

**ADDIS ABABA UNIVERSITY  
COLLEGE OF HEALTH SCIENCE  
SCHOOL OF PUBLIC HEALTH**



**Assessment of Magnitude and Determinants of Neonatal Care Practice among Mothers in Selected Health Centers of Addis Ababa, Administration, Ethiopia**

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**Declaration**

I declare that this research paper titled on Assessment of Magnitude and Determinants of Neonatal Care Practice among Mothers in Selected Health Centers of Addis Ababa city Administration, Ethiopia is my original work and has not presented for a degree in this or any other university, and that all sources of materials used for the research have been properly and suitable acknowledged.

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Place: Addis Ababa, Ethiopia

Signature\_\_\_\_\_ Date\_\_\_\_\_

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## Abbreviations

AARH	Addis Ababa regional Health Bureau
AAU	Addis Ababa University
ANC	Ante Natal Care
DHS	Demographic Health Survey
ENBC	Essential Newborn Care
EDHS	Ethiopian Demographic Health Survey
HEW	Health Extension Worker
LBW	Low Birth Weight
LMICs	Low and Middle Income Countries
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
NB	New Born
NGO	Non Governmental Organization
NM	Neonatal Mortality
NMR	Neonatal Mortality Ratio
PNC	Post Natal Care
REC	Review Ethical committee
SBAs	Skilled Birth Attendants
STS	Skin To Skin Contact
U5M	Under Five Mortality
WHO	World Health Organization

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## Abstract

**Background:** Essential newborn care is a wide-ranging approach planned to improve the health of newborns through interventions before, during and after pregnancy, immediately after birth and during postnatal period. In Ethiopia about 120,000 newborns die every year in the first weeks of life which accounts for 42% of all deaths of under five mortality.

**Objective:** The aim of this study was to assess the magnitude and determinants of essential newborn care practices among mothers in selected health centers of Addis Ababa, city administration, Ethiopia.

**Methods:** A facility-based cross-sectional study was conducted in February to March, 2015. A total of 576 women in the first six weeks of post partum were included in the study. The collected data were entered into computer using Epi-Data version 3.5 and analyzed using SPSS version 21. Logistic regression was fitted to assess possible associations and the strength of association was measured using odds ratio with 95% CI.

**Result:** The study revealed that the level of essential new born care practices was 38.8%. Education and advise about essential new born care practices during and after birth by skilled birth attendants (OR=2.17, 95%, CI=1.42,3.31),home visit by health extension worker (OR=1.55, 95%CI=1.03,2.32) and place of delivery at health centers (OR=7.69, 95% CI =1.32, 36.42), at private health facility(OR=9.18, 95% CI=1.32, 63.75) and government hospital (OR=6.68, 95% CI =1.32, 33.87) were found to have statistically significant association with essential new born care practices.

**Conclusion:** This study indicated that level of essential newborn care practices were low even though the majority of respondents practice early initiation of breast feeding and safe cord care. Home visit by health extension workers, timing of postnatal care visit by skilled birth attendants, advice about essential newborn care practices during and after pregnancy and place of delivery were found to be independent predictors of essential newborn care practices in the study area.

# 1. INTRODUCTION

Essential newborn care (ENC) is a wide-ranging approach planned to improve the health of newborns through interventions before, during and after pregnancy, immediately after birth and during postnatal period. Infant deaths occur during the first month of life accounts 70 %, decision-makers and health professionals in low and middle income countries (LMICs), in recent times, neglected the newborn care. One cause for little attention comparative to the enormous number of deaths is the invisibility of those deaths. Most deaths during the neonatal period occur at home and are often unregistered, postnatal services were scarce and traditional practices, such as delayed breastfeeding, untimely bathing, and unsafe cord care contributed to high newborn mortality rates. The additional reasons for this neglect include cultural adherence to high neonatal wastage; poor collection data on prenatal deaths, and a extensive misunderstanding that neonatal care is costly and depends on modern technology based equipment. But ,the essential new born care philosophy are easy, requiring cheap modern technology based equipment; resuscitation, radiant warmer to avoid hypothermia, early initiation of breast feeding, cleanliness, support for bonding and early treatment.[1],[2],[3].

Of the approximately four million global neonatal deaths that occur annually, it accounts for 38% of U5M. The same number of babies are still born and of all neonatal deaths 99% occur in low and middle income countries [4][5][6]. Among babies born alive in Africa, 290,000 die from complications during birth. Some of these deaths could be prevented by skilled care during pregnancy, delivery, and during postnatal period. For each neonate who dies, an unidentified number develop long term disabilities. In Africa an about four million babies are born with low birth weight each year. Particularly these babies are liable and lacking additional care is more likely to die from preventable causes, such as infections, hypothermia, or hypoglycemia. In the past decade in Sub-Saharan Africa, skilled care average coverage has increased only at 0.2 percent per year; with no quicker improvement, skilled attendance coverage will still be less than 50 percent in 2015 and addressing neonatal mortality is difficult[7].

About 120,000 newborns die in the first weeks of life every year which accounts for 42% of all deaths of U5M in Ethiopia, the highest risk of death is occurred in the first 24 hours of life while within the first weeks of life greater than half of deaths occur and about three-quarters of all neonatal deaths occur [8].

Under-five and infant mortality rates obtained by these surveys proof a continuous declining tendency in mortality. According to EDHS 2011 report neonatal mortality rate has remained stable at 37 deaths per 1, 000[9].The ultimate moment to bring interventions to get better health and survival of both the mother and newborn is early postnatal period. However, policies and programs have mainly unnoticed this serious time, delay efforts to meet the MDGs for maternal and child survival. The huge gap in postnatal coverage is apparent in 23 African countries in a recent analysis of DHS that is, no more than 13 % receive a postnatal care visit within three days of delivery [11]. The coverage of post natal care is also ranked as very low in Ethiopia; 92% of women with a live birth in the past five years did not get a postnatal checkup. As recommended, women get postnatal care within three days was only 7 percent [9].

Attention must be given to two most important gaps in the care provision. The primary continuum of care is by time. The time during pregnancy and delivery into babyhood contains a gap at delivery and during the first week of life, when the majority of neonatal and maternal deaths occur. The next gap is in the middle of levels of care mainly at family-community level [10]. Newborn care by the family is major for all newborns and includes promotion of breastfeeding and demand for health care during neonatal period and afterwards; provision of cleanliness and warmth decrease neonatal illnesses, particularly infection [11].

The responsibilities of mother are vital for essential newborn care. Promoting good home care of the newborn particularly cleanliness, warmth provision, and exclusive breastfeeding through family community package would have an expected reduction in the NMR of 10 to 40 percent. But when outreach services of prenatal care combined with a family package using community health promoters' decreases NMR by 30 percent as projected in Ethiopia [11]. Even though where all women give birth by skilled birth attendants in a facility newborn care practices may be affected by traditional practices after discharge and some components essential newborn care can be practiced at home by the family and community.

## ***1.1 Statement of problem***

Globally, each year, approximately four million babies die during the first 28 days of life and another three million are stillborn and seven newborn die every minute before their first month of life. Neonatal mortality accounts for approximately two-thirds of all infant mortality and 38% of deaths of children aged less than five years (under-five mortality). Ninety-nine percent of these deaths occur in middle- and low-income countries with half of deliveries occurring at home [4],[5],[6].

In developing countries, the risk of death during this period is six times greater than in developed world. Though these deaths could be easily prevented and avoided with simple, low cost and short period of time; the problem is still persisting due to lack of adequate maternal neonatal care practices [7],[8],[9]. Approximately 300,000 African babies die on first day of birth due to lack of adequate maternal neonatal care practices. Africa accounts for 11% of the world's population but more than 25% of the world's newborn deaths of the 20 countries in the world with the highest risk of neonatal death, 15 countries 75% are found in Africa [3],[10].

Ethiopia is one of the three countries in Africa with the highest newborn death and an estimated neonatal cause of death from infection is 47% which accounts for almost half of the neonatal death. Asphyxia & preterm deliveries also take high part in causing neonatal mortality [6]. Each year about 120,000 newborn die in Ethiopia and according to EDHS 2011report neonatal mortality rate has remained stable at 37 deaths per 1, 000[9].

## ***1.2 Significance of the Study***

This study will provide base line information for policy or decision makers at different levels and concerned institution on factors related to neonatal care practices of the mothers. It will be beneficial for health professionals, especially those who work on maternal and child health to build up the knowledge and evidence based practice on areas related to neonatal care practices of mothers. Similarly, the result of the study can be used for health education and awareness creation of community. Finally since there are limited published studies done around this area, it can be used as baseline data for other similar researches.

## 2. LITERATURE REVIEW

All neonates no matter who they are and where they born, they deserve a chance to survive and get the important health care, but the reality is much different than this truth. Every year 4 millions of newborns die. Developing countries like Ethiopia takes the account almost for 99% of the death throughout the world. The concern for neonatal death was limited till recent times, even though recent studies show neonatal death contributes 41% of the under-five mortality [7].

Infant mortality and under five mortality shows a significant reduction in the past 20 years, but NMR still high. It needs hard work to change this death of the neonate through the world; otherwise it is difficult to think about millennium development goal (MDG) 4. Essential newborn care is a comprehensive strategy designed to improve the health of newborns through interventions before conception, during pregnancy, at and soon after birth, and in the postnatal period. A set of practices that reduces neonatal morbidity and mortality such as clean cord care, thermal care and initiation of early breast feeding with in the first hour of birth are defined as essential newborn care practices. This should be given during neonatal period and necessary for all neonates [8],[9].

Women education in urban and rural areas about the activities on essential newborn care is very vital activities should be done by mothers who are primary care givers for their newborns in most context of the world [10], [11]. In low income countries (LICs), steps forward towards achieving Millennium Development Goal 4 to reduce by two-thirds under-5 mortality from the 1990 baseline- is being hindered by slow progress in reducing neonatal death. The neonatal period is only 1/60 of the first five years of life, but contributes 38% of the estimated 10.5 million under-five deaths which occur every year. It is estimated that each year four million neonatal deaths occur, and almost exclusively in low income countries [11], [12], [13].

There is a lack of data on newborn health from sub-Saharan Africa, and few studies have assessed inequity in uptake of newborn care practices. The World Health Organization recommends improving care practices at birth in order to decrease neonatal morbidity and mortality. These have been described as essential newborn care (ENC) practices [14] and include safe cord cutting, delayed bathing and initiating breast feeding within the first hour after birth.

These easy practices are significant for all babies in order to save lives, but also need to be integrated into a comprehensive newborn care package which includes immediate care at birth, care-seeking behavior, and additional care for sick and premature babies, and resuscitation. Successful promotion of ENC at scale could significantly contribute to reducing the leading causes of newborn deaths in LICs, especially those due to sepsis/pneumonia, preterm births and tetanus [15].

## ***2.1. Components of Essential Newborn Care***

**Cord care:** It is one of the essential newborn care practices. Clean blade, tie and keeping the cord environment clean and dry are the main intervention in clean cord practice. It is very useful in reducing the incidence of neonatal tetanus and umbilical sepsis, but evidence did not support topical treatment of the cord. But there are different cultural beliefs and practice that affect the cleanliness of the cord, mostly in developing countries the problem is seen repeatedly, which may be related with low level of economy of countries. Many studies indicate the problem is more common in rural areas than urban. There are different cultural belief in most countries related with unclean cutting process and putting different materials on the umbilical cord [16].

Researches done in Uganda in 2010 indicate cord cutting was mostly by use of a razorblade (67%) of which 10% were reused and only 28% reported to have used cord scissors. About half of the mothers put substances on the cord (such as powder, surgical spirit, salty water, or lizard droppings), which affect the cleanliness of the umbilical cord [17]. Study done in Nepal in 2006 shows the umbilical cord was cut with a new or boiled blade in 217(90.4%) deliveries and in 17(7.1%) deliveries a sickle or house hold knife or an old and un-boiled blade was used [19].

The stump of umbilical cord left undressed in 177(73.8%) deliveries but oil was applied in 53 (22.1%) deliveries. In all the instances mustard oil was used [15]. Application like turmeric and antiseptics were also reported by the mothers. The newborn was often wrapped in an old washed cloth (177, 73.8%).

Another study in Bangladesh in 2011 shows the severity of the problem on clean cord care, which shows blade was the most common modern instrument used to cut the umbilical cord. Relatively few of these blades came from a delivery bag (7.6%). In 43.8% of cases something was applied on the cord, of these 29% were potentially harmful substances (mustard oil with garlic, boric powder, shidur, talcum powder, blue ink, turmeric juice). Only 42.8% of newborns received complete cord care and also study done in East Gojan, was showed that safe cord cutting 97.6%[16],[17],[18].

Most of the researches done in developing countries like in Uganda and Nepal shows that there are still poor cord care practice that harm the cleanliness of the cord and expose the neonate for infection. The practice commonly done at community level and which expose the neonates for different complication and even death.

**Initiation of early breast feeding:** As world health organization states breast feeding should be initiated within an hour after birth, initiation of breast feeding within an hour is very beneficial for the mother and neonates. Colostrum is first breast product after birth which is highly nutritious and full of immunity. Early initiation of feeding is very advantageous for neonate to prevent from infection and high content of nutrient and help the mother for uterine contraction which prevents post-partum hemorrhage [3].

The WHO collaborative trial found the risk of mortality in non-breastfed neonates to be 2.5 to 7.0 times greater than for breastfed neonates. The practice of keeping well babies close to their mothers and allowing feeding on demand increases breast feeding rates, reducing both hypothermia and nosocomial infections[1],[3].

A study done in Uganda shows although all babies were breastfed only about half were initiated within the first hour of birth, with 41% were initiate breast feeding within 1-6 hours. Additionally the study done in Nepal in 2006 shows all the newborns were breastfed but clarified butter (ghee), oil, honey, sugar or animal milk was sometimes given to the newborns (37/240, 15.4%) before initiation of breast feeding. Ghee or oil was given to 19(7.9%) newborns. Overall, 203(84.6%) had given colostrums or breast milk to their babies as the first feed. Thirteen mothers (5.4%) had given breast milk mother lactating mothers when there was a delay in initiation of breast feeding. Twenty six out of 240(10.8%) mothers had discarded colostrums before initiation of breast feeding. The rates of initiation of breast feeding were 57.9% within one hour and 85.4% within 24 hours and study done in East Gojam, showed that early initiation of breast feeding was 41.6% [17],[18].

A study done on determinants of timely initiation of breast feeding among mothers in Goba woreda, Ethiopia shows that formal education, being urban resident, institutional delivery and postnatal counseling on breast feeding were significantly associated with timely initiation of breast feeding( $p < 0.05$ ). Finally the study conclude the practice of timely initiation of breast feeding is low as nearly half of the mothers did not start breast feeding with one hour after delivery[20]. The result suggest that breast feeding behavior change communication especially during the postnatal period is critical in promoting optimal practice in initiation of breast feeding. Mothers who live in rural area need special attention as they are distant from various information sources [16], [17].

Different study still shows there is lack of awareness about early initiation of breast feeding. In some communities their traditional practice to discard the colostrums, which has high nutritional value for the neonate. Breastfeeding should be initiated as early as possible to initiate the breathing system in addition to its ideal nutrition for the neonate, but literatures shows delaying of breastfeeding is common practice in developing countries.

**Bathing:** Bathing of a newborn baby should be delayed until the first 24 hours of birth to prevent the risk of hypothermia. Bathing cause hypothermia which threatens newborns with delayed fetal to newborn circulatory adjustment, acidosis, hyaline membrane disease, coagulation defects infection and brain hemorrhage .every second exposure to the outside environment results in heat loss via evaporation , conduction, convection and radiation [18]. Through drying direct to skin to skin contact immediately after delivery and covering with a blanket and bonnet (prior to cord clamping)drying also stimulate breathing. Sustained skin to skin contact and also initiate colonization of the newborn with maternal flora (as opposed to hospital flora) and facilitate olfactory learning, successful intake of colostrums and sustained breast feeding [18].

Bathing exposes newborns to hypothermia, but also removes maternal bacteria and the vernix-caseosa( a potent inhibitor of Escherichia coli) and eliminates the crawling reflex. It is theoretically possible that bathing a newborn infant early after birth may affect its adaptation to extra uterine life, particularly by adversely affecting its pulmonary and gastrointestinal circulation as well as its thermoregulation (hypothermia), by increasing evaporation and dilating the peripheral vessels in skin[21],[22].

In Uganda early bathing was norm, with 56% of the babies bathed with in the first 6 hours, 82% within the first 12 hours and almost all during the first 24 hours [15]. In fact some reports have found a higher incidence of hypothermia in newborns that were bathed early. There are studies which contradict with the theoretical effect of bathing. A study in Iran in 2007 about the effect of bathing in neonatal health shows no significant difference between infant bathed within 1-2 hours of birth and those bathed 4-6 hours after birth [16].

Similarly study done in Japan concludes early bathing, minute after birth did not appear to adversely affect the adaptation of healthy full-term and near-term newborn [17].These literature shows there is still contradict result about the outcome of early bathing on neonatal health. The study in Nepal shows 100(45.8%) new born were wrapped within 10 minutes and 97.1% newborns were wrapped within 30 minutes after birth. By one hour all the newborns were wrapped. Two hundred and twenty five (93.7%) out of 240 newborns were bathed after birth. Almost all of these newborns were bathed within six hours after birth. Nearly half of them were bathed within ten minutes, 88.9% within half an hour and 96% within one hour [14].

The application/massage of the newborn with oil was a common practice and 144(60%) newborns received an oil massage any time after birth. Almost all of these newborns received mustered oil massage traditionally for thermoregulation purpose [15]. A study done in Bangladesh in 2011 shows the proportion of newborns that received complete thermal protection was 5.1% (i.e., dried and wrapped within 10 minutes after birth and first bathed 72 or more hours following birth) only 44.6% of newborns were breastfed within 24 hours of birth. Postnatal care was received by only 9% of newborns; only 11% of these were seen by received care from medically trained providers and study done in East Gojam showed delay bathing 34.4 % [18],[19].

Different literature shows thermal care is an important practice that is important to reduce hypothermia and other complication, but there is high gap in practical aspect of thermal care. Some society may delay the wrapping of the baby for more than one hour. In most communities immediate bathing consider as a good practice culturally which is contradict with the good thermal care procedures.

## ***2.2. Determinants of Neonatal Care***

Research on newborn survival so far has either focused on examining the determinants of mortality or shown the patterns of newborn care practices by education, ethnicity or socio-economic status and focused on examining socio economic and demographic predictors of child mortality [2], [3].

The study done in Bangladesh in 2011 shows only 42.8% and 5.1% newborns received complete cord care and complete thermal protection. Only 44.6% of newborns were breast fed within one hour of birth. The proportion of newborns that received postnatal care within 24 hours of birth was 9%, and of them 11% received care from medically trained providers. Higher level of maternal education and richest bands of wealth were associated with complete thermal care and postnatal care within 24 hours of birth but not with complete cord care and early breast feeding. Use of sufficient antenatal care and assisted birth by medically trained providers were significantly associated with several of the newborn care practices [19].

**Age:** A study done in Italy in 2010 over all risk of prenatal death is statistically higher in advanced aged women ( $p < 0.05$ ), advanced age women seem to have higher risk of pregnancy complications, such as gestational hypertension and diabetes, neonatal clavicle fracture and prenatal death, and undergo more frequently to cesarean section which will end up in neonatal morbidity and mortality [19]. Similarly in Turkey TDHS 2008 showed that early and advanced maternal age are both related to increase neonatal morbidity and mortality [20]. As study shows both early and advanced age have an impact on outcome of the pregnancy and determine the wellbeing of the neonate [14].

**Parity:** Parity could be determinant factors especially for those who did not use family planning methods and in those countries with high fertility rate. The study done in Nepal in 2011 shows that parity has linkage with child survival. Similarly the study done in Turkey also indicate that the number of previous children  $>3$  and birth interval less than 24 months were determined to be closely related to higher neonatal mortality risks. The study done in Turkey in 2011 indicate the maternal determinants of child survival in rural African community, found that high parity together with illiteracy and chronic maternal stress hampered the survival of children [14,20].

**Educational back ground:** Different studies agree on an important way to empower women by education; it is obvious that empower future mothers to be stronger and wiser advocate for their own and children health. Educated girls tend to marry later and have fewer, healthier and better nourished children. Mothers with little or no education are much less likely to receive skilled support during pregnancy and child birth, and both mothers and their babies are in higher risk of death [19].

Different studies shows education has a positive impact on good newborn bathing practices for example the study done in Bangladesh in 2011 support the idea higher level of maternal education and richest bands of wealth were associated with complete thermal care and postnatal care within 24 hours of birth. The study done in Turkey shows newborns of illiterate mothers have a 3 times higher risk of dying than newborns of educated mothers. Similarly study done in Ethiopia, Jimma shows mothers who had formal education were 1.4 times as likely to initiate breast feeding within the first hour after delivery as compared to those who had no formal education [17, 19].

Ethiopian ministry of health also assure investments in education, particularly for women, that lead to better child health, lower fertility and reduced maternal mortality. Female literacy in Ethiopia is low only 18.5 percent, compared to 40% of men. EDHS in 2011 also indicate antenatal care is most common among women with higher than secondary education (91%) and those living in Addis Ababa (94%) [9], [19].

The study done in turkey in 2011 indicates an educated mothers living in rural areas and having more children receive less antenatal and postnatal care and are more likely to lose their newborn. The most important and effective factor is promote education for girls and strengthening the status of women in society. EDHS indicate most delivery is assisted by a health professional and whether the birth is delivered in health facility. For example 5%of birth to mothers with no education were attended by a health professional and delivered in a health facility compared with those mothers with some secondary education are between 70 and 72 percent of births. Less than 1% of women were attended by health extension workers [9].

Different literatures agree that education of the women tend to save lives of mothers and babies by enabling women to delay and prevent pregnancy when they are too young or too old, and to space their births at healthy intervals, which avoid neonatal death related to pregnancy complication. Totally women education is a priority method to solve the problem.

**Health service utilization:** The 2011 EDHS result shows that 34% of women who gave birth in the five years preceding the survey received antenatal care from a trained health professional at least once for their last birth. Antenatal care from a trained health professional has increased by 6% since 2005 EDHS estimate 28% (9). As save the children 2010 stated thousands of children die every day in developing countries because health system are grossly under-funded and cannot meet the needs of the people. More funding is needed for staffing, transport equipment, medicine, health worker training and supportive supervision, and the day to day cost of operating these systems [9].

The study done in Nepal shows positive relationship between antenatal care attendant and neonatal care, if a women receive ANC from SBA, they had a two fold increase in odds(OR 1.98, 95%CI 1.06-3.73)of delaying bathing of their newborn compared to women who did not receive ANC at all[14]. Mothers who were advised by health professional during pregnancy about the correct newborn bathing time had a 3.01 fold increase in the odds (95%CI 1.53-5.91) of performing good newborn bathing compared to women who were not advised by a health care provider [17,14]. Similarly the in Bangladesh support the idea use of sufficient ANC visit and assisted birth by health professional were significantly associated with several newborn care practices [19].

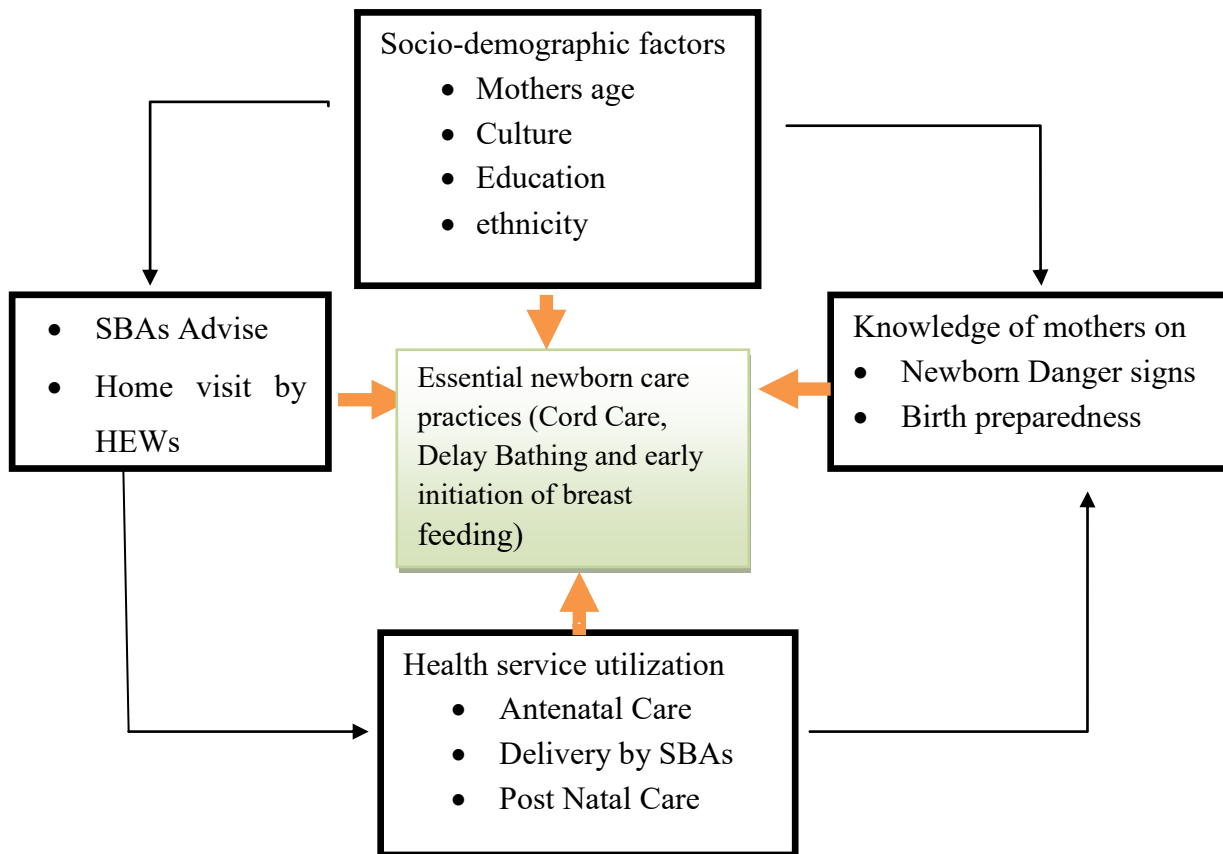
Another study here in Ethiopia, Jimma shows place of delivery and postnatal advice on breast feeding were significantly associated with timely initiation of breast feeding, mothers counseled on breast feeding during postnatal visit were about 52% more likely to initiate breast feeding with in the first hour of delivery[17]. Similarly, mothers who got postnatal education on breast feeding were 2.7 times more likely to initiate breast feeding within one hour after delivery,  $p < 0.05$  [21].

**Socio-economic factor:** The economic power of the women have a great impact on maternal and neonatal or community as a whole. As a women economically power full delay of health services due to lack of money can be avoided and also increase a decision making power and avoid dependence of women on their husband. Totally economic empowerment is a power itself to solve many problem especially related with maternal and neonatal health care. The study done in Nepal in 2011 shows socio economic background found to be having a positive association with good bathing practice. The women of the fourth and the highest wealth quintiles had 2.02(95% CI 1.03-3.94) and 2.40(95% CI 1.22- 4.73) fold increased odds of bathing newborns after 24 hours of birth compared to women of the lowest wealth quintile(14). Health system factors: The contribution of health system is important in studying the predictors of newborn care practices. Access to and availability of services and their quality are found to have an impact on care seeking behavior [14].

**Mothers' knowledge:**-The knowledge of the mothers has greater influence on care of the newborn. Knowledge and beliefs have a strong influence on the health care of the neonate. A study by Sharan done in (2004) showed that mothers knowledge of danger signs to be completely associated with the odds of breastfeeding the newborn within 24 hours of birth (OR 1.24, 95% CI 1.09-1.40), indicating that mothers who have more knowledge on health care of the newborn are more aware of the benefits of early breastfeeding. The study done in Nairobi in 1999 showed that the mother's knowledge of cord care practices in Nairobi, Kenya, The results showed that 91% and 28% of mothers have knowledge of the need for hygienic cord care. As for postnatal cord care, 40% had good knowledge and 66% had good practice [19].

**Birth preparedness:** is an important factor for healthy pregnancy and its outcome and a strategy to promote utilization of skilled maternal and neonatal care timely, based on the theory that preparing for childbirth and being ready for complications reduces delays in obtaining this care [21].

**Skilled birth attendant (SBA) at delivery:** To avoid infection during delivery, cleanliness is very important. In study done in Gahana, thirty percent of the attendants had washed their hands with soap before delivery, while 43.1% birth attendants used either gloves or plastic rubber bag to cover their hands before attending to the mother. This situation is less satisfactory. This coverage was very low and far from satisfaction because it opens opportunity for sepsis which is a result of infection during the conduct of delivery. Infection may account for up to 40.0% of neonatal mortality [21].



**Figure 1: - Conceptual frame work on factors associated with newborn care practices. (Constructed after reviewing literatures).**

## **3. OBJECTIVES**

### ***3.1. General Objective***

To assess the magnitude and determinants of essential newborn care practices among mothers who gave birth in the last six weeks in selected health centers of Addis Ababa city Administration, Ethiopia.

### ***3.2. Specific objectives***

- ✓ To assess the magnitude of newborn care practices among mothers in post-partum period.
- ✓ To identify factors affecting newborn care practices among mothers during post-partum period.

## 4. METHODS

### *4.1. Study Area and setting*

Addis Ababa is the capital city of Ethiopia and the seat of the Africa Union. As a chartered city, Addis Ababa has the status of both a city and state. Addis Ababa has a total population of 3,048,631, of whom 1,595,968 were females and the rest 1,452,663 males; with annual population growth rate of 2.1% and male to female ratio in the city is 0.91:1 all of them are urban inhabitants. According to CSA, 2012, about 94.3 percent of males are literate while the proportion of literate among female population accounted for 80.0 percent [24].

The city is classified in to ten sub cities which are the second level administrative units, followed by weredas, the lowest level administrative units. Addis Ababa has 10 sub cities and 116 weredas. Each sub-city is expected to serve a total population of 300,000 and each wereda for 30,000[27].

**Health services in Addis Ababa:** A total of eleven and eighty six government owned hospitals and health centers, 31 private hospitals and 700 different level private clinics are providing health service in the city. Health services to population ratio in Addis Ababa are 1:283,818 and 1:50,355 hospitals and health centers respectively [23]. The neonatal mortality in Addis Ababa is 21 per 1000 live birth. Currently, all health facilities of different categories are offering postnatal care. The total number of live birth attended in health facilities 46,134 among these 98 neonatal deaths was occurred and neonatal institutional death rate of Addis Ababa is 0.2[22,25].

## **4.2. Study design**

Health institution based Cross sectional study design was employed

## **4.3. Source population**

All women in reproductive age group who visited health centers under City Government of Addis Ababa Health Bureau for MCH service.

## **4.4. Study population**

Women who attended post natal care in selected health centers .

## **4.5. Sample size determination**

The required sample size was determined by using single population proportion formula. The prevalence of ENBC practices on these three composite variables in the study area is unknown. But, according to study done in Ethiopia 2013, the prevalence of dry cord care is 65.2% therefore; taking this( $p=0.65$ ), considering the non-response rate 10% and multiply by design effect of 1.5 the total sample size was 576[21].

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

$1.96 (1.96) * 0.652 (1-0.652) / (0.05)^2 = 348.65 + 10\% = 384 * 1.5$  design effect equals to 576.

The highest sample size was taken to maximize the number of study subjects to increase degree of precision and minimizing sampling error.

#### 4.6. Sampling procedures

Multistage sampling technique was employed to select the respondents of the study. First, out of ten sub-cities found in Addis Ababa City government, four sub-cities namely Gullele, Kolfe, Addis Ketema and Arada, were selected using simple random sampling method. Secondly, out of a total of 36 health centers found in the selected four sub-cities, a total of 15 (3 in Arada and 4 in each of Gullele, Kolfe, and Addis Ketema) Health centers were selected by a lottery method. The calculated sample size was allocated to each health facility based on population to proportion to size of the selected health centers. Then by using registration book as a sampling frame, checking the client load for the last three month before data collection. Finally, respondents in each health facility were selected using systematic random sampling technique where every 5<sup>th</sup> case/visitor was selected and reviewed.

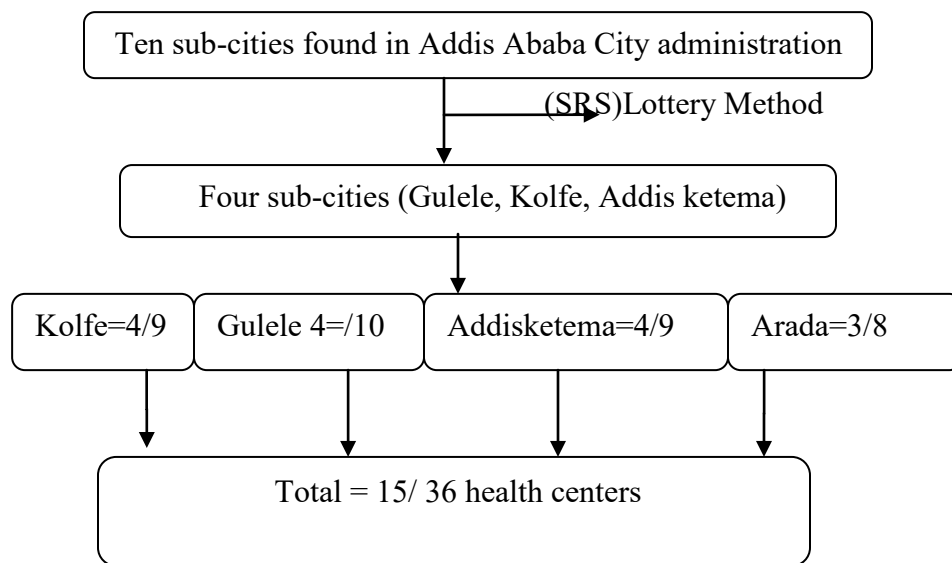


Figure 2:- Schematic presentation of sampling procedure

#### ***4.7. Inclusion and exclusion criteria***

Inclusion criteria: All Women who gave a live birth, who were within six weeks of postpartum and came for immunization and postpartum visit to health centers during data collection period were included in the study.

Exclusion criteria: Women who were seriously sick or with known mental illness, still birth and neonatal death were excluded from the study.

#### ***4.8. Data collection procedures and methods***

Data was collected using adopted and modified structured questionnaire from other researches to assess variables which influence newborn care practice of mothers. The questionnaire was initially prepared in English after an extensive search and review of relevant studies done on the issues under caption and then it was translated in to Amharic. The Amharic version was again translated back to English to check for consistency of meaning. The translated Amharic version questionnaire was pretested in similar areas outside of the study site prior to the actual data collection.

Five data collectors (voluntary community health workers who graduated diploma in nursing from private college) and one supervisor (one degree Midwife) were recruited from outside selected facilities. The purpose of the study was explained to them to minimize bias during data collection. The supervisor and data collectors were trained using lecture and field practice method for two days on basic principles of data collection, on questionnaire and how to do other related procedures during data collection by the principal investigator. An additional training on data completeness, cross-checking and correction actions was given to the supervisor.

Accordingly the supervisor continuously followed and supervised data collectors. The supervisor collected and cross-checked the completeness of questionnaires received from data collectors and took corrective measures accordingly. In addition to these activities the supervisor reported and discussed with the principal investigator on a daily basis throughout the data collection period. The data was compiled, cleaned and entered at the end of each data collection day.

#### ***4.9. Variables of the study***

Dependent variables: Essential newborn care practices (Safe cord care, Delayed bathing, Early initiation of breast feeding).

Independent variables: Age, Educational status, Ethnicity, Marital status, Parity, Mothers' knowledge on newborn danger sign, Health care service utilization.

#### ***4.10. Operational Definitions***

**Early initiation of breast feeding:** Initiation of breast feeding following delivery.

**Essential newborn care practices:** A set of practices which includes delay bathing, safe cord care and early initiation of breast feeding

**Good knowledge:** Mothers who knows at least four newborn danger signs.

**Poor knowledge:** mothers who knows less than or equal three newborn danger signs.

**Safe cord care:** Clean and dry cord without application of any foreign substances

**Thermal care:** Avoidance of bathing before 24 hrs and well wrapping of neonates head after bathing.

#### ***4.11. Data quality management***

To maintain data quality, all data collectors were health professionals (diploma nurses and degree midwife) who had knowledge on newborn and all of them were trained on data collection procedures by the principal investigator. Moreover, 5 % of the sample size was pretested at lideta health center to see for the accuracy of responses, language clarity, appropriateness of data collection tools, estimate the time required and the necessary amendment was considered. Accordingly minor corrections regarding language clarity and data collection tool were incorporated in to the study tool.

#### ***4.12. Data processing and Analysis procedures***

After data collection, filled questionnaires were coded and checked for completeness, consistency and clarity. Double data entry was used and entered in to Epi data 3.5 and analyzed using SPSS version 21 statistical soft wares. Frequency tables and descriptive summaries were used to describe the study variables. Significant variables ( $P < 0.2$ ) detected at bivariate level were subsequently entered into Multivariate LR model to control for possible confounding variables, to examine association and to produce crude and adjusted odds ratio along with their corresponding confidence limits (95% CI).

Variables that had significant association with the outcome variables in the crude analysis were entered in to multivariable logistic model. In a Multivariable logistic regression model using adjusted odds ratio (AOR) independent predictors of new-born care practices among post-partum mothers were identified through controlling the confounding effects of other variables. Before multivariate analysis, independent variables were checked for multi co-linearity effect using variance inflation factor and Hosmer lemsnow goodness of fit chi-square was checked for possibility of performing a logistic regression analysis.

#### ***4.13. Ethical consideration***

An ethical approval was obtained from Research and Ethics Committee (REC) of School of Public Health, college of Health Sciences, Addis Ababa University. Official letter of cooperation was written to Addis Ababa regional health office by the school of public health and AARHO was written letter of cooperation to selected sub-cities health office, then after; the selected sub-cities wrote letter of cooperation to the selected health centers where the study was conducted.

Informed verbal consent was obtained from each selected study participants who was in post-partum period during data collection to confirm willingness. Each woman had been informed about the purpose of the study and participation was voluntary. Also affirmation that they were free to withdraw consent and discontinue participation without any form of prejudices was made. Confidentiality of information and privacy of participants was assured for all the information

provided, to preserve the confidentiality the data was not exposed to the third party except the principal investigator and advisor.

#### ***4.14. Dissemination of the result***

Primarily, the result of this study will be submitted to, school of Public Health College of health sciences, Addis Ababa University and defended as partial fulfillment of the requirements for the degree of masters in public health. The information will be disseminated to the respective bodies (Addis Ababa city administration health bureau and Federal Ministry of Health) and the results will be published in national and international journal and presented in different conferences.

## **5. RESULTS**

### ***5.1 Socio-demographic characteristics***

A total of 576 post-partum women were willing and able to participate in the study making a response rate of 100%. Accordingly, analysis was made based on 576 participants. About 311(54.0%) of the respondents were belong to age group 25-34 years with mean age of 26 (SD of  $\pm 4.6$ ) years respectively. More than four-fifth of the respondents, 511(88.7%) of the women were married. Three hundred twenty eight (56.9%) of the respondents were house wives by their occupation. Majority, 425(73.8%) of the respondents claimed to have attended formal education. (Table1).

**Table 1:- Socio demographic characteristics of women in postpartum period, in health centers of four sub-cities of Addis Ababa city Administration, Ethiopia, (N= 576).**

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Mothers Age</b>		
15-24	231	40.1
25-34	311	54.0
35-44	34	5.9
<b>Religion</b>		
Orthodox	317	55.0
Muslim	200	34.7
Protestant	59	10.3
<b>Ethnic Groups</b>		
Amhara	198	34.4
Gurage	174	30.2
Tigre	116	20.1
Oromo	42	7.3
Others*	46	8.0
<b>Marital Status</b>		
Married	511	88.7
Never married	24	4.2
Divorced	41	7.1
<b>Education Level</b>		
Formal education	425	73.8
Can't read and write	90	15.6
Informal education	61	10.6
<b>Occupation</b>		
House Wife	328	56.9
Employee	155	26.9
Marchant	93	16.2

(\*=Wolayita, Silite and Hadiya)

## 5.2. Obstetric factors and Health service utilization

Five hundred fifty four (96.2%) of the respondents had less than three live births and twenty two (3.8%) had three and more live births. Five hundred seventy one (99%) of the respondents have attended antenatal care (ANC) for their current pregnancy of which 525(91.9%) had ANC visit at health centers. Almost three fourth 414(72.5%) of the respondents have started ANC visit at less than 4 month and 157(27.5%) started at greater than four month of gestational age. Four hundred fifty seven (79.3) of the respondents delivered at health centers(Table 2).

**Table 2:- Obstetrics factors and health service utilization of women in postpartum period, in health centers of four sub-cities of Addis Ababa city Administration, Ethiopia, April 2015.**

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Antenatal follow up (n=576)</b>		
Yes	571	99.1
No	5	0.9
<b>Place of ANC visit (n=571)</b>		
Health center	525	91.1
Gov. Hospital	16	2.8
Prvt. Health Facility	30	5.3
<b>Gestational age at first visit(n=576)</b>		
Less than 4 month	414	72.5
Greater or equal to 4 month	157	27.5
<b>Place of current delivery(n=576)</b>		
Health center	457	79.3
Prv. health facility	84	14.6
Home	18	3.1
Government hospital	17	3.0

### ***5.3. Home visit by HEWs and advise by skilled birth attendants***

Two hundred fifty seven (44.6%) of the respondents had visited by health extension worker in the last six months and one hundred fifty seven (61.1%) of the respondents had been educated on drying and wrapping of newborn, 189(73.5%) on early initiation of breast feeding and the remaining 160(62.3%) on newborn danger sign during home visit. Above half, 328(56.9%) of women have been advised on early initiation of breast feeding, 418(72.7%) on delay bathing and 412(71.5%) on cord care by skilled birth attendants before and after birth. (Table 3).

**Table 3:- Home visit by HEWs and advise by skilled birth attendants of women in postpartum period, in health centers of four sub-cities of Addis Ababa city Administration, Ethiopia, April 2015 G.C**

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Home visit by health extension worker(n=576)</b>		
Yes	257	44.6
No	319	55.4
<b>Drying and wrapping(n=257)</b>		
Yes	157	61.1
No	100	38.9
<b>Early initiation of breast feeding(n=257)</b>		
Yes	189	73.5
No	68	26.5
<b>Danger sign(n=257)</b>		
Yes	160	62.3
No	97	42.4
<b>Health education and advise by SBAs</b>		
<b>Early initiation of Breast feeding (n=576)</b>		
Yes	328	56.9
No	248	43.1
<b>Delay bathing(n=576)</b>		
Yes	418	72.7
No	158	27.3
<b>Cord care(n=576)</b>		
Yes	412	71.5
No	164	28.5

#### ***5.4 Prevalence of Essential Newborn Care practices***

In this study, early initiation of breast feeding , safe cord care and delayed bathing practices were studied for 576 women and 486(88.4%), 484(84.4%) and 309(53.6%) of the respondents demonstrated the practices, respectively.

##### **Early initiation of breast feeding**

One hundred ten(19.1%) of the mothers were given additional feeding other than breast feeding with in the first month and the item of additional feeding were 44(40.0%) water, (43(39.1%) formula milk and 15(13.6%) cow milk and 8(7.3%) honey. Five hundred thirty five (92.9%) of the respondents have reported they plan to continue exclusive breast feeding during the first six months.

**Table 4:- Practice on initiation of breast feeding of women in postpartum period, in health centers of four sub-cities of Addis Ababa city Administration, Ethiopia, April 2015 GC**

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Intonation of first breast milk (colostrum)(n=576)</b>		
Yes	550	95.5
No	26	4.5
<b>Time the first breast milk(colostrum)(n=550)</b>		
Within one hour afterbirth	486	88.4
After one hour after birth	64	11.6
<b>Which one is important for the first 6 month(n=576)</b>		
Breast milk	535	92.9
Additional foods	41	7.1
<b>Did you give additional fluid?(n=576)</b>		
No	466	80.9
Yes	110	19.1
<b>Additional fluid given for newborn(n=110)</b>		
Water	44	40.0
Infant formula	43	39.1
Cow milk	15	13.6
Honey	8	7.3
<b>Bottle feeding for current newborn(n=576)</b>		
No	456	79.2
Yes	120	20.8
<b>Reason for bottle feeding(n=120)</b>		
My breast has no enough milk	51	42.1
I am employee	41	34.3
I am too busy with homework	28	23.6
<b>water is important in the first one month(n=576)</b>		
No	482	83.7
Yes	94	16.3

## Safe cord care

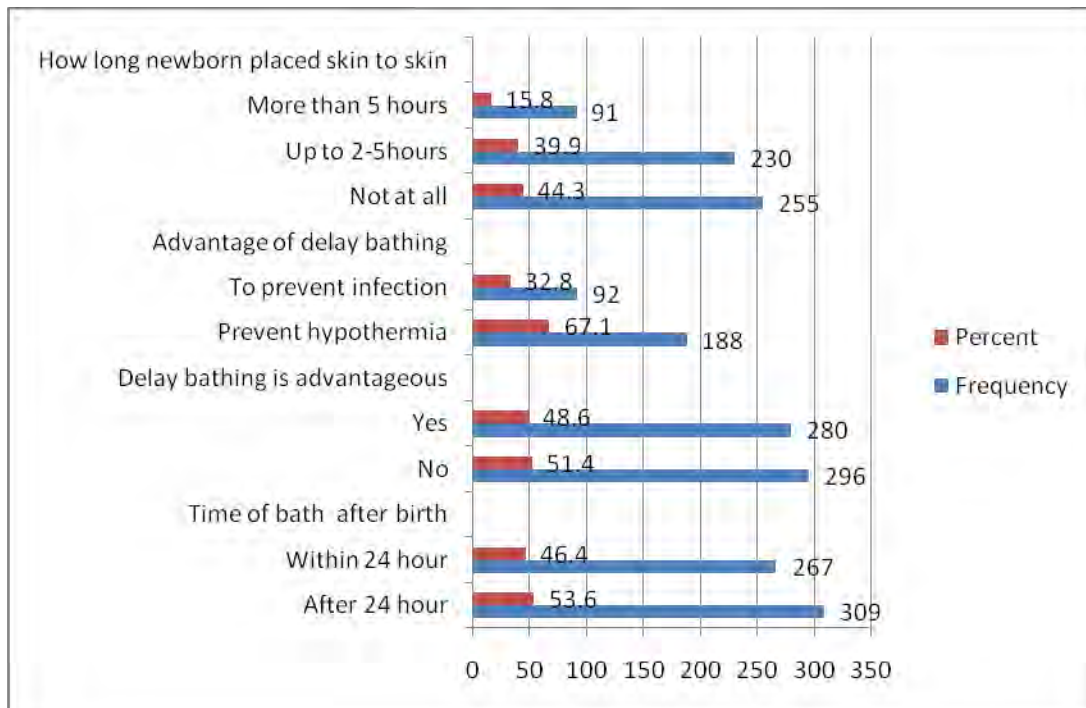
Ninety two (16.0%) of the respondents were reported as have applied anything on the cord, among these 74(80.4%) and 18(19.6%) of women had applied Vaseline and butter respectively. Most of the respondents 540(93.8%) have gone to health center for cord infection and 69(12.2%) of women had given home medication. Three hundred twelve (54.2%) of women took care of cord bleeding while 368(63.9%) of women kept the cord dry and clean (Table 5).

**Table 5:- Practice of cord care of women in postpartum period, in health centers of four sub-cities of Addis Ababa city Administration, Ethiopia, April 2015 G.C**

<b>Variables</b>	<b>Frequency</b>	<b>Percent</b>
<b>Applysomething on the cord(n=576)</b>		
No	484	84.0
Yes	92	16.0
<b>What did you apply(n=92)</b>		
Vaseline	74	80.4
Butter	18	19.6
<b>What do you do if cord bleeds or have foul smelling discharge?</b>		
<b>Go to health center(n=576)</b>		
Yes	540	93.8
No	36	6.2
<b>Home medication(n=576)</b>		
No	507	88.0
Yes	69	12.0
<b>Take care of cord bleeding(n=576)</b>		
Yes	312	54.2
No	264	45.8
<b>keep it dry and clean(n=576)</b>		
Yes	368	63.9
No	208	36.1

## Delayed bathing

Delay bathing of a newborn baby after the first 24 hours of birth to prevent the risk of hypothermia. With respect to adopting a good bathing practice, the result shows only 309(56.3%) of the respondents were bathed their newborn baby after 24 hours after birth. Two hundred sixty-seven (46.4%) of the women had given bath within 24 hour, whereas 309(53.6%) of women had given bath after 24 hour (Figure 2).



**Figure 3:- Illustrates distribution of delay bathing of the neonate of women in postpartum period, in health centers of four sub-cities of Addis Ababa city Administration, Ethiopia, April 2015 G.C.**

**The distribution of essential new born care practices:** Only 218(38.8%) of the respondents fulfill the three essential newborn care practices and lower than each individual practices that is, early initiation of breast feeding 486(88.4%), safe cord care 484(84.4%) and delayed bathing 309(53.6%).

### ***5.5 Knowledge of respondents' on danger signs of the new born***

About 369 ( 64.1%) of the respondents were answered the average and above about knowledge questions concerning poor sucking or not able breast feed, fever, fast breathing, lethargic or unconscious, hypothermia, convulsion, umbilical infection/such as redness of the cord, bleeding from the cord.

### ***5.6 Factors associated with Essential New Born Care practices***

In order to identify the association of independent variables with essential newborn care practices both bivariate and multivariate analysis were used. Those variables showed association with outcome variables in the bivariate analysis like home visit by health extension workers, importance of water during one month, bottle feeding, substances applied on the cord, advantage of delay bathing, place of delivery, time of postnatal care visit and advice by skilled birth attendants were selected as candidate variables for multivariable logistic regression analysis.

Table below indicated that those women who delivered at health centers 5.4 times more likely to practice essential new born care practice as compared with those women who delivered at home with [COR=5.49, 95% CI = (1.24,24.18)]. Those women who delivered at private health facility 5.3 times more likely to practice essential new born care practice as compared with those women who delivered at home with [COR=5.33, 95% CI = (0.88,32.15)]. Those women who delivered at government hospital 4 times more likely to practice essential new born care practice as compared with those women who delivered at home with [COR=4.14, 95% CI = (0.89,19.33)].

Those women who had got advise by skilled birth attendants about essential newborn care practices during and after pregnancy were 1.4 times more likely to practice essential newborn care practices as compared with those women who had not got advise about essential newborn care practices during and after pregnancy [COR=1.43, 95% CI = (1.01,2.01)]. Those women who

had got visit by HEWs were 1.3 times more likely to be practice essential newborn care practice as compared with those who had not got visit with [COR=1.31, 95% CI = (0.91,1.89)].(Table 8).

The multivariable logistic regression analysis was used by taking all these factors into account simultaneously and only four of the most contributing factors remained to be significantly and independently associated with essential newborn care practices (place of delivery, time of postnatal care visit, advice about essential newborn care practices by skilled birth attendants and home visit by health extension workers).

Place of delivery was found to have statistically significant association with essential newborn care practice of women. Those women who delivered at health centers 7.6 times more likely to practice essential new born care practice as compared with those women who delivered at home with [AOR=7.69, 95% CI = (1.32,36.42)]. Those women who delivered at private health facility 9 times more likely to practice essential new born care practice as compared with those women who delivered at home with [AOR=9.18, 95% CI = (1.32,63.75)]. Those women who delivered at government hospital 6.6 times more likely to practice essential new born care practice as compared with those women who delivered at home with [AOR=6.68, 95% CI = (1.32,33.87)].

Advice by skilled birth attendants about newborn care practices was showed statistically significant association with essential newborn care practice of women. Those women who had got advise by skilled birth attendants about essential newborn care practices during and after pregnancy were 2 times more likely to practice essential newborn care practices as compared with those women who had not got advise about essential newborn care practices during and after pregnancy [AOR=2.17, 95% CI = (1.42, 3.31)]. The presence of home visit by HEWs was showed statistically significant association with essential newborn care practice of women. Those women who had got visit by HEWs were 1.5 times more likely to be practice essential newborn care practice as compared with those who had not got visit with [AOR=1.55, 95% CI = (1.03, 2.32)] (Table 8).

**Table 6:- Association between selected factors and good new born care practices of women in postpartum period, in health centers of four sub cities of Addis Ababa city Administration, Ethiopia, April 2015**

Characteristics	Newborn care practices (%)		COR(95%CI)	AOR (95%CI)
	Yes	No		
<b>Age</b>				
Less than/equal to 26	207(52.0)	191 (48.0)	1.00	1.00
Greater than 26	69 (45.4%)	83(54.6%)	1.110 (0.76,1.16)	0.79(0.52,1.19)
<b>Home visit by health extension workers</b>				
Yes	66(34.6%)	125(65.4%)	1.31(0.91,1.89)	1.55(1.03,2.32)*
No	152(41.0%)	219(59.0%)	1.00	1.00
<b>Skilled birth attendants advise</b>				
Yes	112(35.1%)	207(64.9%)	1.43(1.01,2.01)*	2.17(1.42,3.31)*
No	106(43.6%)	137(56.4%)	1.00	1.00
<b>Place of delivery</b>				
Home	2(11.1%)	16(88.9%)	1.00	1.00
Government hospital	28(34.1%)	54(65.9%)	4.14(0.89,19.33)	6.68(1.32,33.87)*
Private health facility	6(40.0%)	9(60.0%)	5.33(0.88,32.15)	9.18(1.32,63.75) *
Health center	182(40.7%)	265(59.3%)	5.49(1.24,24.18)*	7.69(1.32,36.42) *

Where \* significant at < 0.05

## 6. DISCUSSION

This study attempted to assess the magnitude and determinants of essential newborn care practices and associated factors. The finding of this study revealed that the prevalence of newborn care practices was 38.8% and the prevalence of each component of newborn care practices included early initiation of breast feeding (88.4%), safe cord care (84.0%) and thermal care (53.6%). Home visit by health extension workers, timing of post natal care visit, advice about essential newborn care during and after pregnancy, and place of delivery were significantly associated factors of the essential newborn care practices.

Our study found that 84.0% of the women practice safe cord care, by keeping clean and dry, this result is higher than study done in Nepal, 2010 [14]. The possible reason for the variation might be due to the expanding health services coverage and increased awareness and information and maternal health services. This study finding lower than study conducted by JSI /L10K base line household survey in 2009 [13], study done in southern Tanzania in 2010[14], and study done in East Gojam, 2013[18]. This may be due to study setting, multi-cultural variation among countries and regions.

In this study demonstrated that about 16.0% of the women have applied different substance on the cord like butter and Vaseline. Among these 19.6% of women have applied butter this is lower than study done in Jimma, 2008[17], lower than study conducted in Uganda, 2010[19], Bangladesh, 2011[20] and lower than JSI /L10K base line house hold survey in 2009[13]. Higher than study done in East Gojam, 2013 [18]. This is may be due to awareness or may be because of most people think that applying butter would lubricate the cord and prevent dryness.

When the mother asked what they would do if the cord bleed or have a foul smelling discharge, 93.8% of them responded that they would take their neonate to health center, this may be due to better awareness and relatively better accessibility of health facilities. Since 96.8% of deliveries took place in health facilities cord cutting and tying procedures were carried out by health professionals. The women responsibility were only to keep clean and dry, otherwise different substance application would expose the neonate to cord infection and even may lead to death.

The prevalence of timely initiation of breast feeding observed in the study area was 88.4%. This is higher than finding of EDHS, 2011 [9], study done in Nepal 2010 [14], study done by JSI /L10K base line house hold survey in 2009 [13], study done in Goba Woreda, South East Ethiopia, 2011 [15], higher than EDHS 2011 Addis Ababa region [9], study done in Tanzania, 2010 [14], study done in Jimma Arjo Woreda, Southwest Ethiopia, 2012 [16] and study conducted in East Gojam, 2013 [18].

The finding of this study was found to be higher than national prevalence, other research areas reports and regional. This higher result may be due to awareness about the advantage of early initiation of breast feeding, it is recommend that all newborns should start breastfeeding immediately (with in the first hour after delivery) and the feeding of colostrums also promoted. This study showed that 95.5% of mothers had given colostrums. This could be due to media exposure, information and high percentage of institutional delivery. Women gave additional fluid for their current newborn in this study was 19.1% which was lower than the national EDHS, 2011 [9].

Compared to safe cord cutting and early initiation of breast feeding, bathing of the new born after 24 hours was practiced by only 53.6% of the women. This finding is higher than study done in Nepal, 2010, study done by JSI /L10K base line house hold survey in 2009, study done in Jimma, 2008, study done in East Gojam, 2013 [13], [14], [17], [18]. The finding of the study was found to be unacceptably lower this may be because of awareness about the importance of delayed bathing and may be lack of proper advise before, during and after birth.

In this study those women who were visited by HEWs more likely to practice ENBC as compared with those women who do not visited. Consistent finding was documented in a study done in Nepal in which female Community Health Volunteers was one of predictors [14]. This might be related to the fact that women visited by HEWs may have better understanding about the ENBC practices. This may be due to ongoing progress advice about the ENB care during the first PNC visit.

Skilled birth attendants counseling has been accepted as key factor influencing the healthy outcome of pregnancy and child survival [29, 30]. The finding of this study revealed that advice about ENBC practices was showed statistically significant association with ENBC practice of women. The likely hood of practicing ENBC was high among women who had got advice than those women who had not got advice during and after pregnancy. This may be due to ongoing advice and counseling during and after pregnancy.

The promotion of newborn care practices through home visits by health extension workers has been shown to reduce newborn deaths in high mortality settings in Asia [31]. Evidence from this study strongly showed that place of delivery was statistically significant association with ENBC practice of women. Those women who delivered at health centers, private health facilities and government hospitals were more likely to be practice ENBC as compared with those who delivered at home. This could be those women who delivered at health facilities were educated and advised about the ENBC during and after pregnancy.

## **7. STRENGTH AND LIMITATION OF THE STUDY**

### ***7.1. Strength of the study***

The study includes mothers with neonate within 45 days to reduce recall bias. Cover wide area of essential newborn care practice components (early initiation of breast feeding, cord care and thermal care).

### ***7.2. Limitations***

Since it is cross sectional study it did not address the cause and effect of the factors and Mothers who delivered at home and not came for PNC visit- not addressed.

## 8. CONCLUSION AND RECOMMENDATION

### **Conclusion**

This study indicated that level of comprehensive ENB care practices were low even though the majority of respondents practice early initiation of breast feeding and safe cord care. Home visit by HEWs, timing of PNC visit by skilled birth attendants, advice about ENBC practices during and after pregnancy and place of delivery were found to independent predictors of ENBC practices in the study area.

### **Recommendations**

**Government level:** Community oriented promotion of essential newborn care practices including health extension workers, skilled birth attendants and women participation on maternal and newborn health issues.

**Facility level:** Antenatal and postnatal care visit is one of the key interventions areas of maternal and neonatal health so that health workers should focus and promote essential newborn care practices during antenatal and postnatal visit.

**Researchers:** Nationally representative studies which involve communities at different level are recommended.

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## **Annex: I structured questionnaire and consent English version**

### Consent

Addis Ababa University College of Health Science, School of publichealth Department of Reproductive Health. Questionnaire Prepared for the assessment of magnitude and determinants of neonatal care practice of mothers in Public Health Institutions of Addis Ababa, Ethiopia.

This study includes all mothers of reproductive age visit in public health institutions for maternal and child health services during their post natal period intended to assess determinants of neonatal care among mothers living in Addis Ababa.

Hello: my name is \_\_\_\_\_ and I am from Addis Ababa University College of health science school of public health for a research undertaken by the mentioned university. I need to get your consent to participate on this study; it is your right to participate or refuse to participate on this study. So, I kindly ask you to listen carefully what I am reading for you about the purpose and general condition of the study and tell me whether you agree or not to participate in this study.

The objective of this study is to assess the determinants of neonatal care practice among mothers living in Addis Ababa and to communicate the study results with concerned institutions to improve the neonatal health status. The study will be conducted through interviews. It might take 10-15 minutes. Your name will not be written anywhere in the questionnaire. I would like to inform you that all information you give as is Confidential. Except for the purpose of the study it will never be disclosed to the third party. If you have any question regard to this study, you can ask immediately the interviewer or the investigator (Tele: 0942150069)

Part I: Socio demographic characteristics

Q.	Question	Answers and codes	Go to
101	How old are you?	_____ In Years	
102	What is your religion?	Orthodox_____ 1 Muslim_____ 2 Protestant_____ 3 Catholic_____ 4 Others(sepecify)_____ 5	
103	To which ethnic group do you belong?	Amhara_____ 2 Tigre_____ 3 Oromo_____ 1 Gurage_____ 4 Others(specify)_____ 5	
104	What is your marital status?	Never married_____ 1 Married_____ 2 Divorced_____ 3 Widowed_____ 4 Others(Specify)_____ 5	
105	What is your educational level?	Can't read and write _____ 1 Read and write_____ 2 Grade 1-8_____ 3 Grade9-10_____ 4 Grade11-12_____ 5 Diploma and above_____ 6	

Part II. Socio economic and demographic information

Q.	Question	Response	Go to
201	What is your occupation?	Merchant_____1 Governmentemployee____2 SelfEmployee_____3 Student_____4 Housewife_____5 Others(specify)_____6	
202	How much is your monthly income? in ETB		
203	Is there any situation that delays the health care of your current baby?	Yes_____1 No_____2 Nohealth problemishappen_____3	If2 skip to 205
204	What was the reason that delays the health care of your baby?	Lackofmoney_____1 Nonearbyhealthinstitution__2 Lackoftransport_____3 Lackofsocialsupport_____4 Don'tknow_____8	
205	Did you have a home visit by health extension worker in the last 6 weeks?	Yes_____1 No_____2	
206	What the HEW did advise you on care before and after delivery about the following points?	Yes _____ No	
	1.Hand washing with soap and water before handling the neonate.	1 _____ 2	
	2.Keeping the neonate immediately dry and wrapping during delivery.	1 _____ 2	

	3.Breastfeeding immediately after birth within an hour?	1	2	
	4.Danger sign of the neonate that need immediate health care	1	2	
	5.Immunization	1	2	
	6.How to care for low birth weight	1	2	

Part III: obstetric information and health care service utilization

Q.N	Question	Response and Code	Go to
301	How many times have you been pregnant	One_____1 Two_____2 Three_____3 Four_____4 Five or more_____5	
302	How many children do you have (alive)?	One _____1 Two _____2 Three _____3 Four _____4 Five or more _____5	
303	How many years / gap between your pregnancy	_____in months	
304	What was your age at first delivery?	In year _____	
305	Do you have antenatal follow up for current pregnancy?	Yes _____1 No _____2	If no go to 308
306	Where did you receive antenatal visit for current pregnancy?	GovernmentHospital_____1 Health center _____2 Pvt. Hospital _____3	
307	At what gestational age was your first visit?	_____months	

308. During your antenatal visit or delivery at health institution, did the health professional informed about the following points at least once?

	Counseling topics	Yes	No
	1.Breast feeding immediately after birth within an hour	1	2
	2.Care of newborn, particularly cleanliness, avoiding chilling	1	2
	3.Delay bathing of newborn for 24 hour	1	2
	4.Keeping the cord clean and avoid injuries	1	2
	5.immunization	1	2
	6. How to care for low birth weight	1	2
	7. Cord care for newborn	1	2
309	Where is your place of current delivery	Home_____ 1 Health center_____ 2 GovernmentHospital____ 3 Private Hospital_____ 4 Others(specify)_____ 5	
310	If it is home, why?	Nonearbyhealthfacility__ 1 Notransportation__ 2 Precipitated labor___ 3 Lack of money_____ 4 No partner for help__ 5 I don't want to go health facility_____ 6 Other specify_____ 7	
311	At which day do you return back to health institution for postnatal check up?	On the 3 <sup>rd</sup> day_____ 1 On the 6 <sup>th</sup> day_____ 2 On 45 <sup>th</sup> day_____ 3	

Part Iv: Assessing the knowledge and practice on initiation of breast feeding.

Q.	Question	Response and code	Go to
401	Are you currently feed breast exclusively?	Yes_____1 No_____2	If no skip to 404
402	Did you give the first breast milk (colostrums) for your baby?	Yes_____1 No_____2 Idon't know_____8	
403	When did you give the first breast milk(colostrums) for your baby?	Within an hour after birth____1 Within24 hours_____2 After 24 hours_____3 I don't know_____8	
404	What do you think more important for the baby in the first six month breast milk or additional nutrients?	Breastmilk_____1 Additional foods_____2 I don't kow_____8	
405	Did you give additional food for your current baby?	Yes_____1 No_____2 I don't Know_____8	For 2skip to 407
406	What additional food did you give for your current baby after birth?	Water_____1 Honey_____2 Cow milk_____3 Infant formula_____4 Butter_____5 Abesh_____6 Others(specify)_____7	
407	Did you use bottle feeding for the baby?	Yes_____1 No_____2	
408	Why did you use bottle feeding?	I am employee-----1 My breast has no enough milk-2	

		I am too busy with home work--3 My family advise-----4 Other specify-----5	
409	Did you think that water is important in the first one month for the baby?	Yes _____ 1 No _____ 2 I don't know _____ 8	

Part V: Assessing the knowledge and practice of cord care

Q.N	Question	Response and code	Go to
501	Did you apply anything on the cord of your baby?	Yes _____ 1 No _____ 2 Don't Know _____ 8	If no go to 503
502	What did you apply?	Butter _____ 1 vasiline _____ 2 Ointment/oil _____ 3 Others( specify) _____ 4 Don't Know-----8	
503	What do you do if the baby cord bleeds or have unpleasant discharge? 1.Go to health center 2.Home medication 3.Wait until heal by itself 4.Others(specify)_____	Yes                      No 1                              2 1                              2 1                              2 _____ 4	
504	What do you do to keep the cord clean and safe I take care of bleeding I keep it dry and clean I send to health facility for treatment	Yes                              No 1                                      2 1                                      2 -----4 -----5	

	Nothing Others(specify)_____		
--	---------------------------------	--	--

Part VI: Knowledge and practice of the thermal care of the neonate.

Q.	Question	Response and code	Go to
601	When did you give bath for the baby after birth?	Within 1 hour _____ 1 Within 24 hour _____ 2 After 24 hour _____ 3 Don't know _____ 8	
602	Do you think delay bathing is advantageous for the baby?	Yes _____ 1 No _____ 2 To prevent hypothermia-----3 Don't know _____ 8	If no skip to 604
603	If yes what is the advantage of delay bathing	Prevent hypothermia _____ 1 Preserves natural skin immunity_ 2 To prevent infection _____ 3 Other(specify) _____ 4 I don't know _____ 8	
604	Was the baby placed in skin to skin contact in the first 24 hours after delivery?	Not at all _____ 1 A little (upto 2 hour total) _____ 2 Moderate amount (between 2 to 5 hour total) _____ 3 More than 5 hour _____ 4 Always _____ 5	

Part VII: Newborn danger sign

Q.	Question	Response and code		Go to
701	Newborn danger signs	Yes	No	
	Poor sucking or not able feed breast	1	2	
	Fast breathing(>60/min)	1	2	
	Hypothermia(<35.5C°)	1	2	
	Fever(> 38C°)	1	2	
	Drowsy or unconscious	1	2	
	cord bleeding and infection	1	2	

## Annex II :-Amharic version questioners

የመጠይቁ ኮድ \_\_\_\_\_

የጤና ጣቢያ ስም: \_\_\_\_\_ የጤና ጣቢያ ኮድ:----

ክ/ከተማ \_\_\_\_\_ ኮድ \_\_\_\_\_

የጤና ጣቢያ ቁጥር \_\_\_\_\_

ክፍል 1 አጠቃላይ ግላዊ መረጃን የተመለከቱ ጥያቄዎች

	ጥያቄ	መልስ እና ኮድ	ዝለል
101	እድሜዎት ስንተ ነው?		
102	የሚከተሉት ሀይማኖት ምንድነው?	አርቶዶክስ-----1 ሙስሊም-----2 ፕሮቴስታንት-----3 ካቶሊክ-----4 ሌላ ካለ ይጠቀስ-----5	
103	ብሄርዎ ምንድነው?	አማራ-----1 አሮሞ-----2 ትግሬ-----3 ጉራጌ-----4 ሌላ ካለ ይጠቀስ-----5	
104	የጋብቻ ሁኔታ?	አላገባሁም-----1 አግብቻለሁ-----2 ተፋትቻለሁ-----3 ባሌ ሞቶብኛል-----4 ሌላ ካለ ይጠቀስ-----5	
105	የትምህርት ደረጃዎ ምን ያህል ነው?	ማንበብ እና መጻፍ የማይችል ___ 1 ማንበብ እና መጻፍ የሚችል ___ 2 1ኛ 8ኛ ክፍል _____ 3 9ኛ 10ኛ ክፍል _____ 4 11ኛ 12ኛ ክፍል _____ 5 ዲፕሎማ እና ከዚያ በላይ _____ 6	

ክፍል 2. የኢኮኖሚያዊ ና የማህበራዊ ሁኔታ፡

201	መደበኛ ስራዎች ምንድነው?	ንግድ-----1 የመንግስት ስራተኛ-----2 የግል ተቀጣሪ-----3 ተማሪ-----4 የቤት እመቤት-----5 ሌላ ካለ ይጠቀስ-----6	
202	የወር ገቢዎች ምን ያህል ነው?		
203	ህፃኑ ህክምና በወቅቱ እንዳያገኝ ያደረገ ሁኔታ ወይም ችግር ምን አለ?	አዎ-----1 የለም-----2 ህጻኑ የጤና እክል ገጥሞት አያውቅም--3	ለ2እና3 ወደ205 ይሂዱ
204	ህፃኑ ህክምና በወቅቱ እንዳያገኝ ያደረገ ሁኔታ ወይም ችግር ምን ነበረ?	የገንዘብ ችግር-----1 በቅርብየጤናአገልግሎት መስጫ ስለሌለ-2 ትራንስፖርት እጥረት-----3 የሚረዳኝ ሰው ስለሌለ-----4 የጤናአገልግሎትመስጫመሄድስላልፈለ-5	
205	ቤት ለቤት ህክምና የሚሰጡ የጤና ባለሙያዎች ባለፉት 6 ወራት ውስጥ ወደ ቤትዎ መጥተው ነበር?	አዎ-----1 የለም-----2	
206	ከመውለድዎ በፊትም ሆነበኋላ ማድረግ ስለሚገባዎት ነገር በቤት ለቤት (HEW) በየትኛው ርዕስ ላይ ትምህርት ተስጥቶዎት ነበር?	አዎ አይደለም	
	1.ህፃንእንደተወለደበንፁህእጅ/በሳሙናበው ሁታጥበን/ህፃኑንመያዝእንዳለብን	1 2	
	2.ህፃኑንእንደተወለደወዲያውኑማደራረቅእና በደንብማልበስእንደሚገባ	1 2	
	3.ህፃኑንእንደተወለደወዲያውኑጡትማጥባ ት እንደሚገባ	1 2	

4.ህጻኑ ላይ የሚታዩ የአደጋ ምልክቶችን በተመለከተ	1	2	
5.ከትባትናአስፈላጊነቱን በተመለከተ	1	2	
6.ከብደቱበጣምአናስተኛ ለሆነ ህጻን የሚደረግ ጥንቃቄን በተመለከተ	1	2	

ክፍል 3. የእናቶችንየወሊድሁኔታዎች/የስነተዋልዶጤናአገልግሎት/አጠቃቀምንበተመለከተ

301	ከዚህበፊትምን ያህል ጊዜ አርግዘዉ ወቃሉ?	አንድ-----1 ሁለት-----2 ሦስት-----3 አራት-----4 አምስትናከዚያበላይ-----5	
302	በህይወት ያሉ ስንት ልጆች አልዎት?	አንድ-----1 ሁለት-----2 ሦስት-----3 አራት-----4 አምስትና ከዚያ በላይ-----5	ለ1 ወደ 304 ይሂዱ
303	በልጆችዎ መካከል በትንሹየስንትአመት መራራቅ/የእድሜ ልዩነት አለ?	በወራት ይጠቀስ----- አላስታውስም-----8	
304	የመጀመርያ ልጆዎትን ሲወልዱ እድሜዎት ስንት ነበር?	በአመት ይገለጽ-----	
305	በአሁኑ እርግዝናዎት ወቅት የቅድመወሊድ ክትትል ነበርዎት?	አዎ-----1 አይደለም-----2	ለ2 ወደ 308ይዱ
306	በአሁኑ እርግዝናዎት ጊዜ ቅድመ ወሊድ ክትትል ያደረጉት የት ነበር?	የመንግስት ሆስፒታል-----1 የግል ጤና ድርጅት -----2 ጤና ጣቢያ-----3	
307	ቅድመ ወሊድ ምርምራ ስትጀምሪ እርግዝናሽ ስንት ወሩ ነበር?	የወራት ቁጥር-----	
308	ከመውለደዎ በፊትም ሆነ በኋላ በጤና ባለሙያ ከሚከተሉት የኞቹ ርዕስ ላይ ትምህርት ተሰጥቶዎት ነበር?	አዎ አይደለም	

	የምክር አገልግሎት ርዕስ		
	1.የጨቅላ ህፃኑን ሙቀት ሁልጊዜ መጠበቅእንዳለብዎት(የእናትየውናየህፃኑን ቆዳባማጋናጎትሙቀትመጠበቅ)በተመለከተ	1	2
	2.የጨቅላ ሕጻኑ እንደተወለደ ወድያውኑ ጡት ማጥባትን በተመለከተ	1	2
	3የጨቅላ ህጻኑ ላይ የሚታዩ አደጋኛ ምልክቶችን በተመለከተ	1	2
	4.የጨቅላ የህጻኑ እትብት እንክብካቤ በተመለከተ	1	2
	5.ክትባትና አስፈላጊነቱን በተመለከተ	1	2
	6.ክብደቱ በጣም አናስተኛ ሲሆን ለህጻኑ ስለ ሚደረግ ጥንቃቄን በተመለከተ	1	2
	7.ለጨቅላ ህጻኑን ከመያዝ(ከመንከበክብ በፊት) እጅን በሳሙናና በውሀ ማታጠብ እንደሚገባበት መለከተ	1	2
309	የአሁኑ ልጄዎን የወለዱት የትነው?	በቤት ውስጥ-----1 የመንግስት ሆስፒታል---2 የግል ሆስፒታል-----3 ጤና ጣቢያ-----4	መልሱ 2፣3፣4ከ ሆነወደ3 11 ይሂዱ.
310	ቤት ውስጥ የወለዱበት ምክንያት ምንድነው?	በቅርብ የጤና አገልግሎት መስጫ ስለሌለ----- -----1 የትራንስፖርት አጥረት-----2 የሚረዳኝ ሰው ስለሌለ-----3 ምጡ ስለተፋጠነ-----4 የገንዘብ ችግር-----5 የጤና አገልግሎት መስጫ መሄድ ስላልፈለጉ---- -----6	

		ሌላ ካለ ይጠቀስ-----7	
311	ህጻኑ ከተወለደ በኋላ በሰንተኛው ቀን ነበር ለድህረወሊድ ክትትል የመጡት	በ ሶስተኛው ቀን -----1 በ ስድስተኛው ቀን-----2 በ አርባ አምስተኛው ቀን-----3	

ክፍል 4: የእናቶች የጡት ወተት አጠባብ እውቀት

401	በአሁኑ ወቅት ጨቅላ ህጻኑን ጡት ብቻ ታጠቢያለሽ?	አዎ-----1 አይደለም-----2	
402	ልጅዎን የመጀመርያውን የጡት ወተት (እንገር)አጥብተውታል?	አዎ-----1 አይደለም-----2	ለ2ወደ 404ይዝ ለል
403	የመጀመርያውን ጡት ወተት ለልጅዎ የሰጡት መቼ ነው?	በእንደ ሰዐት ውስጥ -----1 በ24ሰዐት ውስጥ-----2 ከ24ሰዐት በኋላ-----3 አላስታውስም-----8	
404	ለህፃኑ በተወለደ በመጀመርያዎቹ ስድስት ወራት የትኛውን ቢመገብ የበለጠ ጠቀሟል ነው ብለው ያስባሉ የእናትጡትወይስሌላ ተጨማሪምግብ?	የእናትጡት-----1 ተጨማሪ ምግብ-----2	
405	የአሁኑ ልጅዎ ከተወለደ ከእናት ጡት ውጪ ሌላ ተጨማሪ ምግብ ሰጥተው ያዉቃሉ?	አዎ-----1 አይደለም-----2	ለ2 ወደ 407 ይሂዱ

406	ለአሁኑ ልጅዎን ከእናት ጡትውጪ ምን ተጨማሪ ምግብ ሰጥተውታል?	ውሀ-----1 ማር-----2 የላምወተት-----3 ቅቤ-----4 አብሽ-----5 የቆርቆሮ ወተት-----6 ሌላ ካለ ይጠቀስ ----7	
407	ልጅዎን ለመመገብ ጡጦ ይጠቀማሉ?	አዎ-----1 አይደለም-----2	ለ2ወደ 409ይሂ ዱ
408	ከእናት ጡት ዉጪ ጡጦ ለምን ሰጡት?	ሰራተኛ ስለ ሆንኩ-----1 የጡትወተት በቂ ስለል ሆነ-----2 ቤት ውስጥ ስራ ስለ ሚበዛብኝ-----3 በቤተሰብ ምክር ምክንያት-----4 ለላ ካለ ይጠስ-----5	
409	ልጅዎ በተወለደ በመጀመርያ ወር ውስጥ ውሀ መጠጣት ጠቃሚ ነው ብለው ያስባሉ?	አዎ-----1 አይደለም-----2	

ክፍል 5. ለህጻኑ የሚሰጠው የእትብት እንክብካቤ የሚመለከቱ ጥያቄዎች

501	የአሁኑ ልጅዎ እትብት ላይ የቀቡትን ነገር አለ?	አዎ-----1 ምንምየለም-----2	ለ2 ወደ 503 ይዝለል
502	እትብቱ ላይ የቀቡት ወይም ያደረጉት ነገር ምንድነው ?	ቅቤ-----1 ቫዝሊን-----2 ጠብታ/ዘይት-----3 ሌላ ካለ ይጠቀስ-----4 አላዉቅም-----8	

503	<p>የልጅዎ እትብት ቢደማ ወይም መጥፎ ጠረን ቢያመጣ ምን ያደረጋሉ?</p> <p>የጤና አገልግሎት እንዲያገኝ አደርጋለሁ</p> <p>ቤቱ ውስጥ እንከባከበዋለሁ</p> <p>በራሱ እስኪደን አጠብቃለሁ-</p>	<table border="0"> <tr> <td>አዎ</td> <td>አይደለም</td> <td>አላስታውስም</td> </tr> <tr> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td>1</td> <td>2</td> <td>8</td> </tr> <tr> <td colspan="3">-----4</td> </tr> </table>	አዎ	አይደለም	አላስታውስም	1	2	8	1	2	8	1	2	8	-----4			
አዎ	አይደለም	አላስታውስም																
1	2	8																
1	2	8																
1	2	8																
-----4																		
504	<p>እትብት ጤናማ እንዲሆን ምን ዓይነት እንክብካቤ ያደርጋሉ?</p> <p>1..ደምመፍ ስለእንዳይኖር አጠነቀቃሁ</p> <p>2.. በደረቁ እና በንጽህና አጠብቃለሁ</p> <p>3.የጤና አገልግሎት እንዲያገኝ አደርጋለሁ</p> <p>3.ምንም አላደርግም/አለወቅም</p> <p>5.ሌላ ካለ ይጠቀስ</p>	<table border="0"> <tr> <td>አዎ</td> <td>አይደለም</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td colspan="2">-----4</td> </tr> <tr> <td colspan="2">-----5</td> </tr> </table>	አዎ	አይደለም	1	2	1	2	1	2	-----4		-----5					
አዎ	አይደለም																	
1	2																	
1	2																	
1	2																	
-----4																		
-----5																		

ክፍል 6 ለህፃኑ የሚደረግለትን የመጀመሪያ የሰውነት እጥበት የተመለከቱ ጥያቄዎች

601	<p>ሕፃን ልጅዎ በተወለደ በስንት ጊዜ ውስጥ አጠብት?/baby bathing/</p>	<p>በአንድ ሰዓት ውስጥ-----1</p> <p>በ24 ሰዓት ውስጥ-----2</p> <p>ከ24 ሰዓት በኋላ-----3</p>	
602	<p>ህፃኑ ከተወለደ ጊዜ ጀምሮ ለተወሰነ ጊዜ ሳይታጠብ መቆየቱ ጠቀሜታ አለው ብለው ያስባሉ?</p>	<p>አዎ-----1</p> <p>አላስብም-----2</p> <p>ቅዝቃዜን ለመከላከል-----3</p>	<p>ለ2:3 ወደ 604 ዝል</p>
603	<p>ከተወለደ በኋላ ህፃኑ ሳይታጠብ ለተወሰነ ጊዜ መቆየቱ ጥቅም ምንድነው?</p>	<p>ቅዝቃዜን ለመከላከል-----1</p> <p>የህፃኑን የተፈጥሮ መከላከያ ለመጠጠ-----2</p> <p>ህፃኑን ከበሽታ ለመከላከል-----3</p>	
604	<p>ሕፃኑ እንደ ተወለደ ሙቀት ከአናቱ ሰውነት ወይም ቆዳ እንዲያገኝ ለረጅም ጊዜ በአናቱ እቅፍ ውስጥ እንዲቆይ ማድረግ ሞክረሽ ነበር?</p>	<p>አልሞክርኩም-----1</p> <p>ትንሽ ትንሽ (ለሁለት ሰዓት) ያህል-----2</p> <p>የተወሰነ (ከ2-5 ሰዓት) ያህል-----3</p> <p>ብዙ (ከ5 ጊዜ በላይ) ያህል-----4</p> <p>ሁል ጊዜ-----5</p>	

ክፍል 7 የሕፃናት የጤና እንክብካቤና ፈጣን የጤና አቅርቦት የተመለከቱ ጥያቄዎች

701	ህፃኑ በተወለደ በአንድ ወር ውስጥ ፈጣን የህክምና እርዳታ የሚያስፈልጋቸው የአደጋኛ ምልክቶች የትኞቹ ናቸው?/ከአንድ በላይ መመለስ ይቻላል ያበረትዋቸው/	አዎ	አይደለም	
	1. መጥባት አለመቻል			
	2. ቶሎቶሎ መተንፈስ	1	2	
	3. የሰውነት ሙቀት መቀነስ	1	2	
	4. የሰውነት ሙቀት መጨመር	1	2	
	5. በጣም መድከም መደም የንቃት መጠን መቀነስ	1	2	
	6. እትብት ላይ የሚፈጠር ቁስልተ	1	2	
	7. የትብት ላይ ደም መፈሰስ	1	2	
		1	2	