledge on immediate newborn care practice, (Good/poor)
- ❖ Obstetric history of mother: Parity ,history ANC, birth preparednes, and mode of delivery
- ❖ Health system related variables :Availability of drugs and materials ,(Good/poor),
- ❖ Health professional related variables: Competency of health professional on their work, Training of health professional on immediate newborn care and challenges of health professionals to give appropriate immediate newborn care

## 4.7. Operational definitions

**Immediate new born care:** is a care given for new born babies from birth up to 1 hour of birth.

**Level of immediate newborn care practice:** Refers to leveling of immediate newborn cares practice in delivery rooms as “good” or “poor” by using observational checklist. It is “**Good**” if baby received at least 75% of the component or performed 10-13 components in the checklists and “**Poor**” if received below 75% or performed 1-9 components(49)

**Availability of drugs, equipment and materials:** Presence of supply needed to provide newborn care mentioned in national newborn care manual was used. Its “good” if 75% of listed materials are available and used for each new born during observation and “poor” if < 75% by observatory checklist(50).

**Knowledge on components immediate new born care:** from four components of maternal related immediate new born care components if the mother is aware of 75% of maternal related immediate new born care components the mother have “good” knowledge otherwise the mother have “poor” knowledge on components of immediate newborn care(26).

## **Measurement**

**The level of immediate newborn care practice** -was measured by 13 indicator variables including dries newborn baby vigorously and change wet towel immediately after birth, evaluate breathing of newborn , tie or clamp cord after 2-3 minute of birth, Ensure the baby is covered ,ensure the baby is in skin to skin contact with mother, delaying the newborn's first bath for at least 24, ensure baby is start breastfeeding within 1 hour, administered TTC eye ointment, administered vitamin K, weight the newborn baby ,check newborn breathing and breast feeding status every 15 minutes, ensure privacy during birth ,the mother and newborn is not physical emotionally and verbally abused. Then the composite score for practice of immediate newborn care is computed.

## **4.8. Data analysis procedure**

### **For quantitative**

Collected data were coded, entered and cleaned by Epi data version 3.1, and then it was exported to SPSS version 22 for analysis. Descriptive, binary and multivariable analysis was done. All variables that show significant association during the Bivariable analyses at p value  $<0.25$  were enter to multivariable logistic regression to control for all possible confounders. Independent variables with P-value of  $<_0.25$  in Bivariable logistic regression were considered for multivariable logistic regressions. P-value less than 0.05 was used as cut off point for presence of statistical significance. Backward logistic regression method was used in multiple regression to identify independent predictors of outcome variable. Adjusted OR and 95 % CI was identified to see the strength of association between dependent and independent variables. Multicollinearity is checked for independent variables by using variance inflation factor (VIF) and the all variables had VIF  $<2$ . Model fitness was assessed by Hosmer and Lemeshow model fitness test and the model was fitted with minimum p value of 0.849.

### **For qualitative**

The Qualitative data from in-depth interview is analyzed by thematic analysis by grouping the same ideas together in different themes. First data were transcribed, checked and re-checked by data collectors. Then, line by line coding system was conducted manually by PI. The data were then breakdown into discrete parts, closely examined and compared for similarities and differences (i.e. themes was developed from the data) and supplement quantitative findings.

#### **4.9. Data quality assurance**

##### **For qualitative**

To assure quality of the data the following measures were undertaken: The quality of data were assured through careful design of questionnaire, pretest of the questionnaire and proper training of the data collectors. A pre-test was conducted in 5% of the sample population in Finote Selam Town health facilities one week prior to the actual data collection. Based on the pretest result, the questionnaire was corrected accordingly. Before data collection, training was given for data collectors and supervisors about the aim of the study and the data collection technique .Supervision and immediate feedback was carried out on daily by the principal investigator. After the actual data collection process, each questionnaire was given a unique code; the collected data were cross checked for questionnaires consistency and completeness.

##### **For qualitative**

Appropriate key informants were selected for in-depth interview. Categorization and coding of the data were carried out after the information checked and for completeness audio tape recording was used in order to not miss important information for the IDIs.

#### **4.10. Ethical considerations**

Ethical clearance was obtained from Jimma University ethical review board. The permission letter was written from Debre Markos Town health department. Written informed consent was obtained from each key informant and verbal consent from each mother to follow the care provided to their baby and to interview them. Confidentiality of the study participants was maintained in each level of the response. Personal identifier was not used in the questionnaire to assure privacy. Termination of participation from the study at any time during the study was possible.

#### **4.11. Dissemination plan**

The research result is submitted to Jimma university, institute of health ,faculty of public health , Department of population and family health and disseminated to Town health office and public health facilities of the Town furthermore it will be presented on conferences and the manuscript will be submitted to Peer reviewed journals for publication. The hard and soft copy of manuscript will be submitted to Jimma University research library after incorporating the comments given by the assessors.

## CHAPTER FIVE: RESULT

For quantitative study a total of 286 newborns and mothers were included in the study with response rate of 100%. For qualitative study 10 key informants were participated

### 5.1 Socio demographic characteristics

The mean ( $\pm$ SD) ages of mothers were 27.59( $\pm$ 5.31) years. About 100 (35%) of the mothers were between age group between 25-29 years. Regarding with educational status 102(35.7%) of the mother have not formal education. The majority of mothers 241(84.3%) were married. Among mothers included in the study 175(61.2%) were come from urban area. From the total of 286 newborns observed the 152(53.1%) were females. (Table 2).

Table 2: Socio-demographic characteristics of immediate postnatal mothers and new born in public health facilities of Debre Markos Town, Northwest Ethiopia, 2020.

Variables	Category(N=286)	Frequency(N)	Percent (%)
<b>Age of respondent</b>	15-19	7	2.4
	20-24	83	29
	25-29	100	35
	30-34	54	18.9
	35-39	38	13.3
	40-44	4	1.4
<b>Educational status of mothers</b>	Not formal education*	102	35.7
	Formal education**	184	64.3
<b>Marital status of mother</b>	Unmarried ***	45	15.7
	Married	241	84.3
<b>Residence</b>	Urban	175	61.2
	Rural	111	38.8
<b>Average family income</b>	<1200	69	24.1
	1200-1800	78	27.3
	1801-3200	71	24.8
	3201-8000	60	21
	>8000	8	2.8
<b>Sex of new born</b>	Male	134	46.9
	Female	152	53.1

\*Unable to read and write & Read and write \*\*Primary, Secondary, Collage and above.

\*\*\*never married, divorced, and widowed.

## 5.2 Health service and obstetric related characteristics of immediate postnatal mothers

About greater than half of the mothers, 177 (61.9%) were multiparous. With regard to birth preparedness 189(66.1%) of mothers are prepared for birth by making birth preparedness activity like preparing essential items(clean cloth, funds for birth-related and emergency expenses) for clean and safe delivery before delivery. Concerning history ANC, 184(64.3%) of mothers had attended antenatal clinic at least once during their pregnancy period.

Concerning consultation of immediate new born care during ANC visit, from all mothers that had history of ANC about 120(62.2%) of mothers were not counsel about immediate new born care. With regard to consultation of immediate new born care during delivery only 87(30.4%) of mothers are counseled about immediate new born care. From all mothers about less than half of mothers 139(48.6%) had knowledge on the components of immediate new born care. Concerning mode of delivery the majority of mothers 189(66.1%) had history of spontaneous vaginal delivery.

Table 3: Health service and obstetric related characteristics of immediate postnatal mothers in public health facilities of Debre Markos Town, Northwest Ethiopia, 2020

Variables	Category(N=286)	Frequency(N)	Percent (%)
<b>Parity</b>	Primiparous	109	38.1
	Multiparous	177	61.9
<b>Birth preparedness</b>	Prepared	189	66.1
	Not prepared	97	33.9
<b>History of ANC visit</b>	Yes	184	64.3
	No	102	35.7
<b>Number of ANC visits (N=184)</b>	One ANC visit	121	68.8
	Two ANC visit	40	21.7
	>= 3 ANC visit	23	12.5
<b>Knowledge on ENC</b>	Good	139	48.6
	Poor	147	51.4
<b>Counseled on ENC during ANC visits(N=184)</b>	Yes	64	37
	No	120	62.2
<b>Counseled on ENC during delivery</b>	Yes	83	29.0
	No	203	71.0
<b>Mode of delivery</b>	CS	97	33.9
	SVD	189	66.1

ANC: Antenatal care, ENC: Essential newborn care, CS: cesarean section, SVD: spontaneous vaginal delivery

### 5.3 Availability of drugs, materials and supply

Among total newborns observed checklist, 202 (70.6%) newborns were received immediate newborn care with good supply of drugs, materials and medical equipment while 84 (29.4%) of newborns were received immediate newborn care with poor supply of drugs, materials and medical equipment. Among all essential drugs assessed availability and use of essential drugs for each newborn range from vitamin K(95%) to TTC eye ointment(76%).with regard to essential medical equipment and materials availability and use for each new born range from newborn resuscitation material(58%) to syringes and needles(92%)

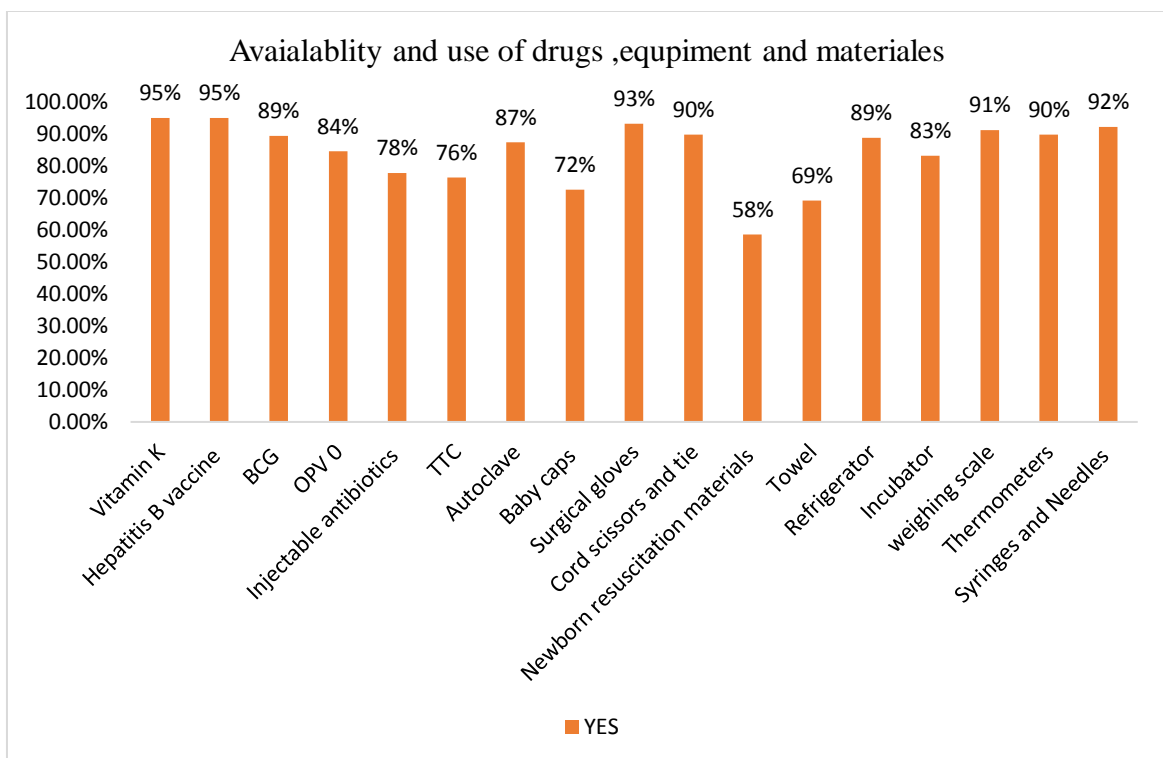


Figure 3 : Availability and use of drugs, equipment's and materials at public health facility of Debre Markos Town, North West Ethiopia.

## 5.4 Newborns care service provision by health workers

Ten in depth interview were conducted on competency of health professionals on their work, training of health professionals on immediate new born care practice and challenges of health professionals to give appropriate immediate new born care practice.

Table 4: In-depth interview participant's demographic status in public health facilities of Debre Markos Town, Northwest Ethiopia, 2020.

Participant Code	Age	Sex	Educational Statuses	Types of Profession	Position
P1	30	M	Diploma	Nurse	Head
P2	28	M	Degree	Midwife	Midwife
P3	29	F	Degree	Midwife	DTWL
P4	35	F	Diploma	Midwife	Midwife
P5	40	M	Master	Nurse	Head
P6	24	F	Diploma	Midwife	Midwife
P7	31	M	Degree	Midwife	DWTL
P8	25	F	Degree	Midwife	Midwife
P9	32	M	Degree	Midwife	DWTL
P10	26	F	Degree	Midwife	Midwife

M: Male, F: Female, DWTL=Delivery Ward Team Leader

### 5.4.1 Theme one –Competency of health professionals on their work

Competency of health professionals include their knowledge on immediate new born care, skill on different components and procedures of immediate new born care and work experience in the area. As mentioned by health facility heads and health professionals there is no knowledge gap on immediate new born care but still there is huge gap on skill to do different cares and procedures which affect level of immediate new born care practice.

*“Most of midwives are new here since there is turn over so there is a skill gap on professionals.....there are health professionals that directly come from college and university especially in newborn resuscitation part there is huge skill gap but with regard to number of human resource there is no problem currently there is around 45 midwife with senior and GP .....To alleviate this skill gap problem there are senior staffs as well as there are also fresh midwives and they communicate each other and share experience.....”* (A 31 years old Male delivery ward team leader from referral hospital)



*“.....Ok Most of the time there is no theoretical knowledge gap on health professionals regarding with immediate new born care but there is practical skill gap so regular training on it is essential.....”(24 years Female Diploma midwife from Referral hospital)*

*“.....Ehhhhh there are different things regard with competence of health professionals in our health center like missing of procedures as well as negligence ....There is also skill gap during different procedures .....” (32 years old male BSC midwife from health center)*

#### **5.4.2 Theme Two –Training of health professionals on immediate newborn care**

According to health professional idea in all facilities there is no any regular training given in all health facilities on immediate new born care practice and as they stated it is important to give on site and regular training in immediate new born care since lack of training on immediate newborn care affect quality and effectiveness of care provision.

*“.....There is no any onsite or formal training for health professionals on immediate new born care. We are informed for case manager but still it is not implemented .....” (A 31 years old Male delivery ward team leader from referral hospital)*

#### **5.4.3 Theme Three – challenges of health professionals to give appropriate immediate new born care.**

According to the health professionals idea there are different problems that challenge health professionals to give appropriate immediate new born care. The major problems mentioned by health professionals were lack of adequate drugs, materials and medical equipment's to give immediate new born care and high client over flow especially in referral hospital.

*“.....Ehhhhh as you know in immediate new born care the basic problem is infrastructure for example one of the care is putting newborns on Radiate warmer so in thermal care there is a problem since we have one radiate warmer in this hospital plus the place is overcrowded even in one radiate warmer we put three or four newborn at a time and sometimes there is a problem of supply one care is for example vitamin K we give it immediately but most of the time it become stoke out and there is shortage of supply in TTC eye ointment .....In my opinion the infrastructure problem is deep rooted since this ward is overcrowded ....even we are asking for additional rooms from our nearby surgical ward but there is similar problem there.....”(A 31 years old Male delivery ward team leader from referral hospital)*

“.....The major problem in this delivery ward is that over crowdedness the ward ....as you see there is high client flow here since the laboring mothers are came from different areas even there is high reference rate so it is important to strengthen nearby primary hospitals to manage their case properly and to open primary hospital in the Town.....”(A 28 years old Female midwife from referral hospital)

“.....In our health center major problem that challenges health professionals is lack of supply of drugs. Most of the time drugs that are essential for newborn care are misplaced in inappropriate place and temperature and they become expired.....”(A 35 years old female diploma mid wife)

### 5.5 Level of immediate newborn care practices

Level of immediate newborn care practice is assessed by using 13 indicators and then the composite score is computed.

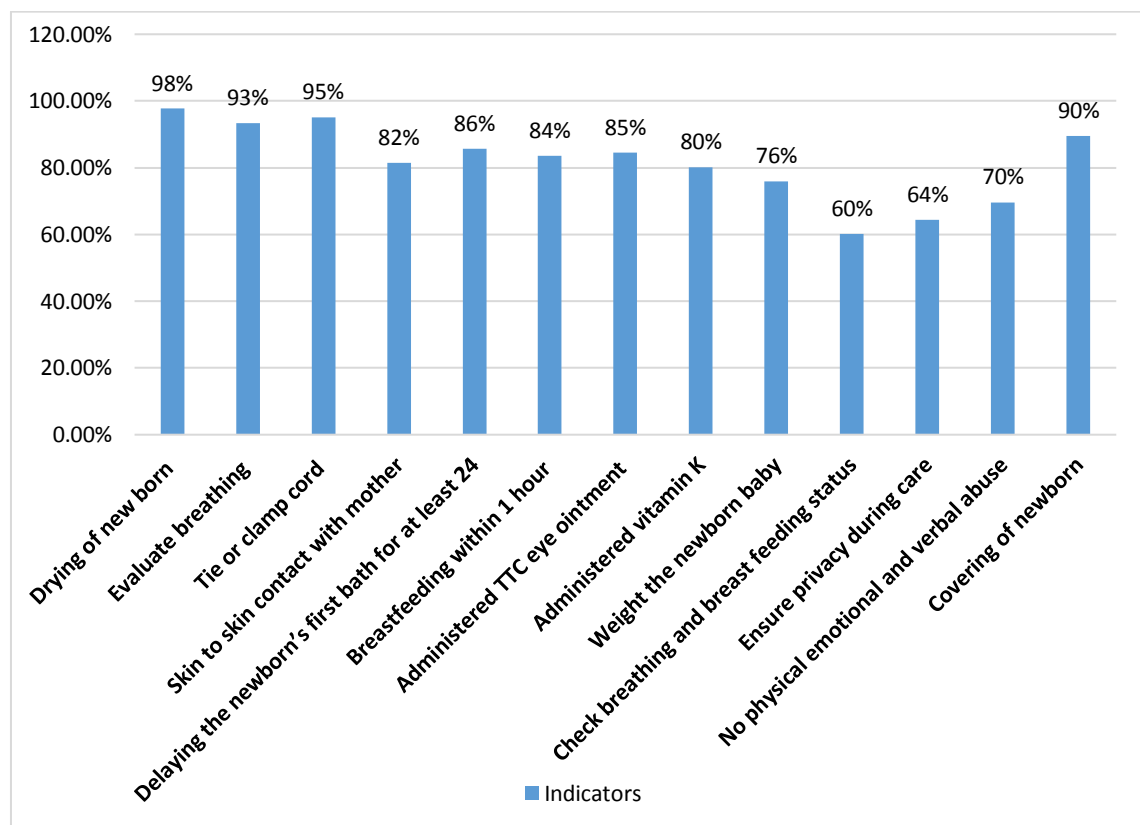


Figure 4: Indicators to assess level immediate newborn care practice and associated factors among newborns at public health facilities of Debre Markos Town, North West Ethiopia, 2020

After assessing the above 13 indicators by observational checklist during delivery then the composite score for level of immediate newborn care practice is computed hence,

from the total of 286 newborns observed in checklist, 220 (76.9%) with 95% CI of 72%-82% newborns were received good level of immediate newborn care practice while the remaining 66 (23.1%) of newborns received poor level of immediate newborn care practice.

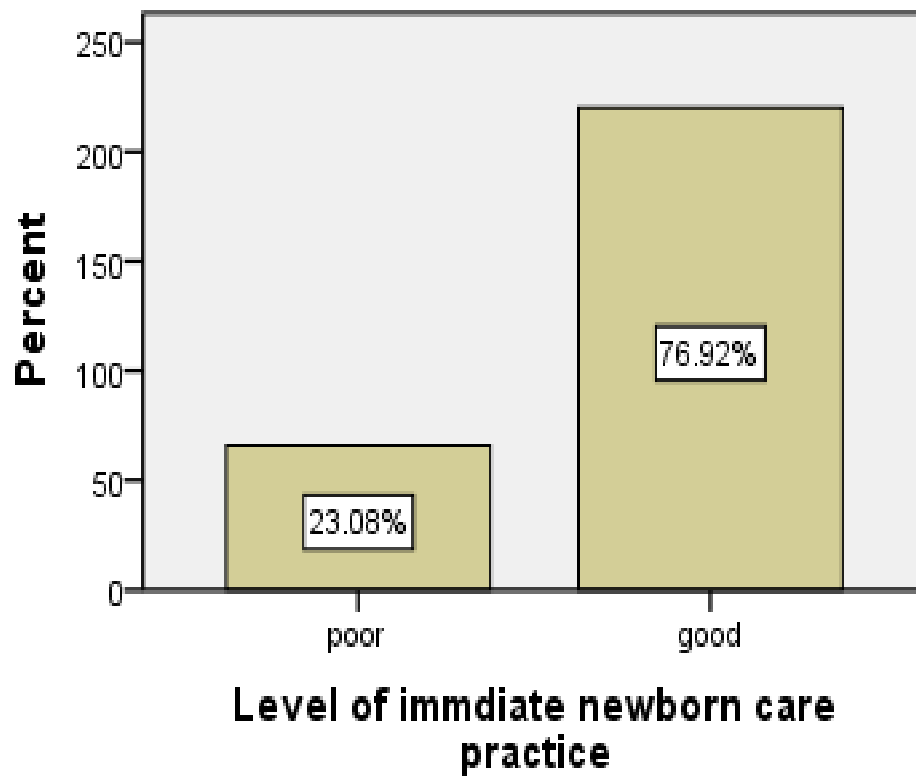


Figure 5: Level of immediate newborn care practice in public health facilities of Debre Markos Town, North West Ethiopia, 2020

### 5.6 Factors associated with good practice of immediate newborn care

Bi variable logistic regression analysis was conducted to identify the candidate variable for the multivariable logistic regression analysis. Hence in bi-variable analysis a total of 7 variables shows association with good practice of new born care at p value 0.25 and

nominated for further analysis and entered the final model. As it can be indicated in the result of the bivariate logistic regression analysis educational status of the mother, residency, birth preparedness, history of ANC visits, advice of ENC during delivery, maternal knowledge on the components of newborn care and availability of drug, equipment and materials were showed association with good practice of immediate newborn care. Hosmer and Lemeshow goodness of fit test at p value greater than 0.05 were used for model fitness test.

In multivariable logistic regression analysis four predictor variables, history of antenatal care (AOR=4.19;95%CI:1.78,9.86), mother's knowledge on immediate newborn care (AOR=4.83;95%CI:1.82,12.8), birth-preparedness (AOR=7.17;95%CI:3.04,16.9) and availability of supply, drugs, equipment and materials AOR=6.71;95%CI:2.95,15.2) were found to be independent predictors of the good practice immediate newborn care at p-value of 0.05.

The odds mother that have antenatal care follow-up during their pregnancy period were 3 times more likely to receive good practice of immediate newborn care for their newborn neonate as compared with mother had not antenatal care follow-up during their pregnancy period. The odds the mother with good knowledge on essential newborn care component were 5 times more likely to receive good practice of immediate newborn care for their newborn neonates as compared with mother that had poor knowledge on the components of essential newborn care. The odds mothers that had birth preparedness were 7.8 times more likely to receive good practice of immediate newborn care for their newborn neonate as compared with mother that had not birth preparedness. The odds of newborn received care with good supply in drugs, equipment and materials was 6.7 times more likely to receive good practice of immediate newborn care than those newborns cared with poor supply of drugs, equipment and materials

Table 5: Bivariable and multivariable analysis result of factors associated with good practice of immediate newborn care in public health facilities in Debre Markos Town, Northwest Ethiopia, 2020.

Variables	Immediate newborn care practice		COR(95% CI)	AOR(95% CI)	P-value
	Poor	Good			
<b>Residency</b>					
Urban	31(17.7%)	144(82.3%)	2.13(1.22-3.73)	1.12(0.49-2.51)	0.782
Rural	35(31.5%)	76(68.5%)	1		
<b>Educational status</b>					
Formal	31(16.8%)	153(83.2%)	2.57(1.46-4.47)	1.70(0.77-3.73)	0.184
Not formal	35(34.3%)	67(65.7%)	1		
<b>Counsel on ENC</b>					
Yes	6(7.2%)	77(92.8%)	5.38(2.22-13.03)	3.09(0.97-9.81)	0.055
No	60(29.6%)	143(70.4%)	1		
<b>History of ANC</b>					
Yes	16(8.7%)	168(91.3%)	10.09(5.30-19.2)	3.36(1.50-7.53)	0.003
No	50(49%)	52(51%)	1		
<b>knowledge on ENC</b>					
Good	8(5.8%)	131(94.2%)	10.67(4.85-23.4)	5.29(2.00-14.00)	0.001
Poor	58(39.5%)	89(60.5%)	1		
<b>Birth preparedness</b>					
Prepared	15(7.9%)	174(92.1%)	12.86(6.64-24.9)	7.80(3.36-18.06)	0.000
Not prepared	51(52.6%)	46(47.4%)	1		
<b>Availability of drug, equipment and materials</b>					
Poor	45(53.6%)	39(46.4%)	1		
Good	21(10.4%)	181(89.6%)	9.94(5.33-18.5)	6.79(3.05-15.12)	0.000

AOR: Adjusted Odd Ratio, COR: Crude Odd Ratio, 1=reference, CI: Confidence Interval, ANC: Antenatal care, ENC: Essential newborn care, CS: cesarean section, SVD: spontaneous vaginal delivery

## CHAPTER SIX: DISCUSSION

In this study, majority of newborns 220 (76.9%) received good practice of immediate newborn care which is in line with the study done in Sub-Saharan African countries(80%)(31), Wolayta zone public hospitals, South Ethiopia(75.8%)(8) and the study done in Northern Ethiopia (72.7%)(26). This similarities may be due to the study in Sub-Saharan African countries use similar study population and study design, the study done in Wolayta zone use similar standard tool and study population and the Northern Ethiopia study have similar Scio-demographic and cultural characteristics of the study population with the current study. But it is higher than the study done in the upper Himalayas (47.8%)(29), Ghana (33%)(32), Bahir Dar, North Ethiopia (55.7%)(28) and Addis Ababa Ethiopia (30%)(51). This may be due the study in upper Himalayas due to the difference in Scio-demographic, health service and cultural difference of the study population ,the study in Ghana used surveillance data, the study in Bahir Dar is only focus on provider perspective of quality of newborn care while study in Addis Ababa is more concentrated on maternal basic emergency obstetric and newborn care and assessed only three components of immediate newborn care.

According to this study 70.6% of newborns were received immediate newborn care with good supply of drugs, materials and medical equipment. This finding is in line with study done in Amhara regional state health facilities, Ethiopia (73.1%)(38) and almost comparable with study done in Wolayta zone, South Ethiopia(80.6%) (8) But higher than a cross-sectional observational study done in sub-Saharan African countries (30.8%)(31). This dissimilarities might be due to the later study is done at country level.

This study revealed that history ANC flow up, maternal knowledge on components of immediate newborn care, birth preparednes of the mother and availability of supply of drugs, material and equipment are significantly associated with good practice of immediate newborn care.

Hence the odds mother that have antenatal care follow-up during their pregnancy period were 3 times more likely to receive good practice of immediate newborn care for their newborn neonate as compared with their counter parts. Which is supported by the study done in Brazil which indicated that there is relationship between adequate antenatal care and immediate new born care practice in which newborns that had mothers with inadequate antenatal care was 1.17 times less likely to get good practice of immediate

newborn care(42),another systematic review and meta-analysis done in sub Saharan African countries which indicate that utilization of at least one antenatal care visit by a skilled provider during pregnancy increase good practice of new born care and reduces the risk of neonatal mortality by 39%(52),it also in line with another study done in Bahir Dar City Administration, North West Ethiopia which indicate those new born who had mothers received ANC service and not received ANC service were 24.7% and 9.6% had good practice of essential newborn care respectively(53).

This study also revealed that the odds of mother that had good knowledge on essential newborn care component were 5 times more likely to receive good practice of immediate newborn care for their newborn neonate as compared with mother had poor knowledge on the components of essential newborn care. This finding is consistent with the study done in Wolayta zone southern Ethiopia in which newborn who had mother with lack of knowledge on essential newborn care component were 2.7 times less likely to receive good practice of immediate newborn care as compared with their counter parts (8)and another study done in Southern Ethiopia in which newborn who had mother with lack of knowledge on essential newborn care component were 0.2 times less likely to receive good practice of immediate newborn care as compared with their counter parts(54). But it contrasted with a qualitative evidence synthesis done in low- and middle-income countries which revealed that there is no any relationship between maternal factors and immediate newborn care (41).This difference is may be due to the difference in study design and study population.

The result of the study indicate the odds of mother that had birth preparednes were 7.8 times more likely to receive good practice of immediate newborn care for their newborn neonate as compared with newborns whose mother had not birth preparedness. This finding is supported by Amaro Woreda, Southern Ethiopia, in which those newborn who had mother that had birth preparednes were 3.5 times more likely to receive good practice of immediate newborn care as compared with newborns whose mother had not birth preparedness(54).

Newborns received care with good supply in drugs, equipment and materials was 6.7 times more likely to receive good practice of immediate newborn care than those newborns cared with poor supply of drugs, equipment and materials. This finding is supported by study done in Brazil in which inadequate drugs and equipment for new born care is associated with level of immediate newborn care practice hence newborns received care with inadequate drugs and equipment is 2.16 times less likely received good practice

of immediate newborn care(42) and another the study done in Wolayta zone in which the odds of newborn received care with poor supply in drugs, equipment and materials was 1.8 times less likely to receive good practice of immediate newborn care than those newborns cared with good supply of drugs, equipment and materials(8).

### **6.1 Limitation and strength of the study**

The study have social desirability bias due to health workers self-report of their behavior. It also have Hawthorne effect since observation is used as data collection technique. There is also intra-observer and inter-observer bias. As strength of the study evidence of measurement of immediate new born care practice is strong since it is measured by observing the procedure in delivery ward during care provision rather than using secondary data.



## **CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIO**

### **7.1 Conclusion**

Majority of newborns received good practice of immediate newborn care but still there is gap to reach national set target which is 95% of newborn should receive newborn care components in 2020. In this study, having ANC follow up, birth preparedness of the mother, maternal knowledge on the components of ENC, skill gap of professionals, lack of training for health professionals and receiving care with good supply of drugs and materials needed for care were predictors good practice of newborn care.

### **7.2 Recommendation**

Based on the finding of the study the following recommendations are forwarded.

To pregnant women

- It is important to attend ANC follow up during their pregnancy period.
- It also important to make birth preparednes activity during pregnancy period.

To health facilities

- Antenatal care services for all pregnant women should be strengthened and considering immediate new born care as crucial element of positive pregnancy outcome
- Pregnant women should be informed about birth preparednes activity during their pregnancy period
- To assign Regular training of health professionals on immediate newborn care

To Town health office

- To assign supply drugs, materials and equipment needed for newborns care.

To health professionals

- To counsel mothers during ANC visits and delivery about newborn care to develop maternal knowledge

To researchers; longitudinal studies that may come up with deep rooted risk factors

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## ANNEXES

### ANNEX: ENGLISH VERSION QUESTIONNAIRES

#### ANNEX 1: INFORMED CONSENT FORM

Hello, my name is-----I am conducting a study on immediate newborn care practice among immediate newborns and associated factors at health facilities in Debre Markos town as part of the requirement to graduate with master degree in reproductive health from Jimma University.

You have been selected by chance among others. I would like to ask you some questions related to this study. Participation in this study is voluntary and you can choose not to take part. All information you will give will be confidential and will be used to make a general report. No names will be included in the report and there will be no way to identify you as one of the people who give information. The interviews may last about 20 minutes. If you have any question about the study, feel free to ask me.

Do you mind if we proceed? 1. Yes, Continue      2.No, stop

Respondent agreed to be interviewed Mark/circle each

Data Collector Name-----Signature-----Date-----

--

Supervisor Name-----Signature-----Date-----

-

#### ANNEX 2: QUESTIONNAIRES (ENGLISH VERSION)

##### Part one: observational checklist

Lists of variables that will be used in measuring immediate newborn care practice at public health facilities of Debre Markos town, 2020

Q no	Observe whether skilled birth attendant do the following after birth for the newborns	Response (observed)	Remark
	Skilled personnel:		
1	Dries newborn baby vigorously and change wet towel immediately after birth	1. Yes 2. No	

2	Evaluate breathing of newborn	1. Yes 2. No	
3	Tie or clamp cord after 2-3 minute of birth	1. Yes 2. No	
4	Ensure the baby is covered	1. Yes 2. No	
5	Ensure the baby is in skin to skin contact with mother	1. Yes 2. No	
6	Delaying the newborn's first bath for at least 24	1. Yes 2. No	
7	Ensure baby is start breastfeeding within 1 hour	1. Yes 2. No	
8	Administered TTC eye ointment	1. Yes 2. No	
9	Administered vitamin K	1. Yes 2. No	
10	Weight the newborn baby	1. Yes 2. No	
11	Check newborn breathing and breast feeding status every 15 minutes	1. Yes 2. No	
12	Ensure privacy during labor	1. Yes 2. No	
13	The mother and newborn is not physical emotionally and verbally abused	1. Yes 2. No	
Interview with mother and card review			
1.	Age	----- Years	
2.	marital status	1. single 2. Married 3. Divorced 4. Widowed	

3.	What is your educational statuses?	1. Illiterate 2. Read and write 3. Primary 4. Secondary 5. Collage and above	
4.	Address?	1. Urban 2. Rural	
5.	What is your average monthly family Income	-----ETB	
6.	Parity	1. Primiparous 2. Multiparous	
7.	Do you have any birth preparedness activity like preparing essential items(clan cloth, funds for birth-related and emergency expenses) for clean and safe delivery before delivery?	1. Yes 2. No	
8.	History of ANC	1. Yes 2. No	If no skip to Q.No 12
9.	Number of ANC visit	1. One ANC visit 2. Two ANC visit 3.Threeand above ANC visit	
10.	Are you Counseled on ENC during ANC visits?	1. Yes 2. No	
11.	Are you Counseled on ENC during delivery?	1. Yes 2. No	

12.	Did you heard about immediate newborn care after birth previously?	1.Yes 2.No	
13.	If yes for question number 12 what are the components	1. Breast feeding within one hr. 2. covering by towel 3. skin to skin contact 4. Delaying of first bath up to 24 hr. 5. Covering by hat	
14.	Mode of delivery	1.Spontaneous vaginal delivery 2.Cesarean delivery	

Lists of materials drugs and materials that will be used in immediate newborn care at public health facilities of Debre Markos town, 2020

Q no	Observe whether the new born get the following drugs after birth.	Response (observed)	Remark
1.	Vitamin K	1. Yes 2. No	
2.	Hepatitis B vaccine	1. Yes 2. No	
3.	BCG	1. Yes 2. No	
4	OPV 0	1. Yes 2. No	
5.	Injectable antibiotics for management of newborn sepsis	1. Yes 2. No	
6.	Tetracycline (TTC) eye ointment available	1. Yes 2. No	



7.	Oxygen for newborn use	1. Yes 2. No	
	Observe whether the following Equipment's and materials are available and used for newborn care		
8.	Functional autoclave	1. Yes 2. No	
9.	Refrigerator	1. Yes 2. No	
10.	Baby caps – and adequate cloths for drying	1. Yes 2. No	
11.	Surgical gloves	1. Yes 2. No	
12.	Cord scissors and cord tie	1. Yes 2. No	
13.	Newborn resuscitation materials (at least Bag and mask, mucus extractors, mask) available	1. Yes 2. No	
14.	At least two towel to dry and wrap baby after delivery available	1. Yes 2. No	
15.	Functional incubator (enough light or radiant warmer) available	1. Yes 2. No	
16.	availability of a baby weighing scale	1. Yes 2. No	
17.	newborn thermometers	1. Yes 2. No	
18.	caps or hats to prevent newborn heat loss,	1. Yes 2. No	
19.	Register for sick babies,	1. Yes 2. No	
20.	IV fluid (neonatal giving) set,	1. Yes	

		2. No	
21.	kangaroo mother care (KMC) registers and designated space or beds for KMC for small and sick newborns	1. Yes 2. No	
22.	Syringes and Needles	1. Yes 2. No	
23.	Sterile scissors or blade	1. Yes 2. No	
24.	Sterile disposable cord ties or clamps	1. Yes 2. No	

### **In depth interview guide**

Key informant in-depth interview guide line

Name of the interviewer \_\_\_\_\_

Hello, my name is-----I am conducting a study on care among immediate newborns and associated factors at health facilities in Debre Markos town as part of the requirement to graduate with master degree in reproductive health from Jimma University. Thus, this interview is prepared for this purpose to get appropriate information on factors that affect of immediate new born care in public health facilities of Debre Markos Town. The information that we will obtain using this interview will be used only for research purpose and also we need to assure you that confidentiality of your response will be kept. The study has no risk to you and your family members but has share some of your time. Therefore, we politely request your cooperation to participate in this interview. You do have the right not to respond at all or to withdraw in the meantime, but your input has great value for the success of our objective.

**Thank you for your cooperation!**

## **In Depth Interview Guide Developed for head of the facility**

### **Part I: General Information**

1. Types of profession \_\_\_\_\_
2. Work experience in the area \_\_\_\_\_

### **Part II: Socio-demographic information**

1. Age: \_\_\_\_\_
2. Sex: \_\_\_\_\_
3. Educational status \_\_\_\_\_

### **Part III. Interview Questions**

1. Do you think giving training for health professionals is important for immediate new born care practice?
2. Do you have any regular training on immediate new born care for health professionals in your hospital/health center?
3. Do you think human and physical resources are important for immediate new born care practice?
4. Do you have any scarcity of resources in your Hospital/health center which are important for immediate new born care (human resource ,material drug and equipment )

## **In Depth Interview Guide Developed for delivery ward team leaders**

### **Part I: General Information**

1. Types of profession \_\_\_\_\_
2. Work experience in the area \_\_\_\_\_

### **Part II: Socio-demographic information**

1. Age: \_\_\_\_\_
  2. Sex: \_\_\_\_\_
  3. Educational status \_\_\_\_\_
1. In your perception what are important factors that affect immediate new born care practice in this delivery ward?
  2. Is there any scarcity of physical (drug, equipment and materials) and human resource in this delivery ward?
  3. What solutions do you suggest to alleviate this problem and to give quality immediate new born care?

## **In-depth interview guide developed for skilled birth attendant's in delivery room**

### **Part I: General Information**

1. Types of profession \_\_\_\_\_
2. Work experience in the area \_\_\_\_\_

### **Part II: Socio-demographic information**

1. Age: \_\_\_\_\_
2. Sex: \_\_\_\_\_
3. Educational status \_\_\_\_\_

1. Immediately after birth, what are some of the things that you do for new born babies?(Probe: immediate drying and wrapping, skin to skin contact with mother, intation of breast feeding, management of asphyxia, covering of baby and management of early sepsis?)
2. Do you have any training on immediate new born care?
3. Do you think training on immediate new born care is important of immediate new born care practice?
4. What are the challenges that the health care personnel are faced with in carrying out their duties for new born in this labour ward?(Probe for: workload; staff; space; equipment; drugs, salary)
5. What will you recommend for better services for newborns delivered in this hospital and why? (Probe for: supervision; training; guidelines)

**የአማርኛ መጠይቅ**

**የስምምነት ቅጽ**

ስሜ----- እባላለሁ። በዚህ በደብረ ማርቆስ ከተማ ጤና ተቋማት ውስጥ የሚሰጠውን የጨቅላ ህጻናት ጤና ክንኳኔ አያያዝ ና ተያያዥ ምክንያቶችን በተመለከተ ጥናት እያደረሁ ነው። እርስዎን በተመለከተ እንደ ግለሰብ የሰጡን መረጃ ለሌላ ግለሰብ ወይም ድርጅት ያለ ስምምነትዎ የማናሳልፍና ለጥናቱ ጥቅም ብቻ የምናውል መሆኑን እንዲሁም ስምዎት የማይገለጽ መሆኑን እንገልጻለን። የጥናቱ አላማም ጨቅላ ህጻናትን እና ተያያዥ ምክንያቶችን በተመለከተ ማጥናትና ለጨቅላ ህጻናት ጤና አስተዋጽኦ ማድረግ ነው።

ስለዚህ የርስዎ ንቁ ተሳትፎና ቅን ምላሽ ለዚህ ጥናት በጣም ይጠቅመኛል። ምላሽ መስጠት ስለረዱኝ በጣም አመሰግናለሁ። ጥያቄዎችን ለመመለስ 20 ደቂቃ ያህል ይፈጃል።

መጠይቁን ለመመለስ ፈቃደኛ ነዎት

አዎ

አይደለሁም

መልስዎ አዎ ከሆነ መጠይቁን ይቀጥሉ

የጠያቂው ስም ----- ፊርማ----- ቀን-----

የሱፐርቫይዘሩ ስም ----- ፊርማ----- ቀን----- ክፍል አንድ፡ የምልክታ ጥያቄዎች

ማብራሪያ 2: - ጥያቄ (እንግሊዝኛ አንቀፅ)

ክፍል አንድ-የምልክታ ዝርዝር

ደብረ ማርቆስ ከተማ በ2012 አ.ም የህዝብ ጤና ተቋማት ውስጥ ለጨቅላ ህጻናት የሚሰጠውን ክንኳኔ ና አያያዝ ለመለካት የሚያገለግሉ ጥያቄዎች ዝርዝር ።

ተራ.ቁ	-ጨቅላ ህጻኑ በጤና ባለሰው የሚከተሉትን አገልግሎቶች አግኝቶታል	አማራጭ መልስ በመክበብ አሳይ	ምርመራ
1	አዲስ የተወለደ ሕፃን ይደርቃል እና ከተወለደ በኋላ ወዲያውኑ እርጥብ ፎጣ ይለውጣል	1. አግኝቶታል 2. አላገኘም	
2	የጨቅላ ህጻኑን እስትንፋስ መገምገም	1. አግኝቶታል 2. አላገኘም	

3	ከወሊድ ብዋላ 2-3 ደቂቃ ውስጥ የጨቅላ ህጻኑን እትብት መቁረጥ	1. አግኝቶዋል 2. አላገኘም	
4	ህጻኑን መሸፈን	1. አግኝቶዋል 2. አላገኘም	
5	ህፃኑ ከእናቱ መቀት ማግኘቱን ያረጋግጡ	1. አግኝቶዋል 2. አላገኘም	
6	የአዲሱ ሕፃን የመጀመሪያውን እጥት ቢያንስ ለ 24 ማዘግየት	1. አግኝቶዋል 2. አላገኘም	
7	ህጻን በ 1 ሰዓት ውስጥ ጡት ማጥባት መጀመሩን ያረጋግጡ ::	1. አግኝቶዋል 2. አላገኘም	
8	የቴ.ቴ.ሲ. (ቴትራሳይክሊን) የዓይን ቅባት አግኝቶዋል	1. አግኝቶዋል 2. አላገኘም	
9	ቫይታሚን ኬ አግኝቶዋል	1. አግኝቶዋል 2. አላገኘም	
10	የጨቅላ ህጻኑ ክበደት ተለክቶል	1. አግኝቶዋል 2. አላገኘም	
11	በየ 15 ደቂቃው አዲስ የተወለደ አተነፋፈስ እና የጡት ማጥባት ሁኔታን ይመልከቱ	1. አግኝቶዋል 2. አላገኘም	
12	ተመጣጣኝ ወይም ነፃ የወሊድ እንክብካቤ	1. አግኝቶዋል 2. አላገኘም	
13	በወሊድ ጊዜ ግላዊነትን ማረጋገጥ	1. አግኝቶዋል 2. አላገኘም	
<b>የእናቶች መጠይቅ እና ካርድ ግምገማ</b>			
001	<b>ዕድሜ</b>	-----ዓመታት	
002	የጋብቻ ሁኔታ	1. ያላገባች 2. ያገባች 3. ፍቺ 4. ባሏ የሞተ	
003	የትምህርት ደረጃ	1. ያልተማረ 2. መጻፍ እና ማንበብ 3. አንደኛ ደረጃ 4. ሁለተኛ ደረጃ 5. ኮሌጅ እና ከዚያ በላይ	
004	አድራሻ	1. ከተማ	

		2. ገጠር	
005	የእርስዎ አማካይ ወርሃዊ የቤተሰብ ገቢ	-----ብር	
006	የልጅ ቁጥር	1. አንድ 2. ሁለት እና ከዛ በላይ	
007	ከመውለድዎ በፊት የትኛውም ዓይነት የወሊድ ዝግጁነት አለዎት?	1. አለኝ1. አዎ 2. 2. የለም 3. የለኝም	
008	የርግዝና ወቅት ክትትል	1. አለኝ 2. የለኝም	
009	የርግዝና ወቅት ክትትል ካለ ስንት ጊዜ	1. አንድ ጊዜ 2. ሁለት ጊዜ 3. ሶስት እና ከዛ በላይ	
010	በርግዝና ወቅት ስለ ጨቅላ ህጻናት እክንካቤ ና አያያዝ ይሰጡዎታል?	1. አወ 2. አልተነገረኝም	
011	በወሊድ ወቅት ስለ ጨቅላ ህጻናት እክንካቤ ና አያያዝ ተነግሮታል	1. አወ 2. አልተነገረኝም	
012	ከወሊድ ብቻ ስለሚሰጠው የጨቅላ ህጻናት እክንካቤ ና አያያዝ ሲናገሩ	1. አወ1. አዎ 2. 2. የለም 3. አላውቅም	
014	የወሊድ ሁኔታ	1. በምጥ 2. በቀዶ ጥገና	

በደብረ ማርቆስ ከተማ የህዝብ ጤና ተቋማት ውስጥ ወዲያውኑ ለአራስ ሕፃን እንክብካቤ አገልግሎት የሚውሉ የቁሶች መድኃኒቶች እና ቁሳቁሶች ዝርዝር

Q no	አዲስ የተወለደው ከተወለደ በኋላ የሚከተሉትን መድኃኒቶች ያገኛል መሆኑን ልብ ይበሉ (የመዳኒቶች ዝርዝር)	አማራጭ መልስ በመክበብ አሳይ	ምርመራ
1.	ቫይታሚን ኬ	1. አዎ 2. የለም	
2.	ሄፓታይተስ ቢ ክትባት	1. አዎ 2. የለም	
3.	ቢ.ሲ.ጂ	1. አዎ	

		2. የለም	
4	የፖሊስ ክትባት	1. አዎ 2. የለም	
5.	በመርፌ ሚሰጡ አንቲባዮቲክሶች	1. አዎ 2. የለም	
6.	ቴትራክሊንሲን (ቴ.ሲ.ሲ.) የዓይን ቅባት	1. አዎ 2. የለም	
7.	አክሲዲን	1. አዎ 2. የለም	
የሚከተሉት መሣሪያዎች እና ቁሳቁሶች የሚገኙ እና አገልግሎት ላይ የሚውሉ መሆናቸውን ልብ ይበሉ			
8.	የመቀቀያ ማሽን	1. አዎ 2. የለም	
9.	ማቀዝቀዣ	1. አዎ 2. የለም	
10.	የመተንፈሻ ማሽን	1. አዎ 2. የለም	
11.	የሕፃን ኮፍያ እና ለማድረቅ በቂ ጨርቆች	1. አዎ 2. የለም	
12.	የቀዶ ጥገና ጓንቶች	1. አዎ 2. የለም	
13.	የእትብት ማሰሪያ እና መቀስ	1. አዎ 2. የለም	
14.	አዲስ የተወለደው ህጻን የመልሶ ለማቋቋም የሚረዱ ቁሳቁሶች (ቢያንስ ቦርሳ እና ጭምብል ፣ የጭስ ማውጫዎች ፣ ጭምብል) ይገኛሉ	1. አዎ 2. የለም	
15.	ከወለድ በኋላ ህፃኑን ለማድረቅ እና ለማሞቅ ቢያንስ ሁለት ፎጣ	1. አዎ 2. የለም	
16.	የጨቅላ ህጻኑ ሙቀት መስጫ ይገኛል	1. አዎ 2. የለም	
17.	የጨቅላ ህጻኑ ክበደት መለኪያ	1. አዎ 2. የለም	
18.	የጨቅላ ህጻኑ ሙቀት መለኪያ	1. አዎ 2. የለም	
29.	ለጨቅላ ህጻኑ ኮፍያ	1. አዎ 2. የለም	



20.	ለታመሙ ጨቅላ ህጻናት ምዝገባ	1. አዎ 2. የለም	
21.	ለካንጋሮ እናት እንክብካቤ ቦታ እና ምዝገባ	1. አዎ 2. የለም	
22.	ለጨቅላ ህጻናት ፈሳሽ መስጫ	1. አዎ 2. የለም	
23.	መርፊ	1. አዎ 2. የለም	
24.	የተቀቀለ መቀስ እና የእትብት መቁረጫ	1. አዎ 2. የለም	

**የጥልቀት ቃለ-መጠይቅ መመሪያ**

**የቁልፍ መረጃ ሰጪ ጥልቀት-ቃለመጠይቅ መመሪያ**

የቃለ መጠይቁ ጥያቄ ስም \_\_\_\_\_

ጤና ይስጥልኝ ፣ ስሜ ----- እባላለሁ በደብረ ማርቆስ ከተማ የህዝብ ጤና ተቋማት ውስጥ አዲስ በተወለዱ ሕፃናት እንክብካቤ እና ተጓዳኝ ጉዳዮችን ላይ ጥናት እያካሄዱኩ ነው ። ከጅም ዩኒቨርሲቲ በመራቢያ ጤንነት በማስተርስ ዲግሪ ለመመረቅ ከሚያስፈልጉ መስፈርቶች ይኤ አንዱ ነው ። ስለሆነም ይህ ቃለ መጠይቅ በደብረ ማርቆስ ከተማ የህዝብ ጤና ተቋማት ውስጥ አዲስ በተወለዱ ሕፃናት እንክብካቤ እና ተጓዳኝ ጉዳዮችን በተመለከተ ተገቢ መረጃ ለማግኘት ለዚህ ዓላማ የተዘጋጀ ነው ። ይህንን ቃለ መጠይቅ በመጠቀም የምናገኘው መረጃ ለምርምር ዓላማ ብቻ ጥቅም ላይ ይውላል እንዲሁም የምላሽዎ ሚስጥራዊነት እንደሚጠበቅ ለእርስዎ እናረጋግጣለን። ጥናቱ ለእርስዎ እና ለቤተሰብዎ አባላት ምንም አደጋ የለውም ነገር ግን የተወሰነ ጊዜዎን ያካፍላል። ስለዚህ በዚህ ቃለመጠይቅ ውስጥ ለመሳተፍ ትብብርዎን በትህትና እንጠይቃለን ። ምላሽ የመስጠትም ሆነ የመተው መብት አልዎት ፣ ነገር ግን ግብዓትዎ ለአላማችን ስኬት ትልቅ ዋጋ አለው።

ለትብብርዎ እናመሰግናለን!

**ለተቋሙ ኃላፊ የተዘጋጀ የቃለ-መጠይቅ መመሪያ**

**ክፍል አንድ: አጠቃላይ መረጃ**

1. የሙያ ዓይነት \_\_\_\_\_
2. የሥራ ልምድ \_\_\_\_\_

**ክፍል ሁለት- ማህበራዊ እና ስነ ህዝባዊ መረጃ**

1. ዕድሜ: \_\_\_\_\_

- 2. ጾታ: \_\_\_\_\_
- 3. የትምህርት ሁኔታ \_\_\_\_\_

**ክፍል ሶስት - ቃለ መጠይቅ ጥያቄዎች**

- 1. ለጤና ባለሙያዎች ሥልጠና መስጠት ለአዲስ ለተወለዱ እንክብካቤ አስፈላጊ ነው ብለው ያስባሉ?
- 2. በዚህ ሆስፒታል / የጤና ማእከል ውስጥ ለሚገኙ የጤና ባለሙያዎች አዲስ ለሚወለዱ ህጻናት እንክብካቤ ላይ መደበኛ ሥልጠና አላቸው?
- 3. አዲስ ለሚወለዱ ህጻናት እንክብካቤ የሰው ኃይል እና ቁሳዊ ሀብቶች አስፈላጊ ናቸው ብለው ያስባሉ?
- 4. በዚህ ሆስፒታል / የጤና ማእከል ውስጥ አዲስ ለሚወለዱ ህጻናት እንክብካቤ አስፈላጊ የሆኑ (የሰው ኃይል ፣ የቁስ ዕዕ እና መሣሪያዎች) በበቂ ሁኔታ አሉ?

**ለማዋለጃ ክፍል የቡድን መረ የተዘጋጀ የቃለ-መጠይቅ መመሪያ**

**ክፍል አንድ:አጠቃላይ መረጃ**

- 1. የሙያ ዓይነት \_\_\_\_\_
- 2. የሥራ ልምድ \_\_\_\_\_

**ክፍል ሁለት-ማህበራዊ እና ስነ ህዝባዊ መረጃ**

- 1. ዕድሜ: \_\_\_\_\_
- 2. ጾታ: \_\_\_\_\_
- 3. የትምህርት ሁኔታ \_\_\_\_\_

- 1. በዚህ የማዋለጃ ክፍል ውስጥ አዲስ ለተወለዱ ህጻናት እንክብካቤ ላይ ተጽዕኖ የሚያሳድሩ ነገሮች ምን ምን ናቸው ብለው ያስባሉ?
- 2. በዚህ የማዋለጃ ክፍል ውስጥ የመዳኒት፣ የመሣሪያዎች፣ የቁሳቁሶች እና የሰው ኃይል እጥረት አለ?
- 3. ይህንን ችግር ለማቃለል እና ጥራት ያለው አዲስ ለተወለዱ ህጻናት እንክብካቤ ለመስጠት ምን አይነት መፍትሄዎች ይጠቁማሉ?

**በማዋለጃ ክፍል ውስጥ ለሚሰሩ አዋጎች የተዘጋጀ የቃለ-መጠይቅ መመሪያ**

**ክፍል አንድ:አጠቃላይ መረጃ**

- 1. የሙያ ዓይነት \_\_\_\_\_
- 2. የሥራ ልምድ \_\_\_\_\_

**ክፍል ሁለት-ማህበራዊ እና ስነ ህዝባዊ መረጃ**

- 1. ዕድሜ: \_\_\_\_\_
- 2. ጾታ: \_\_\_\_\_

3. የትምህርት ሁኔታ \_\_\_\_\_

1. አዲስ ለተወለዱ ሕፃናት ከተወለዱ በኋላ ወዲያውኑ የሚያደርጋቸው ነገሮች ምንድን ናቸው?
2. አዲስ ለተወለዱ ሕፃናት እንክብካቤ ላይ ስልጠና አለዎት?
3. አዲስ ለተወለዱ ሕፃናት እንክብካቤ ስልጠና አስፈላጊ ነው ብለው ያስባሉ?
4. በዚህ የማዋለጃ ክፍል ውስጥ አዲስ ለተወለዱ ሕፃናት እንክብካቤ ለመስጠት የጤና ባለሙያዎች የሚጋጠሟቸው ተግዳሮቶች ምንድን ናቸው?
5. በዚህ ሆስፒታል/ የጤና ማእከል ውስጥ ለተወለዱ ሕፃናት ለተሻለ አገልግሎት ምን ይመክራሉ እና ለምን?

**DECLARATION**

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

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Name of the institution: \_\_\_\_\_

Date of submission: \_\_\_\_\_

This thesis has been submitted for examination with my approval as University advisor

Name and Signature of the first advisor \_\_\_\_\_

\_\_\_\_\_

Name and Signature of the second advisor \_\_\_\_\_

\_\_\_\_\_