



**Process Evaluation of Community Based Newborn Care Program in
Geze Gofa District, Gamo Gofa Zone, Southern Ethiopia**

Evaluation Thesis Submitted to Faculty of Public Health Department of
Health Economics, Management and Policy, Health Monitoring and
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Monitoring and Evaluation

By: Tsegaye G/Medhin (BSc)

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Jimma, Ethiopia

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By: Tsegaye G/Medhin (BSc)

Advisors:

Dawit Wolde (BSc, MSc)

Yibeltal Kifle (BSc, MSc, Assistant Professor)

June, 2017
Jimma, Ethiopia

Abstract

Background: Community Based Newborn Care program is a comprehensive strategy designed to improve the health of newborns at community level through interventions during pregnancy, at and soon after birth, and in the postnatal period by Health Extension Workers.

Objectives: To evaluate the process of Community Based Newborn Care services implementation in Geze Gofa district, Gamo Gofa zone, Southern Ethiopia 2016/2017.

Methods: Case study design with mixed methods was employed to evaluate the process of Community Based Newborn Care program implementation from March 1 to 31, 2017. The process was measured using availability, compliance and acceptability/satisfaction dimensions with 36 indicators. A total of 321 mothers who gave birth from September 1, 2016 to February 30, 2017 were interviewed home to home. Moreover 27 direct observations, six-month retrospective document review, and 14 key informants' interview with manager and health workers were conducted purposefully. Quantitative data were entered in to Epi Data version 3.1 and exported to SPSS version 20 for analysis. Qualitative data were transcribed, translated, coded and analyzed in themes. Variables with p-value < 0.25 in bivariate logistic regression were candidate for multiple logistic regression. P-value < 0.05 and confidence interval were used to declare association. The overall process of program implementation was determined based on pre-set criteria of judgmental. Findings were presented using descriptions, tables and graphs.

Result: The overall level of process of Community Based Newborn Care program implementation according to the judgmental parameter was 72.67 percent. The satisfaction of mothers was 75.05 percent. Resources availability was 81 percent and compliance was 68 percent. The compliance and satisfaction dimension were the area that face many constraints. Very Severe Diseases are not treated congruently to the national guideline and identification of neonatal sepsis cases was low. Mothers satisfaction affected by occupational and wealth status.

Conclusion: The process of CBNC program was good. It can achieve more by availing drugs and medical supplies; vitamin K, chlorohexidine ointment, gloves, cotton and resuscitation bags. Moreover, regular supportive supervision and follow up is better for program improvement.

Key words: CBNC, Process, Availability, Compliance, Satisfaction

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List of Abbreviation and Acronyms

ANC	Antenatal Care
CBMNH	Community Based Maternal and Newborn Health
CBNC	Community Based Newborn Care
CBNSM	Community Based Neonatal Sepsis Management
CHP	Community Health Program
CHWs	Community Health Workers
COMBINE	Community Based Interventions for newborns in Ethiopia
EA	Evaluability Assessment
ENBC	Essential New Born Care
HCPs	Health Care Providers
HDA	Health Development Army
HEP	Health Extension Program
HEWs	Health Extension Workers
HPMRR	Health Post Monthly Report and Resupply
ICCM	Integrated Community Case Management
KII	key Informants Interview
LB	Live Birth
LBW	Low Birth Weight
MNCH	Maternal, Newborn and Child Health
MNH	Maternal and Newborn Health
NMR	Neonatal Mortality Rate
NS	Neonatal Sepsis
PHCU	Primary Health Care Unit
PNC	Post Natal Care
PNMR	Post Neonatal Mortality Rate
U5MR	Under Five Mortality Rate
VSD	Very Severe Diseases
WHO	World Health Organization

Operational Definition

Birth asphyxia: (a) age at death ≤ 7 days and (b) not able to cry after birth and (c) either not able to breathe after birth or not able to suck normally after birth

Continued supply and refill: based on the HPMRR form health posts received drugs and medical supplies as scheduled/every month

Convenient time: the time at which follow up appointment for care givers/clients is taking their need/comfort inconsideration.

Correctly classified: diagnose the young infants based on his/her sign and symptoms according to ICCM treatment booklet chart for 0-2 months of age group

Correctly treated: treating/giving treatment and other services for the young infants based on the diagnoses according to ICCM treatment booklet chart for 0-2 months of age group

Essential job aids: job aids used for CBNC services delivery which are CBNC guideline, booklet chart, reporting and recording materials for CBNC services provision

Essential Newborn Care: A set of practices that reduces neonatal morbidity and mortality such as clean cord care, thermal care (keeping baby warm by wrapping in clean and dry clothes and delaying bathing until 24 hours after birth) and initiating breastfeeding within the first hour of birth are defined as essential newborn care practices.

Level of importance in stakeholder identification and analysis:

- Low– the stakeholder can do little to adversely affect the outcome of the evaluation.
- Medium – the evaluation could achieve its objectives against this stakeholder's opposition, but it would not be easy
- High – the person or group significantly changed the evaluation outcome

Maternal Services: The services which are essential for a pregnant woman and new mothers to ensure their and their baby's good health. These include antenatal care, delivery care, postnatal care and birth preparedness.

Necessary drugs and supplies: drugs and medical supplies used/essential for CBNC services provision which are gentamicin 20mg/2ml, dispersible amoxicillin 125mg, gloves, syringes, iron with folic acid and bandage

Physical and human Resources: the physical existence of health resources with sufficient capacity and health care provider to produce services

Post-neonatal mortality: the probability of dying after the first month of life but before the first birthday (the difference between infant and neonatal mortality)

Low birth weight (LBW): a mother reported that baby very small or small than usual at birth

Recently Delivered Women (RDW): A terminology used in this study to denote the married women aged 15-49 years who delivered at home and health facility in the last 6-month period.

Satisfaction of caregivers: That respondent who answers four and five in the Likert scale of specific satisfaction question about the service provided are satisfied and it is immediate outcome and dependent variable of the evaluation that show the process of CBCN from clients' perspective. And satisfaction level categorized in to two using demarcation threshold formula in order to identify the determinant of satisfaction.

Serious infection: at least two of the following signs: (a) stopped suckling (b) fever or cold to touch (c) unresponsive or unconscious or lethargic (d) bulging fontanel (e) convulsions (f) vomiting (g) redness or drainage from the umbilical cord stump or skin bumps containing pus or blisters or single large area of pus with swelling (h) chest in-drawing, fast breathing or (i) local term for pneumonia

Skilled provider- Skilled provider for EDHS 2016 includes doctor, nurse, midwife, health officer, and health extension worker.

Chapter 1: Introduction

1.1. Background

Proper development and healthy life of a baby shows accessible and qualified newborn care services and it is basic indicators of a country's socioeconomic situation and quality of life (1).

For accelerated change for child survival, health, and development needs more focus on a healthy start to life. Annually 2.9 million newborn babies die; accounting for 44 percent of deaths in children younger than five years of age. Closely linked to this situation are the 2.6 million babies stillborn every year, almost half of which occur during labour (2).

For improving the survival of newborns in Ethiopia, Community Based Newborn Care (CBNC) has been incorporated within the Integrated Community Case Management (ICCM) on platforms of health extension program (HEP) that includes a newborn care package along the continuum of care from pregnancy to child birth and postnatal which is carried out by health Extension workers (HEWs) (3).

Community Based Newborn Care aims to reduce newborn mortality through strengthening the Primary Health Care Unit (PHCU) approach and the HEP by enhancing linkages between health centers and health posts and the performance of Health Extension Workers (HEWs) and the Health Development Army (HDA). It also improves antenatal, intra-partum and newborn care through the “four Cs”: prenatal and postnatal Contact with the mother and newborn; Case-identification of newborns with signs of possible severe bacterial infection; Care, or treatment that is appropriate and initiated as early as possible; and Completion of a full seven-day course of appropriate antibiotics (4).

These four C's are operationalized through the scaling-up of nine community-based maternal and newborn components: Early identification of pregnancy, Provision of focused antenatal care (ANC), Promotion of institutional delivery, Safe and clean delivery including provision of misoprostol in case of home deliveries or deliveries at health post level, Provision of immediate newborn care, including application of chlorohexidine on the cord, Recognition of asphyxia, initiate stimulation and resuscitation of the newborn baby, Prevention and management of

hypothermia, Management of pre-term and low birth weight neonates, and Management of neonatal sepsis and very severe disease at community level (5).

In Ethiopia, only 28 percent of deliveries are assisted by skilled provider and from this 26 percent, and two percent of mothers give birth at health facilities and at home respectively. Eighty percent of births to urban mothers were assisted by a skilled provider and 79 percent were delivered in a health facility, as compared with 21 percent and 20 percent, respectively, of births to rural women (6).

Infants receiving Post-natal care (PNC) within the first 48 hours are 17 percent with higher proportion in urban areas than rural. The first 48 hours' postnatal care is the time when the mother and baby are most vulnerable to morbidity and mortality associated with childbirth (7).

Thus, early postnatal care is critical to ensure the appropriate newborn care which includes exclusive breastfeeding, cord care and thermal care and prevention of infections (8).

Newborns in Ethiopia have a multitude of barriers for them to access health care. Some of these are related to culture and fatalism and others to physical access due to distance and limited communication. Community perceptions of the causes of perinatal mortality and newborn morbidity are consistent with those relating to the biomedical causes in the early neonatal period (1).

Due to this CBNC is a comprehensive strategy designed to improve the health of newborns through interventions during pregnancy, at and soon after birth, and in the postnatal period by HEWs (9) and significant evidence of reduced neonatal mortality when home-based neonatal care and sepsis management were delivered as a part of package (10).

CBNC program is quickly expand coverage to areas where access to facility care is limited, thereby removing key barriers for poor households such as distance and transport costs. It also often offered free of charge and can be used to promote healthy behaviors, to provide screening and referral for complications and illnesses, to promote utilization of facility-based services, and in some cases to provide treatment at the home or community level (11).

1.2. Statements of the problem

The world made substantial progress in reducing child mortality, but has not met the Millennium Development Goal (MDG) four target. Under-five mortality rate has declined by more than half, dropping from 90 to 43 deaths per 1,000 live births between 1990 and 2015 (12).

In sub-Saharan Africa, the annual rate of reduction of under-five mortality was over five times faster during 2005–2013 than it was during 1990–1995 and it has fallen from 179 deaths per 1,000 live births in 1990 to 86 in 2015 (13).

Ethiopia has a steady decline of infant, child and under-five mortality. Under five mortality rate decreases from 116 deaths per 1000 live births in 2000 to 67 deaths per 1000 live births in 2016, child mortality rate was 20 deaths per 1,000 children surviving to age 12 months and infant mortality decreased from 97 deaths per 1,000 live births in 2000 to 77 deaths per 1,000 live births in 2005 and to 48 deaths per 1,000 live births in 2016. Ethiopia has made considerable improvement in child health, yet it is increasingly evident that there is still a disproportionate burden of deaths within the neonatal period (6). Newborns are a vulnerable group and therefore need more attention and care. Every year nearly 45 percent of all under five child deaths are among newborn infants, babies in their first 28 days of life or the neonatal period and three quarters of all newborn deaths occur in the first week of life (14).

The majority of newborn deaths occur in developing countries where access to health care is low. Nearly half of all mothers and newborns do not receive skilled care during and immediately after birth that majority of these newborns die at home, without skilled care that could greatly increase their chances for survival (14,15).

Up to two thirds of newborn deaths can be prevented if known, effective health measures are provided at birth and during the first week of life. But Home care visits are not delivered at the standard day one and three of a newborn's life. For majority of mother's a third visit doesn't take place before the end of the first week of life (16).

Moreover, the implementation of supportive supervision has been identified as a weak link in many community health workers (CHW) program and CBNC strategies which needs to be supported by a facility-based component (17). Theses supervisions ensure the basic quality of neonatal care, including the availability of essential equipment and drugs, and adequate levels of

skilled personnel to meet any increased demand and to change staff attitudes and practices (17, 18).

In Ethiopia, the neonatal mortality rate (NMR) was 29 deaths per 1,000 live births, and the post neonatal mortality rate was 19 deaths per 1,000 live births. Seventy four percent of mothers give birth at home (6). The proportion of death by timing Early and late neonatal deaths; Early neonatal deaths 79 percent (within 24 hours' 41 percent, 24-48 hours' 14 percent, 48-72 hours' 5 percent, Day three 9 percent, Day four 5 percent, Day five 4 percent, Day six 1 percent) and Late neonatal deaths 21 percent (19).

The lack of progress in reduction of NMR may be explained by the high proportion of birth taking place at home and low availability of newborn care and poor care seeking practices. Home visits by a HEW immediately after birth is a health strategy that can increase newborn survival rates. While home births are very common in Ethiopia, only 17 percent of women receive postnatal care including in home and health facilities in the first 48 hours these shows that low coverage (access of health care) (20, 21). Moreover, many mothers who give birth in health facilities cannot return for PNC because of financial, social or other barriers. The first days of life are the most critical for newborn survival (22).

Infant Mortality in Southern Nations, Nationalities and People's Region (SNNPR) were among the highest in the country. Under five, child, infant, post neonatal and neonatal mortalities in the region were 116, 41, 78, 41 and 38 per 1000 live births, respectively (19).

The coverage of home visits by HEWs during pregnancy and the postpartum period was lower than expected, and generally did not significantly favor the poorest households. Strategies for further increasing pro-poor coverage are needed to further reduce inequities in maternal and child health (1). Community-based programs are also often offered free of charge and can be used to promote healthy behaviors, to provide screening and referral for complications and illnesses, to promote utilization of facility-based services, and in some cases to provide treatment at the home or community level but least of HEWs are implement the services according to the guideline (11).

Since the program is new; the status of CBNC implementation in Geze Gofa district is unknown. Previous evaluation research on CBNC implementation status in Southern Ethiopia including the

study area up to the knowledge of the researcher are not conducted and comprehensive descriptions of newborn care seeking practices are needed in the area of CBNC services provision in Geze Gofa district. Availability of resources and access to health care in rural part of Southern Ethiopia are also the main problem of newborn care (23) and also comply of health care provider in the study area is also in questionable.

According to the HMIS report 2016 of Geze Gofa district health office 43 percent of mothers give birth at health facility, 23 percent of newborns received postnatal care home visit within seven days and 7.9 percent of neonates identified as having sepsis cases. Taking the above problem these dimensions (availability, compliance of health care provider with the national standards and acceptability/satisfaction of mothers) will investigate the process of CBNC program implementation status in Geze Gofa district.

1.3. Significance of the Evaluation

Evaluation of CBNC services has paramount importance in providing information for services provision and improvement.

In line with the National Vision 2030, the government intends to scale up community units in the country, and also work towards improving the health service delivery at community level. In view of the above stated information, it was important to carry out an evaluation of the process of the CBNC program in order to establish its effectiveness and relevance as well as take cognizance of the lessons learnt with regards to empowering communities in taking charge of their own health.

The aim of this evaluation was, therefore to identify the point where the barriers for program implementation would occur and to determine process of program implementation status based on the pre-set judgmental criteria.

Finally, it will increase the implementation status by providing valid and accurate information that will be utilized by respective program implementers of Geze Gofa district, users and other stakeholders participating in the program implementation.

Chapter 2: Description of CBNC Program

2.1. Stakeholders for CBNC Program

The major stakeholders that identified during Evaluability assessment were those involved in direct program operation and implementation, served or affected by the program, primary users of the program and those who have interest on the program. These are, Geze Gofa district health offices, and health care providers at Geze Gofa district, Geze Gofa district community, Woreda administration offices, kebele administration, HDA and 1-to-5 network leaders.

The stakeholders provided information on program performances during EA and they identified and prioritized the area of program that was addressed during the evaluation.

The listed stakeholders were identified and their role in the program and in the evaluation along with their ways of communication and level of importance based on the information they provided were identified. Defining the problem and formulating research questions, selecting indicators of evaluation and Assigning weights for indicators and setting judgment parameters was identified through their participations.

Table 1: The stakeholders' analysis matrix for process evaluation of community based new born care implementation in Geze Gofa district, 2017

Stakeholders'	Role in the program	Interest/perspective on evaluation	Role in evaluation	Ways of communication	Level of importance*
Geze Gofa district health office	Planning Implementation Coordinate and facilitate Supportive supervision and monitoring Resource allocation	To Identify skill gap of implementers To know implementation status of CBNC services To learn from experience	Source of information Formulating evaluation questions and deciding on focus of evaluation Facilitation evaluation process Identify indicators Assign weight for indicators and set judgment parameters	Formal letter Face to face Phone	High
Geze Gofa district Health centers	Supportive supervision and review meeting Timely and complete report Strength linkage of PHCU	To identify skill gap and for improvement of knowledge on CBNC program To identify weakness and strength of program implementation	Source of information Formulating evaluation questions and deciding on focus of evaluation Facilitation of evaluation process Identify indicators Assign weight for indicators and set judgment parameters	Phone Face to face	High
HEWs	Service delivery Timely and complete report Strength linkage of PHCU	To identify skill gap and for improvement of knowledge on CBNC program To identify weakness and strength of program implementation	Source of information Facilitation of evaluation process Identify indicators Assign weight for indicators and set judgment parameters	Phone Face to face	High
Direct beneficiaries (mothers and young infants)	Service users	For program improvement	Source of information Formulating evaluation questions	Face to face	High

Woreda administration	Budgeting Facilitation of services Community mobilization	Identification of services gap	Facilitation evaluation process (transportation)	Phone Face to face	Low
Kebele council	Community mobilization Create supportive environment through strengthening HDA and 1 to 5 network	To know the level of implementation	Facilitation of evaluation (assign volunteers for helping data collector by showing selected mothers home)	Face to face Phone	Low
HAD/ 1 to 5 network leaders	Awareness creation Community mobilization	To know the level of implementation	Source of information (information about how they identify & refer pregnant mother)	Face to face	Medium

*Note: - Stakeholders level of importance was rated based on: -

Low– the stakeholder can have done little to adversely affect the outcome of the evaluation.

Medium – the evaluation was achieved its objectives against this stakeholder’s opposition, but it was not easy

High – the person or group significantly changed the evaluation outcome

2.2. Goal and objectives of CBNC Program

2.2.1. Goal of CBNC

To contribute to reduction in newborn and child mortality by providing services for infants less than two months of age.

2.2.2. General objectives of CBNC

To provided 100 percent CBMNC services through efficient and effective linkages between health centers and health posts in Geze Gofa districts in 2016/2017.

2.2.3. Specific objectives of CBNC

1. To improve newborn care through community based newborn sepsis management by 75 percent from 7.9 percent in 2017.
2. To provide 100 percent pregnant mothers identification and care seeking through HDAs and other existing effective community mobilization mechanisms by 2017.
3. To improve the capacity of health centers and health posts to provide 100 percent ANC services coverage through strengthening PHCU linkage in 2017.
4. To improve the capacity of health centers and health posts to provide 100 percent PNC services coverage through strengthening PHCU linkage in 2017.
5. To improve the capacity of HPs to provide 85 percent pregnant mothers referral for institutional Delivery services through strengthening referral linkages b/n HC & HPs in 2017.

2.3. Major strategies of CBNC program

The following strategies are identified to implement CBNC and strengthen existing initiatives for maternal and newborn care;

- Early identification of Pregnancy
- Provision of Focused Antenatal Care (ANC)
- Promotion of institutional delivery and

- Safe and clean delivery including provision of misoprostol in case of home deliveries or deliveries at health post level
- Provision of immediate newborn care, including application of Chlorohexidine on cord
- Recognition of asphyxia, initial stimulation and resuscitation of newborn baby
- Prevention and management of hypothermia
- Management of pre-term and/or low birth weight neonates
- Management of neonatal sepsis/very severe disease at community level

In general, the focus of CBNC is to improve antenatal, intra-partum and newborn care by managing neonatal sepsis for the reduction of neonatal morbidity and mortality through continuum of home-based treatment by HEWs in rural kebele of Geze Gofa district.

2.4. Program Activities and Resources

The resources needed for community based new born care program are:

- Policies/ strategy/guideline (CBNC implementation guideline in Ethiopia)
- Recording and Reporting tools
- Financial and Human Resource (HEWs, supervisors and head of health office, PHCU focal person)
- Logistics (drugs (gentamicin 20mg/2ml, dispersible amoxicillin 125 or 250 mg, chlorohexidine, ointment, vitamin K) and other medical supplies (gloves, syringe, cotton, antiseptics)).
- Medical equipment's (Ambu bag, Spring infant scale with sling)
- Infrastructure (transportation)

Activities:

- Early identification of pregnant mothers
- Provision of Focused ANC (FANC)

- Promote institutional delivery
- Clean and Safe Birth at Home/Health Post Assisted by HEWs in case of emergency
- Postnatal Care (PNC)
- Identify and manage sick newborns at community level
- IEC/BCC and Community Mobilization

2.5. Program Results

Program output:

- HEW providing community level management of sepsis, LBW, asphyxia, quality care treatment ensured at PHCU
- Increased community awareness on availability of the services and importance of neonate care seeking
- Effective coordination and partnership created among partners
- Better information flow established
- Reliable availability of supplies evidences generated and utilized

Program outcome

- Quality of care and client satisfaction
- Services utilization
- Improved knowledge and practices of clients

Program impact

- Neonatal, infant and child morbidity and mortality reduction
- Decrease maternal mortality

2.6. Program logic models

Statement of problems: According to EDHS 2016, proportion of mothers who receive ANC4, delivery and PNC is 32%, 28% and 17% respectively. Further, NMR of 29/1000LB and PNMR of 19/1000LB occurred. Moreover, according to 2016 HMIS report of Geze Gofa district health office 43 % of mothers give birth at health facility, 23 % of newborn received postnatal care home visit and 7.9 % of neonates identified as having sepsis cases.

Goal: Contribute to reduction of neonatal morbidity and mortality by providing CBNC services to all pregnant and delivered mothers and young infants less than two months of age in Geze Gofa district.

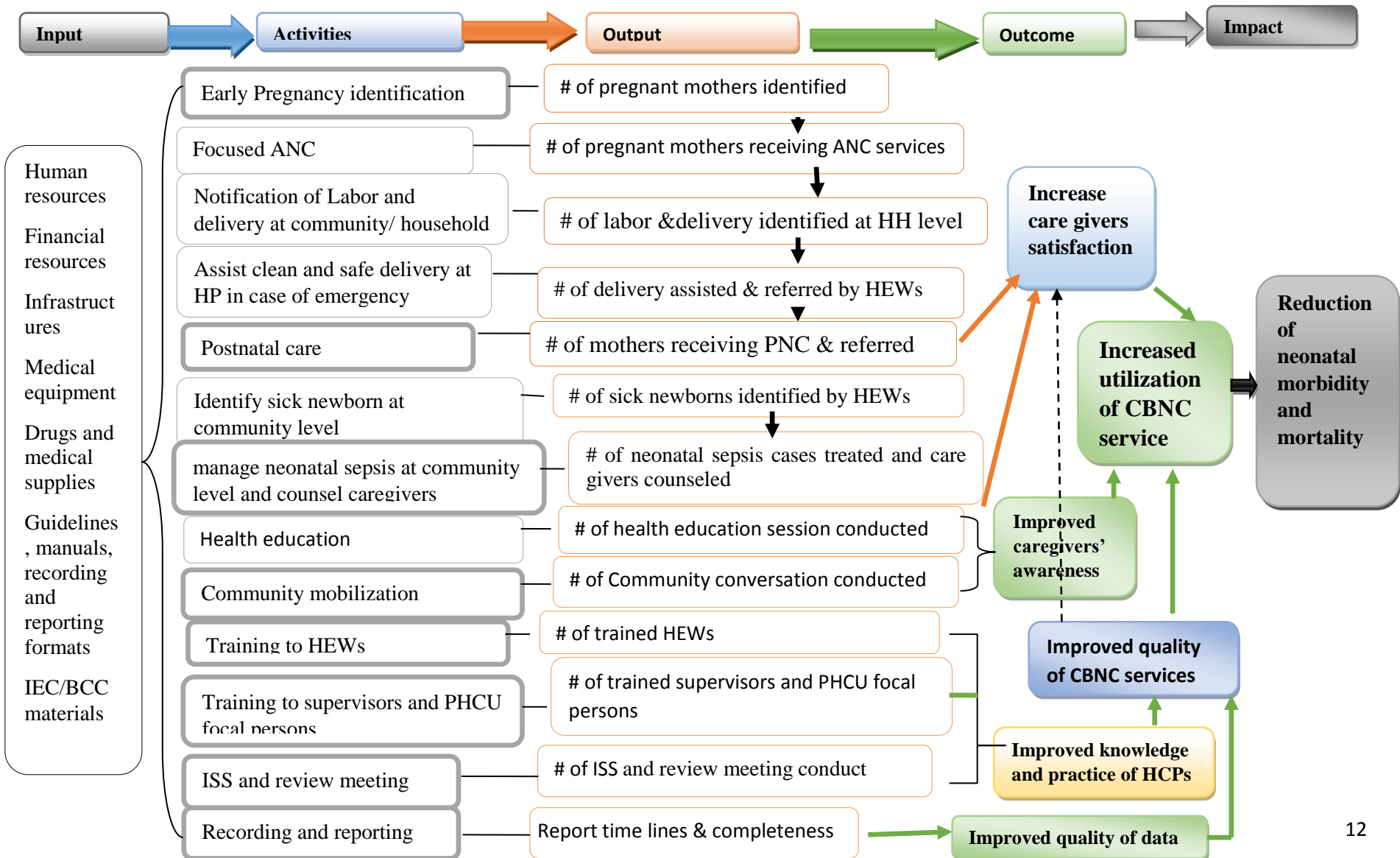


Figure 1: Logic model of CBNC program in Geze Gofa district, 2016/2017

2.7. Stages of program development

Global situation

WHO and its partners agree that a core principle underlying maternal, newborn and child health efforts is lifelong access to health care; a continuum of care for the mother starting from long before pregnancy (during childhood and adolescence) through pregnancy and childbirth. The continuum begins again with adequate newborn care for the new life. As appropriate, care can be delivered in the home and community, as well as health clinics and hospitals (14, 24).

Ethiopia situation

Maternity care, IMNCI, and ENBC are key components of services provided at the health centers. Prior to Integrated Community Case Management (ICCM), the HEWs provided preventive and promotive care as well as treatment of severe acute malnutrition, malaria and diarrhea. In 2010, the FMoH added community based management of pneumonia to the HEP. After 3 years of implementation of the ICCM initiative, 25,000 HEWs have been trained and are providing treatment services for child pneumonia, diarrhea, malaria and severe acute malnutrition at the community level. Based on the successful experience of ICCM at scale, in 2012, the FMoH decided in principle to introduce community based newborn sepsis case management through the HEP (3).

The CBNC initiative was launched in March 2013, following the national policy breakthrough of allowing Health Extension Workers (HEWs) to treat new-born sepsis. The programme is initially supporting six zone of the four agrarian regions: Amhara, Tigray, Southern Nations Nationalities and Peoples' Region (SNNPR) and Oromia with strong HEP and expanded to all the woredas in the zones where newborn sepsis management operations research is being implemented. Hence, during the first phase, new born sepsis management as an initiative was implemented in six zones in the four regions. HDA was played an important role in mobilizing communities to increase demand and utilization of MNH services. Independent review of experiences and lessons learnt in the initial phase was conducted prior to national scale-up (25). Starting from January 2014 phase two (scale-up) was implementing in all zones and woredas of the four regions.

Taking into consideration the fact that newborn mortality stagnated over the years when child mortality showed significant reduction; skills of Health Extension Workers (HEWs) to manage newborn infection such as sepsis, was limited; and utilization of ICCM service for newborns and young infants was low; introduction of community based newborn care was found to be imperative (26).

The core principle of the CBNC strategy is ensuring the continuum of care, i.e. is from pregnancy to postnatal periods as well as from the home/community to the health facilities. This allows for the provision of skilled care during pregnancy, child birth, and postnatal periods and enables early detection and appropriate management of problems which prevents complications. In such a way, CBNC will improve maternal and newborn care practices and care seeking through health development army and other effective community mobilization mechanisms (3).

Through ANC sessions and home visits during pregnancy, they can promote effective newborn care practices, danger sign identification and early care seeking. After delivery, they can visit homes to support healthy behaviours such as hand washing, exclusive breastfeeding, and warmth. HEWs and HDAs can screen babies for danger signs in the vulnerable days and months after delivery and HEWs can treat or refer those with suspected serious infections (5).

Geze Gofa District situation

CBNC program in the Geze Gofa district was started from 2014 during second phase of implementation and implementing in all Health posts of the district. It is on the implementation stage.

The community based management of newborn sepsis provides an opportunity to improve other MNCH program, and strengthen HEP and health systems and HDAs and HEWs are the main pillars of CBNC in the community. They come into contact with families most frequently during pregnancy as well as during or immediately after delivery.

Chapter 3: Literature Review

Neonatal Health and CBNC

Until recently, there has been little effort to tackle the specific health problems of newborn babies. Most of their deaths are unrecorded and remain invisible. A lack of continuity between maternal and child health programmes has meant that care of the newborn has fallen through the cracks between care of the mother and care of the older child. Home visits by a skilled health worker immediately after birth is a health strategy that can increase newborn survival rates (27).

The Lancet series on Newborn and on Maternal Health suggest that 15 to 32 percent of neonatal deaths can be prevented through achieving high coverage of a few key practices: clean home delivery, hygienic cord care, thermal care, early and exclusive breastfeeding, community-based care for low birth weight and care seeking for illness in low income countries (28,29).

The recommended interventions emphasize strengthening the continuum of maternal, newborn and child care including ANC, intra-partum care and PNC for the mother and the newborn (30).

A feasibility study in Nepal, demonstrated that community health volunteers could be trained to recognize danger signs of severe newborn infection and initiate treatment and referral to health posts and/or health centers for injectable antibiotics (31).

Several common elements of these packages are critical to achieve sufficient coverage and quality for mortality impact. The fundamental element was a platform for HEWs and/or volunteers to identify all pregnancies, provide antenatal counseling visits (i.e., promoting ANC, birth preparedness, and birth notification), identify all births within the first day, and make early postnatal home visits to assess newborns, counsel mother (including danger sign recognition), and refer and/or manage suspected newborn infections.

Second, neonatal sepsis case capture is usually dependent upon the community health worker or volunteer identifying danger signs as illness recognition and care-seeking by families remains low without CHW or volunteer case identification. Community-based treatment is then provided, including injectable gentamicin, when families do not accept referral to hospital and the treatment is provided daily for seven to ten consecutive days to complete the required course (5).

In northern India, CHWs were trained in essential newborn care (clean cord cutting, maintenance of warmth, breastfeeding promotion); identification and special care, including referral when indicated, of at-risk infants; and mouth-to-mouth resuscitation of asphyxiated infants resulted NMR fell 25 percent, from 51.9 to 38.8 per 1000 live births, during the 2 years of the implementation, with 18 percent of deaths attributed to asphyxia (32).

Causes of neonatal death

The three major causes of neonatal deaths worldwide are infections (36 percent, which includes sepsis/pneumonia, tetanus and diarrhea), pre-term (28 percent), and birth asphyxia (23 percent). There is some variation between countries depending on their care configurations (33).

A study in the South West part of the country reported neonatal and infant mortality rates of 38 and 76.4 per 1000 live births, respectively (34). Another community based study in the northern part of the country reported, neonatal, post neonatal, infant, and child and under five mortality rates of 37, 30, 67, 33 and 99 per 1000 live births respectively (35).

Effectiveness of CBNC services

Providing CBNC services through home visit by a skilled health worker immediately after birth is a health strategy that can increase newborn survival rates. The strategy has shown positive results in high mortality settings by reducing newborn deaths through treating neonatal sepsis and improving key newborn care practices (14).

A study conducted on community newborn-care package—including support for breastfeeding mothers, extra care for underweight babies, community-based management of pneumonia in neonates and treatment with oral antibiotic therapy—is the most cost-effective intervention to reduce newborn mortality (36).

Partnerships and strengthening relationships between community-based traditional birth attendants and community health workers have resulted in increased care-seeking behaviors by pregnant women, increased knowledge and uptake of appropriate newborn care practices, and improved recognition and treatment of sick infants in the community. These activities suggest a potential model for integrated community-based care of newborns in rural Bangladesh (37).

Studies conducted in Bangladesh, India and Pakistan has shown that home visits can reduce deaths of newborns in high mortality, developing country settings by 30 to 61 percent (38,39,40).

The Lancet Neonatal Survival Series notes “Early success in averting neonatal deaths is possible in settings with high mortality and weak health systems through outreach and family-community care, including health education to improve home-care practices, to create demand for skilled care, and to improve care seeking. Family-community care has similar costs to outreach but greater potential effect. In general, clinical care services are more-costly to implement than outreach or family-community services and also more challenging in terms of human resource management. The potential for postnatal care to have substantial effect, greater than that of antenatal care and similar to that of intra-partum care but at lower estimated cost, is noteworthy (41).

For both at-risk pregnancies and healthy pregnancies, home visits by CHWs may lead to early diagnosis, detection of complications, and appropriate referrals. A home-based newborn care consisting of sepsis management; support for low birth weight (LBW) infants; and primary prevention, health education, and training of TBAs will decrease newborn and infant mortality rates (42). Results from a study in rural Bangladesh suggest that implementation by CHWs of an essential newborn care package, in conjunction with administration of home-based antibiotic therapy for suspected neonatal sepsis, resulted in a 62 percent reduction in the neonatal mortality rate (43).

Access to CBNC Services

The main issue that needs to be addressed in CBNC implementation is pertaining to effective access by the targeted population. Effective access is the proportion of the study population with geographic access, corrected for other barriers, staffing patterns, and medicine availability. The study showed that there is still low awareness in seeking care among the needy and better beneficiaries of the service (23).

According to a study conducted in Haryana, India Access to and availability of services and their quality are found to have an impact on care seeking behaviour. It also examined the impact of the availability of health centers on antenatal and delivery care. Interviews were conducted with 600 married women aged 15-45 years and information on the use of antenatal and delivery services

was obtained from 228 women who delivered in the past two years. The study found that those women who were living in the catchment area of primary health care centers had higher utilization of maternal care services and lower perinatal mortality than those women living in the catchment area of a sub-health center. It suggests that availability of health centers equipped with higher facilities has more influence upon health care seeking behaviour and pregnancy outcomes of rural women (44).

While home births are very common in developing countries, only 17 percent of women in Ethiopia receive postnatal care in the first 48 hours. Even though the first days of life are the most critical for newborn survival; many mothers who give birth in health facilities cannot return for postnatal care because of financial, social or other barriers (14).

The place of delivery is an important indicator of maternal service use and appears to be an important factor in understanding the newborn care practices. The findings from the qualitative data in Bangladesh from in depth interviews of 40 mothers explain why home deliveries are preferred. The most important reason was the easy availability of support from relatives. Attendance by male doctors, cost of services and transportation problems deterred women from delivering in hospitals. Women perceived childbirth as a natural event that does not require medical intervention unless there is a complication. These findings show that the availability of maternal health services and its quality greatly determine the use of maternal health services in the rural areas, which might also impact on the newborn care practices (45).

An assessment in Malawi shows Coverage and equity achieved by the community-based intervention as measured and 36 percent of women received at least one pregnancy home visit by an HSA, while only 10.9 percent received a post-delivery home visit within the recommended 3-day window. Coverage of one and two pregnancy home visits was significantly higher among women in the least poor quartiles, as evidenced by the positive concentration indices of 0.0788 and 0.0960, respectively. Postnatal home visits were not significantly higher among less poor households. Thirty-four percent of women reported being aware of a core group in their community, and although core groups were not expected to make regular home visits to pregnant women, 9.6 percent received a home visit from a core group member during pregnancy. Awareness of and contact with a core group member were not significantly inequitable (11).

In Ethiopia Forty two percent of pregnant mothers were unidentified by the PHCU and two-thirds did not receive any ANC. Of the expected deliveries, over 75 percent did not take place at a health facility (46).

Availability of CBNC program Job Aids, Drugs and Medical Supplies

Approximately 80 percent of health posts had family folders (a family-centered information collection tool for integrated health service delivery by HEWs) and a book for pregnant women and outcomes registration. Sixty-eight percent had any family health cards and young infant record forms. Around 90 percent had ICCM registration books and 65 percent had ICCM chart booklets. Forty-two percent of health posts had stock/bin cards and 33 percent had drug request and resupply forms. Less than one-third had supervision checklist forms and birth preparedness and complication forms. 60 percent of health posts had blood pressure cuffs and examination couches, while only 35 percent had curtains for privacy. Sixty-eight percent had a digital thermometer and 64 percent had a stethoscope and infant scale. A weighing sling was available in 81 percent of health posts and 35 percent had a clock. With respect to supplies, clean gloves were available in 64 percent of the health posts and 80 percent had syringes with needles and gentamycin was available in 64 percent of the facilities and over 80 percent had amoxicillin suspension and tablets and TTC eye ointment (46).

Compliance of HEWs to national Guidelines

Effective care can reduce almost three of the four million deaths of babies under-one month globally: through antenatal care for the mother, obstetric care and birth attendant's ability to resuscitate newborns at birth. Most of the infection-related deaths could be avoided by treating maternal infections during pregnancy, ensuring a clean birth, care of the umbilical cord and immediate, exclusive breast-feeding. For infections, antibiotics are life-saving and needs to be available locally. Low birth weight babies need to maintain body temperature through skin-to-skin contact with the mother. Several of the above interventions would also help save the lives of mothers and prevent stillbirths (47).

An evaluation examined the newborn care services by community health workers in a low socio-economic area of Karachi, Pakistan. Both qualitative and quantitative information was collected through five focus group discussions, 15 in-depth interviews, and 525 interviews with women

who had given birth recently. Results revealed that many of the newborn care services were not consistent with recommended practice (48).

Out of the 478 sick neonates identified with VSD during the project period, 34 percent were referred successfully, 43 percent were treated by CHWs due to unsuccessful referral, five percent received care from another source and 18 percent did not receive any outside care. The case-fatality rate for those successfully referred was 14.2 percent, for CHW treatment in the home was 4.4 percent, and about ~30 percent for whom referral was unsuccessful and for those who refused treatment by CHW indicating a high success rate for those neonates treated at home by CHWs, for who referral was not successful (49).

For good compliance of HEWs to national guideline; close follow up and supportive supervision is necessary through strengthening PHCU. Based on this study done on baseline evaluation of community based newborn care in Ethiopia; 82 percent of HEWs had received supportive supervision in the three months prior to the survey. Among those that received supervision, 86 percent reported visits from health centers and half from woreda health offices. On average; HEWs received five supervisory visits in the previous three months. Less than half the HEWs reported that the supervisory visits covered discussions on newborn special condition care; for example, management of very severe disease was discussed with 41 percent of HEWs (46).

CBNC Services Continuum of Care

Lack of continuum of care from maternal to child: a lack of continuity between maternal and child health programmes has meant that care of the newborn has fallen through the cracks. More than half the neonatal deaths occur after a home birth and without any health care (33).

Ensuring the continuum of care from pregnancy to postpartum, and from household to health facilities is essential for a successful scaling up of effective community based maternal and newborn care. The initiation of community based newborn sepsis management should be an integral part of the HEP. Facilitating timely referral within the health system and from community to the front-line service delivery facility was essential to save the life of sick newborns. The launching of the PHCU is used as an opportunity to strengthen the referral system between health posts and health centers. Efforts need to be exerted to strengthen the referral from health centers to hospitals too (5).

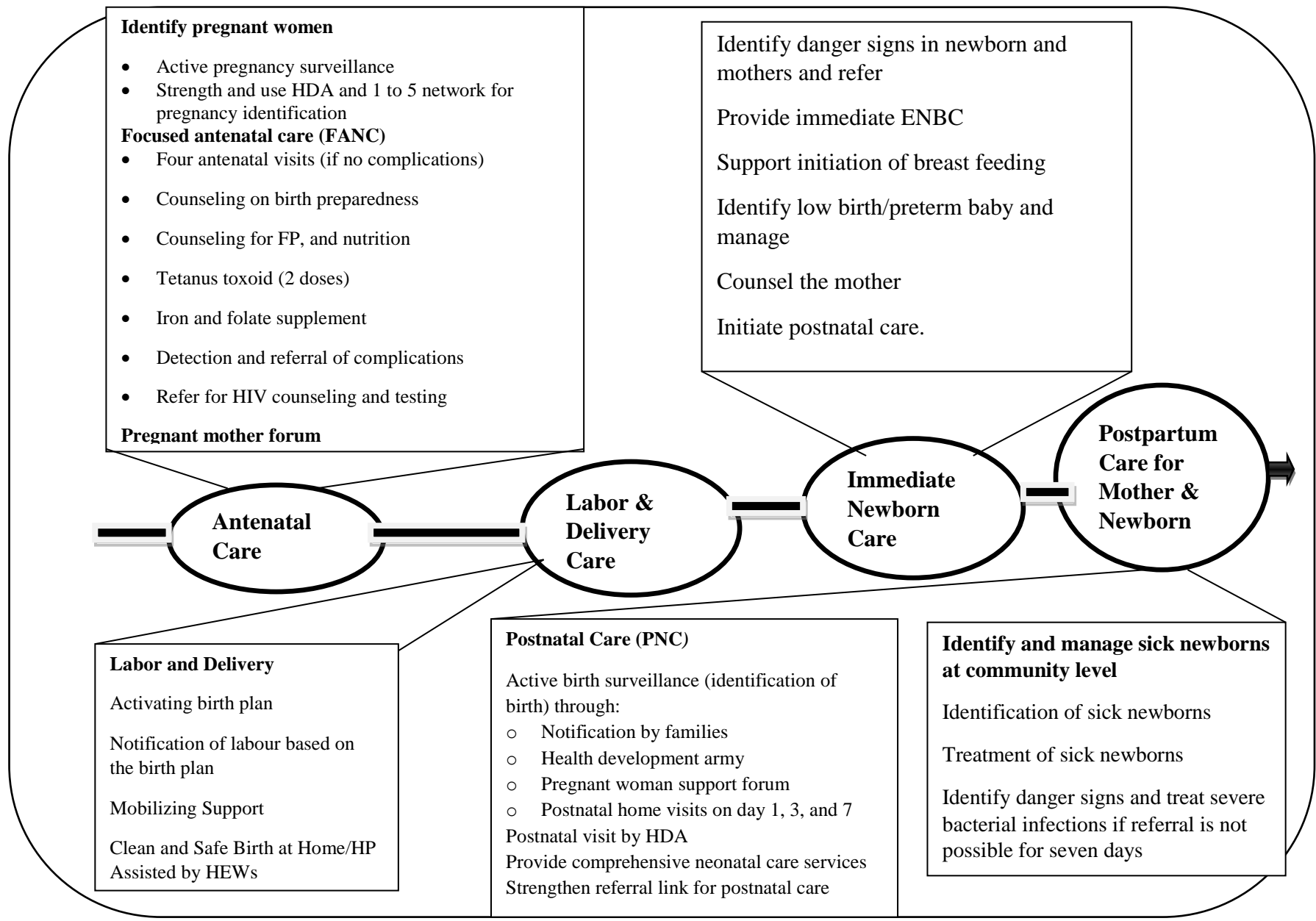


Figure 2: CBNC Continuum of care services adopted from CBNC implementation guideline FMOH 2015

“In the Ethiopian context, active case identification requires a paradigm shift from the current passive identification the HEWs HEWs/HDA waiting for cases. They establish earlier contact with all pregnant women in antenatal, child birth and postnatal periods, they need to be present at birth, they should be able to make assessments and diagnoses rapidly and reliably to initiate treatment on time, and finally, a system needs to be in place to allow completion of the seven days’ treatment course” (5).

“Clinical signs of newborn illness can be detected by CHWs with a range of skills, including illiterate or semi-literate community volunteers. Analysis of routine Community Based Interventions for newborns in Ethiopia (COMBINE) data (aggregate data from 2009 to 2012) showed that 62 percent of newborns were visited by either CHP or HEWs within 48 hours of birth that has improved from 55 percent in 2009 to 78 percent in 2012. The trend shows that the coverage increased positively over the time. Moreover, for the first half of 2012, 276 cases of newborns with severe bacterial infection in COMBINE sites were managed at the health post level. of these, 93 percent had completed their treatment, 94 percent have improved, 4percent referred to higher level and 2 percent died” (50).

Forty three percent of HPs reported having consistently offered safe and clean delivery with gloves, and a similar number provided management of hypothermia. Sixty percent provided immediate newborn care. Postpartum health checks for mothers and postnatal health checks for newborns were available in 75 percent of the health posts. A little over 15 percent of health posts had provided resuscitation services and management of pre-term or low birth weight for neonates. Eleven percent of health posts had provided management for very severe neonatal diseases (46).

A large majority of children (81percent) were assessed for the presence of cough, diarrhea, fever, and malnutrition. Out of 11 key assessment tasks, HEW completed an average of 9.2 (46,51).

Acceptability/Satisfaction of mothers towards CBNC program

Empowering families and communities to close the gap of postnatal care: healthy home practices and empowering families to recognize problems and access care will quickly save many lives. In high mortality settings with low access to care, some interventions may need to be provided closer to home (52). The gap for care of mothers and babies in the first few days of life is

important even where women do deliver in facilities. New approaches are required to reach a large majority of these families (53).

An Evaluation of implementation of community based assessment in Ghana shows mothers reported that the community health workers' visits were welcomed and acceptable to families. Mothers were happy that the work of the CHWs was helping them know when their newborns were ill to seek care. Some explained that they were pleased with the assessment visits because it was reassuring to know the state of health of their newborns (54).

Political commitment and social visibility Communities and decision makers need to be informed that neonatal deaths are a huge portion of child deaths, and need therefore to receive adequate attention. Improved registration and increasing the availability and use of relevant information in programmes and to decision makers is essential if health care for newborn babies and their mothers is to be given adequate attention. Stillbirths should also be counted (33).

The newborn care practices which were deemed acceptable to the community included: maintenance of warmth and cleanliness, exclusive breast feeding and skin-to-skin contact at birth (55).

A study done in Uganda on acceptability of community based newborn care in rural part of the country shows that Mothers accept community based newborn care intervention to improve care of mothers and newborn babies through home visits to households by HEWs during pregnancy and in the first week after deliver (55).

The evaluation of the CB-MNC program conducted in the Jhapa district of Nepal, which included interviews of nearly 900 women aged 15-49 years who delivered over the 12-month period prior to the survey, has shown that the proportion of the newborns who received newborn care within four weeks of delivery from trained health personnel was higher among rich mothers than poor which is 72.2 percent and 22.4 percent respectively (56).

In summary, the conceptual framework used to measure the implementation status of CBNC services was depicted in figure below. It was adapt and developed by referring international guideline, national guideline and previous literature conducted on the program (57).

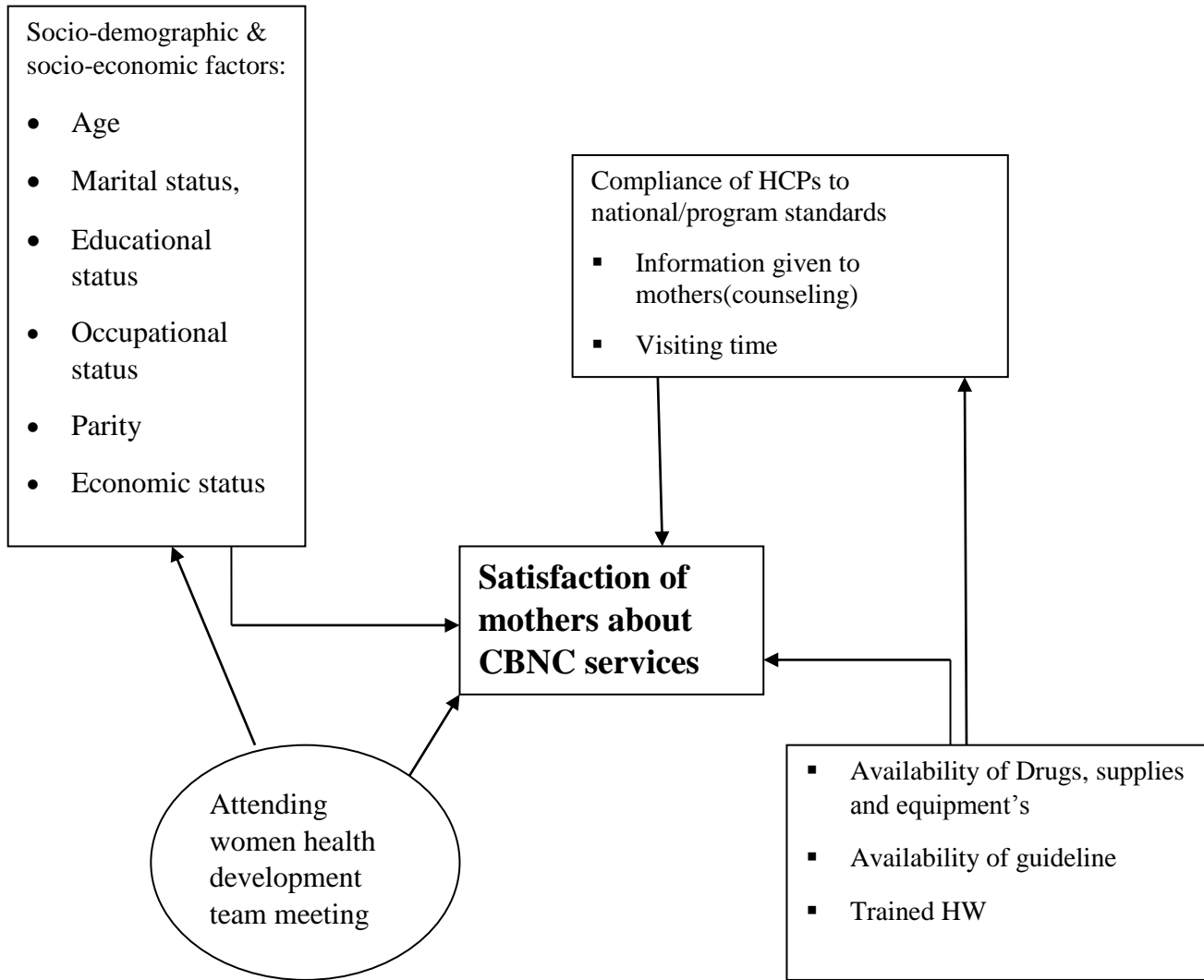


Figure 3: Conceptual framework for the evaluation of process of CBNC program in Geze Gofa district in 2017 (adapted from MNCH framework, Geneva 2013).

Chapter 4: Evaluation Questions and Objectives

4.1. Evaluation questions

4.1.1. Specific evaluation questions

- Does Geze Gofa district has all necessary resources to provide CBNC services? If yes, How and if no, why?
- Do HEWs comply with the national guideline in delivering CBNC services? If yes, how and If no, Why?
- What is the satisfaction of mothers with CBNC services being rendered by HEWs?

4.2. Objectives of evaluation

4.2.1. General objectives

- To evaluate the process of Community Based Newborn Care services implementation in Geze Gofa district, Gamo Gofa zone, Southern Ethiopia

4.2.2. Specific objectives

- ✓ To assess the availability of resources required to provide CBNC services in Geze Gofa district.
- ✓ To assess the compliance of HEWs to the national guideline in delivering CBNC services in Geze Gofa district.
- ✓ To determine the level of mothers' satisfaction with CBNC services provided by HEWs in Geze Gofa districts
- ✓ To identify factors associated with satisfaction of mothers in Geze Gofa district.

Chapter 5: Evaluation Methods

5.1. Study area

The study was conducted in Geze Gofa district, Gamo Gofa zone, SNNPR state. The capital of the district is located 535 km away to the south of Addis Ababa, capital city of Ethiopia and bounded by four woredas of the zone; Demba Gofa woreda in east direction, Basketo special Woreda in west, Melokoza Woreda in north and Oyda woreda in the south direction.

The district is divided in to one urban and 29 rural kebeles and it is a residence of 17,906 households. The total population is 87,731 and of which 43690 (49.8 percent) are males and 44041(50.2 percent) are females. From the total population 20441 (23.3 percent) are women in the child bearing age group (15-49 years). There are 3036 pregnant mothers and 13,695 under five children in the district. Under one year infants are 2,799 and also there are 3,036 neonates in the district (58).

There are 4 health centers, 29 health posts 6 private clinics 3 drug store and 2 rural drug venders. Moreover, 53 HEWs serve HPs of the district and the CBNC service has been rendered in all HPs to the community (59).

5.2. Evaluation period

The evaluation was conducted from March 1 to 31/ 2017 and EA was conducted from November 10 to 21/2016.

5.3. Evaluation approach

Formative evaluation was employed to assess the implementation of CBNC in Geze Gofa district. Formative evaluation is conducted for the purpose of improving programs and by using qualitative methods it can be highly descriptive it provides depth and detail about the programs strengths and weakness. What's working? What's not working so well? What are the perceptions of program participants? Of program staff? and formative evaluation are particularly valuable in the implementation stages of a program when there is likely to be a great deal of development (60).

5.4. Evaluation design

Community Based Newborn Care program is new initiative in the district and premature to establish impact measures (it is on implementation stage). Our evaluation was full, complex picture of what occurs in real context environments and understanding of the program implementation in detail that help for anybody redesign CBNC programs for the future. Due to these features the selected design is case study design.

Single Case study design with concurrent mixed method approach was used to evaluate the process of community based newborn care program. Qualitative and quantitative data was collected concurrently, analyzed separately, and integrated during interpretation of findings.

5.5. Focus of Evaluation and Dimensions

5.5.1. Focus of Evaluation

This evaluation was focus on process of CBNC program; the implementation status of CBNC that is how and why CBNC is implemented, what works? It also used to get at the question, how can the program improve what it does? For understanding implementation of CBNC provision in line with the national guideline and initial operational program plans of Geze Gofa district. So, the evaluation understanding, describing, testing, and improving components of a programs implementation theory; that includes program organizational plan (resources to be used and activities to be accomplished) and services utilization plan (assumptions taken by the program about uptake of services produced, value given by target population) of the program logic model. Moreover; it also considers some immediate outcome which was satisfaction of mothers about the CBNC services provision.

5.5.2. Dimensions of Evaluation

Availability: is one of the five sub-dimensions to measure access to health care that defines the relationship between the volume and types of services and resources to the client's volume and type of need. It is about the adequacy of resources (physical and human) used to provide CBNC services.

Compliance: the degree to which CBNC services being implemented in Geze Gofa district by HEWs are aligned and comply with the national guidelines and clinical parameters and protocols. This evaluation assessed the compliance of HEWs providing CBNC services in line with the national guideline especially in the management of neonatal sepsis.

Acceptability/Client satisfaction: this was determined the level of care givers opinion of care received from community based newborn care services by HEWs.

5.6. Indicators/variables

5.6.1. Indicators

The following indicators are negotiated and agreed and was used during evaluation of process of CBNC implementation in Geze Gofa district through active participation of stakeholders. Stakeholder's participation was using nominal group techniques for identifying and selecting indicators. The indicators are adapted from national CBNC implementation guideline and related literature's (5, 61).

Availability indicators (12 indicators)

- Proportion of HEW trained in CBNC services
- Proportion of health posts with all HEWs trained in CBNC services
- Proportion of HC staff trained in CBNC (including CBNC supervisor)
- Proportion of HPs with Existence of continued supply & refill of necessary drug &supplies in the last six months.
- Proportion of HPs with CBNSM medicines (Gentamicin injection and Amoxicillin) in stock during the last six months
- Proportion of HP with medical supplies (gloves, syringe, cotton and antiseptics) in stock during the last six months
- Proportion of HP with functional Spring infant scale with sling on the day of assessment
- Proportion of HP with functional resuscitation bag on the day of assessment

- Proportion of HPs with ICCM registration book for 0-2 months of age on the day of assessment
- Proportion of HPs with ICCM treatment booklet chart for 0-2 months of age on the day of assessment
- Proportion of HPs with CBNC implementation guideline on the day of data collection
- Proportion of HPs with Counseling card /Family Health Card in stock during the last six months

Compliance indicators (14 indicators)

- Proportion of pregnant women who received at least one ANC by HEWs at HP from September 1/2016 to end of February 2017.
- Proportion of live births identified from HH level in the catchment area from September 1/2016 to end of February 2017.
- Proportion of newborns who received PNC visits by HEWs within 48 hours from September 1/2016 to end of February 2017.
- Proportion of sick young infants who were assessed for more than 12 tasks from 16 tasks during observation.
- Proportion of sick young infants who are asked for main problem/chief complaint at the time of assessment
- Proportion of neonatal sepsis cases who are treated in a given catchment area from September 1/2016 to end of February 2017.
- Proportion of neonatal sepsis cases who received treatment in a given catchment area by HEWs from September 1/2016 to end of February 2017.
- Proportion of very severe diseases (VSD) treated with initial dose with appropriate antibiotics from September 1/2016 to end of February 2017.
- Proportion of VSD referred by HEWs from September 1/2016 to end of February 2017.

- Proportion of VSD receiving 7 consecutive days of gentamycin from September 1/2016 to end of February 2017.
- Proportion of treated neonatal sepsis cases whose treatment outcome has improved from September 1/2016 to end of February 2017.
- Proportion of NS cases referred by HEW from September 1/2016 to end of February 2017.
- Proportion of neonatal sepsis cases correctly classified from September 1/2016 to end of February 2017.
- Proportion of neonatal sepsis cases correctly treated from September 1/2016 to end of February 2017.

Satisfaction indicators (10)

- Proportion of mothers who were satisfied with counseling services about CBNC they received.
- Proportion of mothers who perceive visiting time to receive CBNC service is appropriate/good
- Proportion of mothers who perceive consultation time about CBNC service is appropriate/good
- Proportion of mothers who perceive CBNC service providers (HEWs) are competent
- Proportion of mothers who perceive who receive convenient appointment date/time
- Proportion of mothers who perceive the working hour of health post is convenient
- Proportion of mothers who perceive the available drugs are enough at health post.
- Proportion of mothers who perceive the courtesy of HEWs are good.
- Proportion of mothers who perceive the waiting area of health post are clean
- Proportion of mothers who perceive the waiting area of health post are appropriate

5.6.2. Variables

Dependent variable: Satisfaction of caregivers towards CBNC services

Independent variable:

- Socio-demographic and economic variables (age, educational status, religion and ethnicity, economic status, occupational status, parity)
- Participation in HDA/Women health development team/ meetings
- Availability of drugs
- Visiting time by HEWs

5.7. Population and sampling

5.7.1. Source population

The source populations of the study were:

- All mothers in child bearing age group who gave birth in Geze Gofa district (including both home and institutional delivery) since September 1/2016 to end of February 2017.
- All HEWs working in Geze Gofa district HPs
- All health care managers (head of health office and focal person of PHCU (assigned ICCM/CBNC services supervisors)) working in Geze Gofa district
- All CBNC program documents (ICCM registration for sick young infants 0-2 months of age, reports, stock card, integrated maternal and newborn health care) since September 1/2016 to end of February 2017.

5.7.2. Study population

The study population was all participants of the evaluation: -

- Program clients (mothers who gave birth since September 1/2016 to end of February 2017 and were selected for evaluation)
- Program implementers (HEWs who were selected and included in the evaluation)

- Program managers (head of health office) and PHCU focal persons (assigned ICCM/CBNC services supervisors) who were selected for the evaluation
- CBNC services documents ((ICCM registration for sick young infants 0-2 months of age, reports) since September 1/2016 to end of February 2017) stock card, integrated maternal and newborn health care) that was selected for the evaluation.

5.7.3. Study Unit and Sampling Unit

Study unit: - The study unit were program clients, HEWs, head of health office, PHCU focal persons (assigned ICCM/CBNC services supervisors), and services documents (registers, reports, manuals).

Sampling unit: - Primary sampling unit: selected HPs (kebele), Secondary sampling unit: selected program clients, HEWs, head of health office, PHCU focal person (assigned ICCM/CBNC services supervisors), services documents

Unit of analysis: -Primary unit of analysis: program clients and HEWs, Secondary/final unit of analysis: HPs

5.7.4. Sample Size

Retrospective document review: It includes review of ICCM for sick young infants 0-2 months of age Registration book, integrated maternal and newborn card, and administrative records/reports. For the purpose of compliance assessment retrospectively in the last six months all documents were reviewed (from September 2016 till end of February 2017). Since the documents are exclusive and their data also differ; reviewing all registries was better.

Interviewer administer questionnaire: For the purpose of assessing caregivers' satisfaction interviewer administer questionnaire was conducted. For calculating the sample size; up to the best knowledge of the researcher no previous study was conducted about satisfaction towards CBNC services so; using proportion of 50% (assume 50 percent of mothers are satisfied towards CBNC services) to get maximum sample size, expected margin of error (d) 5 percent and 95 percent confidence level. Then using single population proportion formula

$$n = \frac{p(1-p)z^2}{d^2} \quad \text{then calculate sample size} \quad n = \frac{0.5(1-0.5)(1.96^2)}{0.05^2} \quad n = 384$$

the calculated sample size is 384. Since the source population is less than 10,000 (mothers who give birth in the last six months are 1518) using finite population correction formula calculate the final sample size $n_f = \frac{n}{1 + \frac{n}{N}}$, then put the value in the formula and $n_f = \frac{384}{1 + \frac{384}{1518}} = 307$ it gives the sample size of 307 mothers who give birth both home and institutional delivery in the last six months and adding 10 percent non-response rate the final sample size was **338** mothers. From these 321 mothers who give birth in the last six months in Geze Gofa district was interviewed home to home.

Key informants interview: a total of 14 key informant interview(KII) was conducted in which:

- 1 KII with head of health office
- 4 KII with PHCU focal person (who are assigned ICCM/CBNC services supervisors) (there are four PHCU focal persons) in the district were interviewed.
- 9 KII with HEWs (purposefully one HEW was interviewed in each selected 9 HPs)

Observation: a total of 27 observations was conducted; 3 observation in each selected 9 HP (3 observation per health post) that was conducted using opportunity sampling at the time of arrival at HP and then consecutively.

Resource inventory: a total of nine HPs, four HC and district health office resources was inventoried since September 1/2016 to end of February 2017.

5.7.5. Sampling procedures/techniques

Sampling procedure for quantitative data

Sampling procedure for interviewer administer questionnaire: According to WHO Regional Office for Africa Tools for Assessing the Operationality of District Health Systems guideline; if a district having health facilities of 20 to 39 taking 30 percent of them is enough (62). So, based on this information the district had 29 HPs and 30 percent of these are 9 HPs.

From 29 HPs; 9 HPs are selected by simple random sampling (lottery) method. Then the calculated sample size 338 was allocated for each HPs based on the number of mother who gave birth in the last six months. After proportionally allocated the sample size for each HP; reviewed the delivery registration book (integrated maternal and newborn card from family folder) to get list of mothers who gave birth in the last six months. Having the list of mothers who gave birth in the last six months again using lottery method randomly select the study participant under each HPs. Then having the name of mother and house number from the registration card reached the final study unit and was interviewed. This procedure is represented graphically as follows:

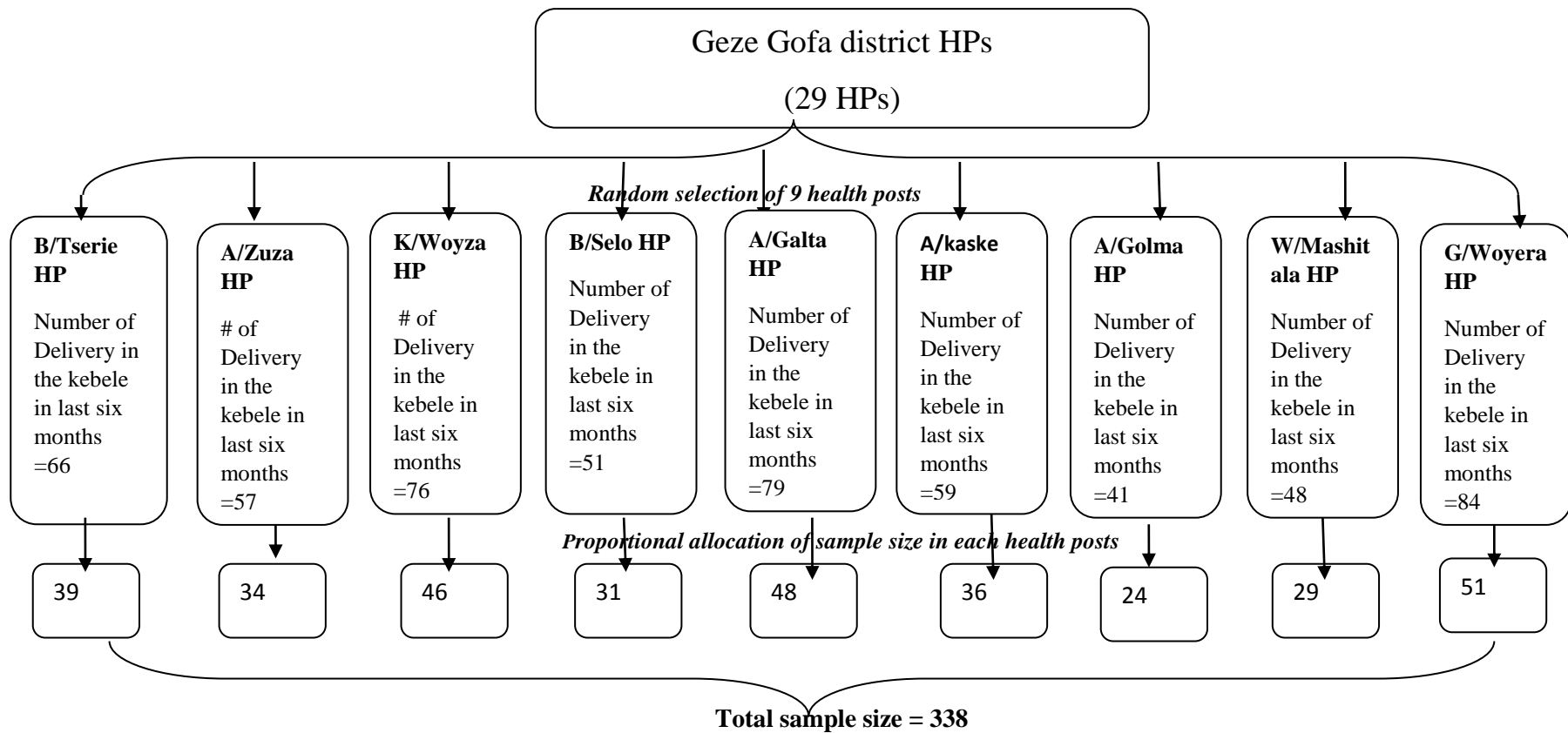


Figure 4: This is schematic diagram of sampling size and sampling procedure for client survey for process evaluation of CBNC services in Geze Gofa district in 2017

Sampling procedure for observation

The client (care giver) and provider interaction was observed through non-participatory for information gathering regarding how the client was counseled, examined, and provided CBNC services with the purpose of assessing the compliance of HEWs to the national standards. In this evaluation, the number of sessions to be observed was determined based on the number of health extension workers in each health post in which according to the standardized USAID tool of observation, 3-5 observations will be selected at random of one or two health care providers exist in the health facility (63) so, consecutively three observations in each health post was conducted from those care givers attending health post for CBNC services in the evaluation period.

Sampling procedure for qualitative data

Key informant interview with HEWs

Study participants for key informant interviews were selected purposefully. The criteria for selection were these HEWs who were trained on CBNC and having more working experience. Those who are information-reach were included to get detail and depth information. One HEW in each HP was selected; a total of nine HEWs were interviewed.

Key informant interview with Head and PHCU focal persons (assigned ICCM/CBNC supervisors)

The purpose of conducting key informant interviews with Heads and PHCU focal persons was to gain detail information regarding program management and barriers to services implementation and solutions. Major issues addressed include: resource allocation and management, support system, promotion of the program to the community, barriers to service implementation from managers and focal person perspective. All HC PHCU focal persons (assigned ICCM/CBNC services supervisors) and Head of health office were participated/interviewed for the evaluation.

5.7.6. Inclusion and Exclusion criteria

Inclusion criteria:

- Health extension workers assigned and working in the selected HPs at least for the last one year were included.

- Mothers who gave birth in the last six months including both home and institutional delivery in the district were included.
- Assigned Head of health office and PHCU focal persons in the selected HC working at least for six months.

Exclusion criteria:

- Mothers who gave birth in another district and came to the study area excluded for survey

5.8. Data collection

5.8.1. Development of data collection tools

Structured questionnaire for survey was used. Semi-structured questionnaire for key informant interview, observation and document review was used. The questionnaires were adopted by referring different literature's (61,64) and contain the following components:

CBNC resource inventory tool: an inventory tool containing CBNC services drugs and medical supplies, human resources, logistics (guideline, recording and reporting tools). These tools were used to assess the availability of program resources for the delivery of CBNC services and list of resources was adopted from national guideline of CBNC program (5).

Interviewer administer questionnaire: a tool containing specific component on background characteristics of the respondent, information about visit, type of services received, compliance of the health care provider with the type and time of services, availability of resources, health care provider- client interaction and service appropriateness from the client perspective and information about caregivers(clients) satisfaction and adapted from measure evaluation tool for CBNC implementation entitled 'user Guide for monitoring the national ICCM and CBNC service implementation (54, 65).

Document review template: a tool used to collect data from program documents (ICCM Registration book for sick young infants 0-2 months of age, integrated maternal and newborn health card from family folder and administrative records). It was adopted by referring evaluation done on implementation of community health workers assessment and referrals of sick babies and ICCM/CBNC guideline (5,54).

Observation checklist: a tool used to assess the compliance of HEW while delivering CBNC services and resources availability. It was adopted by referring national supervision checklist and guidelines on maternal and newborn health approved by FMOH (61). It also assessed the availability of CBNC program resources.

Key informant interview guide for HEWs: was a tool comprised of components like training and preparation, services organization and delivery, barriers to utilization of services by clients from provider perspectives. It also assessed the compliance of HEWs in the provision of CBNC services.

Key informant interview guide for Head and focal persons: was a tool comprised of components like support system, training and preparation, services organization and delivery. It also assessed the availability of resources of CBNC program and barriers to program implementation. The interviewer administer questionnaire was translated to Amharic language.

5.8.2. Data collectors

The interviewer administer questionnaire was collected by four trained diploma nurses after training. For direct observation two trained male Health Officers (HOs) having four and five-year work experience and trained on CBNC services were recruited. Key informants interview, resource inventory and document review was conducted by principal evaluator. Furthermore, two supervisors (one HO and one BSc nurse) was selected and assigned. The data collectors and supervisors were received one day training on the evaluation objective, data collection instruments and techniques and ethical issues. The training was in the same day in order to minimize discrepancy between the data collectors understanding. The data collectors for survey were recruited from nearby Demba Gofa district Sawula HC and data collectors for observation and supervisors recruited from Bulki HC.

5.8.3. Data collection field work

Data collection fieldwork involved recruitment of appropriate study participants, selection of appropriate place and time of interview, and taking of informed consent as presented below. It was collected both at facility and community level.

Document review: The document review in this evaluation was included ICCM Registration book for sick young infants 0-2 months of age, integrated maternal and newborn health card from family folder and service report and the document were reviewed from each nine selected HPs. The document was reviewed in the work area in the appropriate time and place for data collector.

Interviewer administer questionnaire: From HP registration book identify the list of mothers and then by lottery method mothers were selected. Using name and house number of selected mothers the questionnaire was conducted through home to home. For identification of mothers who give birth in the last six months HEWs supported the data collectors and by the support of HDA leaders to get each house. Visited two or more times selected mothers who were not present at the time of data collection.

Direct observation: the observation was conducted while the HEWs deliver the services. Initially the observer was taken consent from HEWs and caregivers. The first and the last three observations were dropped while observing from each HEW in order to minimize observer bias. All observations were conducted in HPs.

Key informant interview: After taking consent and arranging appropriate time and place; it was conducted using key informant interview guide. The voice of the key informants was recorded using recorder. In case of heads and focal person they were interviewed after the interview of HEWs completed.

Resource inventory: Resources inventory was conducted in 9 HPs, four HC and district health office where both conversations with heads and store man at HC level and direct observation of resources was undertaken.

Data quality control

Due care was undertaken prior to data collection, in the process of data collection and analysis to ensure data quality.

For quantitative data: -

Prior to data collection training for data collectors and supervisors were given on the evaluation objectives, data collection instruments and techniques. Data collectors were supervised daily and

every night the consistency and completeness of data was checked by PI. Data collection tool is adopted and prepared for each sub-dimensions and pretest was conducted on 5 percent of the sample size (18 mothers) in Demba Gofa district which is one of neighbor District and checked understandability and clarity of questions, then necessary correction was made prior to the actual data collection.

For qualitative data: -

Qualitative data was collected by principal evaluator and other two trained health officers. The data collectors were engaged throughout the data collection process for controlling data quality. Moreover; the first and last three observations were dropped from each observed HEW for minimizing hawthorn effect and observer bias. Additionally; one HEW was observed in the morning and afternoon. Finally, members check/inserting the voice of the respondents in to the analysis was done and no discrepancy was found between the initially collected information and respondents said.

5.9. Data management and analysis

5.9.1. Data cleaning and entry

Completed quantitative data was clean and checked for completeness, consistency and coded by the supervisor and principal investigator and error was removed every day. Then data was entered to Epi Data version 3.1 software to minimize data entry error.

For qualitative data field note was written as fair notes after data collection every night by principal evaluator and audio record for key informant interview was transcribed to the same language, translated to English and transferred to computer for the analysis.

5.9.2. Data analysis

The quantitative data was exported into SPSS version 20 software. Qualitative data was coded and then analyzed by using thematic analysis techniques, where information produced in availability, compliance and satisfaction thematic areas. Moreover, satisfaction was analyzed as categorical variable.

After exporting data to SPSS version 20, quantitative data was analyzed and results compared based on the evaluation judgment matrix to determine the level of implementation of the program. The wealth of each respondent was measured using 19 items with yes or no answer and then compute them finally rank it in to five quantiles (lowest, second, middle, fourth and highest). For level of satisfaction from the 5-Likert scale of 10 items using demarcation threshold formula $[(total\ highest\ score - total\ lowest\ score)/2] + total\ lowest\ score$; then categorize in to two (below the cut point dissatisfied and above satisfied).

The degree of association between satisfaction and independent variables were assessed using bivariate analysis to examine association and those variables that have association (p-value less than 0.25) was taken as a candidate for multivariate analysis to identify the independent variable that determine the level of satisfaction.

Multivariate analysis result and those having association (p-value less than 0.05) was taken as a predictor for satisfaction. Findings were presented using tables, graphs and charts.

Qualitative data was gathered, transcribed in to text format of Amharic and translated in to English language. Then it was analyzed under the thematized area of availability, compliance and satisfaction used to assess the implementation level and to explain quantitative finding. Finally, the indicators under each dimension of processes were judged based on the judgment matrix to determine level of the program achievement of its objectives.

5.10. Ethical Consideration

Approval of ethical clearance was taken from ethical clearance committee of Jimma university collage of health sciences (*IHRPGC/418/2017*) and informed verbal and written consent were obtained from the study subjects, following an explanation of purpose of the interview and observation. Verbal consent from the service provider also obtained and issues related to client's confidentiality and any potential risk benefits from participation were discussed. The respondents name and specific identification did not mention to maintain confidentiality and privacy. In addition, participants were informed that participation was voluntary and that they can withdraw at any time without any precondition. Moreover, when the HEWs facing miss diagnosed and treated the sick neonate the observer corrected their misdiagnosed and treatment based on the findings.

5.11. Evaluation Dissemination Plan

The evaluation finding communicated with program stakeholders and planned to present to Jimma University and approved. Subsequently the hard and softcopy of finding was provided to stakeholders and further it was published for the scientific research (level of caregivers' satisfaction and associated factors towards CBNC services rendered by HEWs, what are the barriers for CBNC services implementation, assessment of HEWs compliance to the national guideline for providing CBNC services are the expected articles with their titles).

Chapter 6: Result

Description of study participants:

A total of 321 mothers responded the interviewer administered questionnaire with response rate of 94.9 percent. Fourteen key informants from district health office, health center and HP level responded the key informants interview (Male=5, Female=9), and resource inventory was conducted in 9 HPs, 4 HCs and district health office. Moreover, program documents of last six months (nine 0-2 months' registries, nine ANC registries, nine delivery registries, nine PNC registries) (from September 1/2016 till end of February 2017) were reviewed. A total of 36 indicators were employed to collect quantitative information under three dimensions as presented below.

6.1. Availability of Resources

In the district, there are a total of 138 health care workers including one MPH, eight Health officer, 57 nurses (all types), three environmental health, no laboratory technologist and pharmacist, nine laboratory technicians, seven pharmacy technicians and 53 HEWs. Pertaining to training and preparation of health care providers a total of 14 nurses (all types) and 46 HEWs were trained on CBNC.

At least one trained HEW for health posts are assigned to provide the service in integration with HEP at health post and home to home base according to human resource inventory and key informant interview result. In addition, one health care provider from the catchment health centers was assigned as supervisor for each health post to supervise the HEW.

However according to the key informant interview result there is low trained health workers and turnover of trained HEW resulting in interruption of program implementation. All PHCU focal persons and head of health office responded that due to high rate of turnover of HEWs mothers and newborn doesn't receive the services at the health post and home to home base.

“The barriers in our catchment area; recruitment of fresh HEWs having no experience. Senior HEWs who are trained and having good working experiences were changed to other place due to upgrading to other profession and other problems”

[Male Clinical nurse, PHCU focal person]

“In the two health posts, HEW are newly deployed [fresh] and didn’t receive training and the other three have one trained HEW [one HEW per HP]. Providing appropriate CBNC services without receiving training is challengeable and the services will be interrupted”

[Male Clinical nurse, PHCU focal person]

“I am the only HEW in this health post and not-trained on CBNC program. Additionally, there is no alternative way of integrated refresher training about CBNC program. So, this is a barrier that hinder for providing appropriate services for mothers and newborns”.

[25 years old female HEW9]

Table 2: Human resources availability and training status for CBNC services provision in government health facilities of Geze Gofa district April, 2017

Human resources		
Professional category	Total available	Trained
MPH (General Public Health)	1	0
HO	8	0
Nurse (all types)	57	14
Environmental health	3	0
HEW	53	46
lab technician	9	0
pharmacy technician	7	0
Total	138	60

Concerning to drug availability in the respective health posts, drug for treatment of neonatal sepsis Gentamicin 20mg/2ml or 10mg/1ml and 125 mg dispersible amoxicillin was available since September 2016 in all health posts. Furthermore, iron with folic acid for the mothers, TTC eye ointment, paracetamol suppository, examination gloves and syringes, iodine solution and roll bandages are also available in all health posts since September 2016. There was no period in which these drugs were stock out from each health posts; Every three-month continuous resupply of these drugs and medicines from pharmaceutical centers and zonal health department.

Cotton, gauze and surgical gloves were available in four Health posts since September/2016 but stock out in the rest five health posts. The average stock out day was 80 days and the stock out is

due to shortage of resupply and refill of drugs and medicines from different NGOs and district health office.

“Previously NGOs and zonal health department gives us resources including medicines and supplies but not sustainable except gentamicin and dispersible amoxicillin. There is also shortage of budget allocation for the program from the district so, it is challengeable in order to fulfill drugs and medical supplies for each health post in quarterly based.”

[Male Public Health nurse, PHCU focal person]

Moreover, chlorohexidine ointment and vitamin k was stock out since September/2016 in all health posts.

“Chlorohexidine ointment, vitamin K was not available. Starting from the beginning of this programs no supply of chlorohexidine and vitamin k and they told us they would avail it soon but still not availed it. The program accounts more than two years and Others NGOs and zonal health department also didn't supply it.”

[25 years old female HEW3]

Regarding medical equipment's resuscitation bag used to give immediate resuscitation for asphyxiated newborn was not available since September 2016.

Key informants agree with availability of the medicines and supplies. All the HEWs response that there was no stock out of gentamicin and amoxicillin since September/2016 in contrary there were stock out of chlorohexidine ointment and vitamin k since September/2016. All HEWs response that iron with folic acid for the mothers, TTC eye ointment, paracetamol suppository, examination gloves and syringes, iodine solution and roll bandage were also available since September/2016.

“The resources used for CBNC program; Gentamicin, dispersible amoxicillin, fefol (iron plus folic acid), vitamin A for mothers, weighing scale for newborn baby weight measuring are available but chlorohexidine ointment and vitamin K are not available since September/2016 and cotton, gauze and surgical gloves are stock out since December/2016”.

[26 years old female HEW8]

Table 3: Availability of Medicines and supplies of CBNC program in government health posts of Geze Gofa district April, 2017

Drugs and supplies	Available at the time of observation		Available in the last six month	
	Number of HPs	Percentage	Number of HPs	Percentage
Gentamicin 20mg/2cc or 10 gm/cc	9	100	9	100
Dispersible amoxicillin 125mg	9	100	9	100
Fefol (iron with folic acid)	9	100	9	100
TTC eye ointment	9	100	9	100
Paracetamol suppository	9	100	9	100
Examination gloves	9	100	9	100
Syringes with needles	9	100	9	100
Iodine solution	9	100	9	100
Roll bandage	9	100	9	100
Cotton	4	45	4	45
Gauze	4	45	4	45
Surgical gloves	4	45	4	45
Weighting scale	9	100	9	100

Recording and reporting are the other activities of CBNC program implementation. ICCM registration book for young infants 0-2 months of age, integrated maternal and newborn card, monthly services delivery reporting formats, services delivery tally sheets, and community based new born care key indicators monitoring chart are available and stock in since September/2016 in all health posts. Booklet chart for treatment of 0-59 months of age are also available in all health posts. The key informants' interview result; all 9 HEWs replied that ICCM registration book for young infants 0-2 months of age, integrated maternal and newborn card, monthly reporting formats, and community based new born care key indicators monitoring chart are available and no stock out since September/2016.

“Integrated maternal and newborn card, services delivery tally sheet, monthly services delivery report form, family guide having 64 key messages, ICCM registration book for 0-2 months of

age, and other different reporting, checklist and booklet charts are available since September/2016. Integrated maternal and newborn card and services delivery tally sheet, ICCM registration book was donated from zonal health department annual but the other supplied from district health office as needed.”

[A 25 years’ old female HEW4]

However, there was no home to home services delivery registration book, registration book for pregnant mothers’ identification and referral form by women health development team in all health posts.

“Additionally, home to home services delivery registration books for CBNC services program, registration books for pregnant mother’s identification and referral form by women development team and 1 to 5 networks was not available and due to this many home to home activities are not recorded and reported properly”.

[A 28 years’ old female HEW6]

Summary of performance process indicators of program resources availability

On average the process of community based newborn care program with respect to program resource availability was measured to be 81 percent which is good and needs improvement based on the judgment parameter(table:4).

Table 4: Summary of CBNC program resource availability indicators in Geze Gofa district April, 2017

s. no	Indicators	Expected in #	Observed in #	Weight (W)	Score (S)	Achiv. in % (W/S*100)	Judgment parameter
1.	Proportion of HEW trained in CBNC services	53	46	2.7	2.34	86.7	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
2.	Proportion of health posts with all HEWs trained in CBNC services	29	22	2.2	2.05	75.8	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
3.	Number of HC staff trained in CBNC (including CBNC supervision)	85	14	2	0.33	16.4	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor

4.	Proportion of HPs with Existence of continued supply & refill of necessary drug &supplies in the last six months	9	9	2.7	2.7	100	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
5.	Proportion of HPs with CBNSM medicines (Gentamicin injection and Amoxicillin) in stock during the last six months	9	9	4	4	100	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
6.	Proportion of HP with medical supplies (gloves, syringe, cotton and antiseptics) in stock during the last six months	9	5	2.5	1.4	56	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
7.	Proportion of HP with functional Spring infant scale with sling on the day of assessment	9	9	1.2	1.2	100	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
8.	Proportion of HP with functional resuscitation bag on the day of assessment	9	0	1.5	0	0	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
9.	Proportion of HPs with ICCM registration book for 0-2 months of age on the day of data collection	9	9	1.8	1.8	100	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
10.	Proportion of HPs with ICCM treatment booklet chart for 0-2 months of age on the day of data collection	9	9	2	2	100	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
11.	Proportion of HPs with CBNC implementation guideline on the day of data collection	9	9	1.4	1.4	100	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
12.	Proportion of HPs with Counseling card /Family Health Card in stock during the last six months	9	9	1	1	100	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
Overall process of CBNC program for availability sub dimension				25	20.22	81	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor

6.2. Compliance to national guideline

6.2.1. Registration and Report

In the study health posts; a total of 414 young infants 0-2 months of age were registered on ICCM registration book. From these; 21 were diagnosed with very severe disease (severe bacterial infection), 30 were diagnosed to have local bacterial infection, eight were diagnosed to be pre-term, 13 were diagnosed to have low birth weight and four had feeding problem/low weight. From the total registered young infants; 51 were with a complain of fever and fast breathing

From 21 severe bacterial infection cases; 16 were referred to Health center (9 with pre-referral treatment and seven without pre-referral treatment) and five cases treated at HP with gentamicin 20mg/2ml daily and dispersible amoxicillin 125 mg BID for seven days on a daily based follow up for gentamicin injection.

For these diagnosed with local bacterial infection 23(76.7 percent) were treated with dispersible amoxicillin 125 mg BID for seven days and the rest seven didn't gave treatment.

Moreover, a total of 362 mothers were registered with post-natal visit since September 2016. From these 19 within two days, 12 at the 3rd day, 182 b/n 3rd and 7th days, 137 after 7th days and the rest 12 cases not recorded (visiting time unknown). Moreover, Since September 2016 396(70.5 percent) live births identified and registered from the expected 561 live births.

Among mothers with postnatal visits (362), 91.1 percent of newborns weight was recorded. From this, 11(3.3 percent) of newborn had weight of <2.5kg; and 319 (96.7 percent) had birth weight of 2.5-4.5 kg.

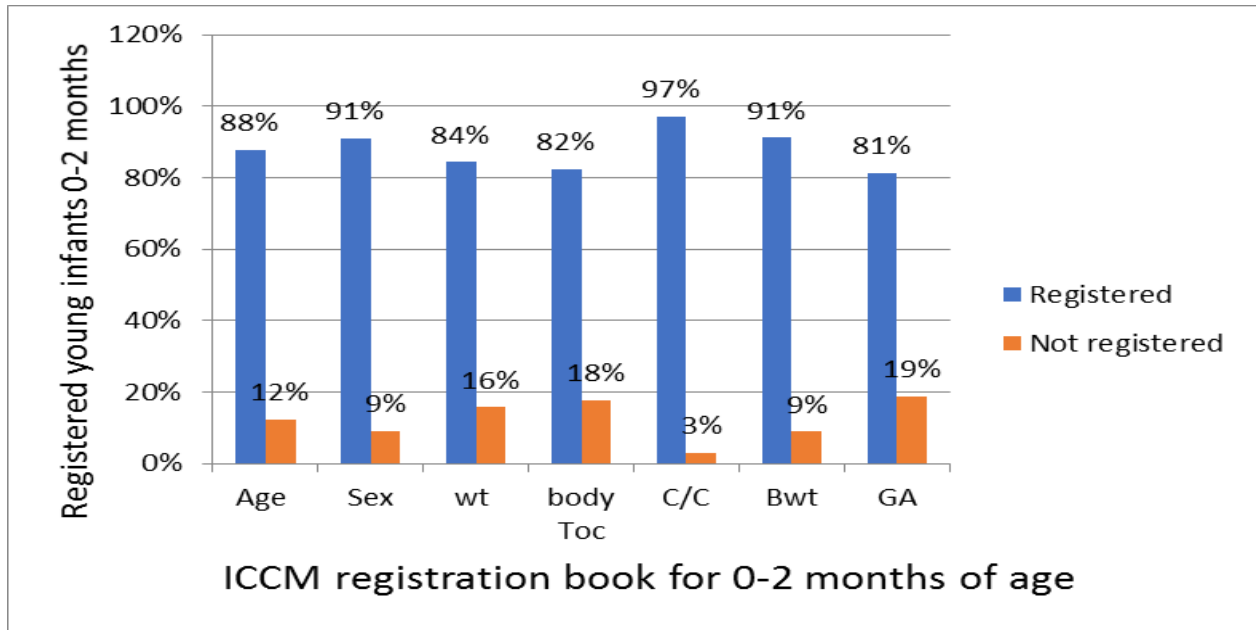


Figure 5: Total cases registration appropriateness on ICCM registration book for 0-2 months of age in Geze Gofa district HPs April 2017.

From 561 expected pregnant mothers 506(90 percent) of mothers received first antenatal care. Moreover 396(70.5 percent) of live birth identified from 561 expected live births from household level in selected health posts within six months' period and 35 percent of newborns received postnatal care within two days from HEWs.

Pertaining to findings of observation session, in all of the sessions the health extension workers showed respect for clients. For a sick young infant, there are 16 tasks that should be performed by HEWs at HP. On average HEWs completed only 10 tasks for an individual sick young infant from the total 16 tasks.

As part of CBNC services, the age of young infants was asked in 20(74 percent) of sessions; gestational age at birth of sick neonate/ young infant was asked in 20(74 percent) of sessions; the weight of sick neonate/ young infant was measured in 21(77.8 percent) of sessions; the body temperature of sick neonate/ young infant was measured in 14(52 percent) of sessions.

The main problem of sick young infant was asked in 20(74 percent) of sessions; from these 20(74 percent) of sessions asked about the sick neonate/ young infant is unable to breast feed. Moreover, in 13(48 percent) of sessions HEWs asked about the sick neonate had or not convulsion, in 20(74 percent) of sessions the sick neonate/ young infants were asked about

unconsciousness, in 13(48 percent) of sessions HEWs count the number of breathing in a minute for sick neonate/ young infant. In 20 (74 percent), 20 (74 percent), 14(52 percent),19(70 percent), 22(82 percent) of sessions HEWs asked about vomiting, diarrhea, jaundice, maternal and child HIV status and immunization status respectively.

Finally, in 21(78 percent) of the sessions the HEWs gave correct classification of the young infants based on the chief complaint and findings.

Table 5: Direct observation result of assessment tasks of HEWs for sick 0-2 months of young infants in Geze Gofa district HPs April 2017

S. No	Tasks	Performed by HEWs N=27	Percent
		Yes	
1.	Give/show respect for caregivers	27	100
2.	Ask age of sick neonate/young infant	20	74.1
3.	Ask gestational age at birth	20	74.1
4.	Measure weight	21	77.8
5.	Measure body temperature	14	51.9
6.	Ask main problem for sick neonate/young infants	20	74.1
7.	Ask about young infants is unable to breast feed	20	74.1
8.	Ask for convulsion	13	48.1
9.	Ask for unconsciousness	20	74.1
10.	Ask for breathing problem	14	51.9
11.	Count number of breathing	13	48.1
12.	Ask for vomiting	20	74.1
13.	Ask for diarrhea	19	70.4
14.	Ask for jaundice	20	74.1
15.	Ask for maternal and child HIV status	20	74.1
16.	Ask for immunization status	22	81.5

The KII result shows that; Three quarter of the health posts received weekly based follow up and supervision from their respective catchment health center, 25 percent received program specific supportive supervision from zonal health department and all health posts received integrated supportive supervision from district health office quarterly based.

“I had received supervision from health center and woreda health office supervisors; which is not program specific supportive to CBNC program rather it is integrated, but from zone I received CBNC program specific supportive supervision every quarter and the last supervision was on December 17/2016. From woreda health office every three months; last integrated supportive supervision on January and every week from catchment health center supervision. From health center, previously I got weekly based supervision but nowadays there is interruption.”

[A 28 years' old female HEW6]

The survey result shows that; All of the respondents know the HEWs and majority of mothers received advice during pregnancy and in the postpartum period.

From the total respondents 277(94 percent) are member of women health development (1 to 5 network) team and from these 154(56 percent) attended meeting during their last pregnancy but the rest 46 percent didn't attend meeting.

The mean stage of pregnancy during their last ANC visit was 4.6 month with SD of ± 1.2 during their first ANC visit; early at 2nd month and late 8th month.

From mothers who received ANC services at least once 149(47.3 percent) were in the first trimester during 1st contact for ANC visit, 159(50.4 percent) were in the 2nd trimester and the rest 7(2.3 percent) were in the 3rd trimester.

During their ANC follow up 266 (84.4 percent) mothers attended HP; 48(15.3 percent) mothers attended HC and the rest 0.3 percent attended hospital for their antenatal care. From the total respondents 274 mothers take iron (iron plus folic acid) averagely for 68 (range 15-180) days. More over; 265(82.6 percent) of the respondent had went to HC if they have faced danger sign during their recent pregnancy, 44(13.7 percent) to health posts and the rest 12 (3.7 percent) to hospital. Majority of the respondents 254(79.1 percent) know about vaginal bleeding is dangers

sign during pregnancy and 221(68.8 percent) about severe headache is dangers sign during pregnancy.

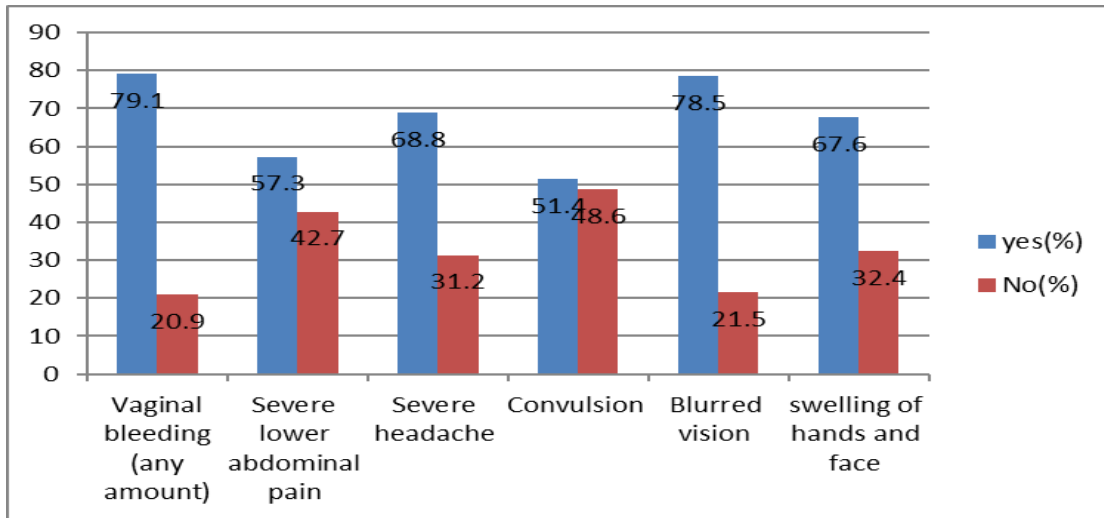


Figure 6: Knowledge of mothers about danger signs during pregnancy in Geze Gofa district since September 2016; April 2017

From the total respondents 265(82.6 percent) mothers didn't experience danger sign during their pregnancy but the other 56(17.4 percent) have experience at least one sign.

From the total respondents; Most of the mothers 170(53 percent) delivered in HC, 115(35.8 percent) in home, 27(8.4 percent) in hospital and the rest nine (2.8 percent) in health post. Moreover, nine percent of the delivery assisted by HEWs (2.8 percent in health post and the rest in home).

Immediately delivery after cutting the cord 10 (3.1 percent) the newborns had applied anything on the stump and from these 6 six (60 percent) was ointment or powder the rest four (40 percent) was oil and other things and 90 percent of them applied by their relatives. For the prevention of infections of the cord 200(62.3 percent) caregivers wants to use special medicine if it was available.

From the total respondents 294(91.6 percent) of newborns start breast feeding within the first one hour and the other 27(8.4 percent) newborns feed breast for the first time between 1 and 24 Hours after delivery. Three fourth of mothers received information about breast feeding from

health extension workers, 40(12.5 percent) of mothers received from health care provider, 23(7.2 percent) received from mass media and 2.5 percent received from HDA/community group.

From the total respondents 226(70.4 percent) mothers had information about community based newborn care provided by HEW at HP and community level.

Majority of mothers 285(88.8 percent) know about fever that needs to seek immediate health care within two months of infants after delivery and 242(75.4 percent) about poor sucking or unable to sucking and 225(70.1 percent) knows about fast breathing.

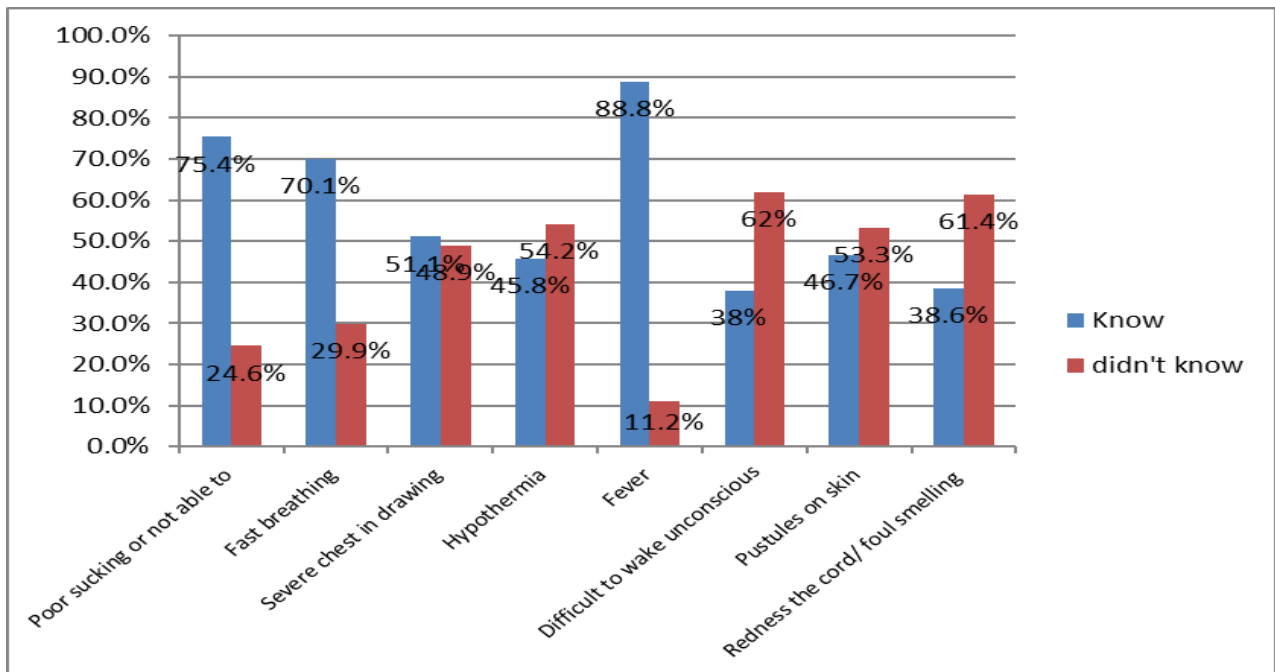


Figure 7: Knowledge of mothers about danger signs during 0-2 months of young infants in Geze Gofa district April 2017.

During the first two months after delivery 60.1 percent mothers checked on their newborn's health by HEWs. From these 35 (18.1 percent) newborns checked one times; 80 (41.4 percent) newborn checked two times; 73 (37.8 percent) newborn checked three times and the rest 5 (2.6 percent) check four times. A total of 75(38.8 percent) of newborns were checked within 48 hours; 31 (16 percent) checked at the 3rd day; 47 (24 percent) checked between the 3rd and 7th day and the rest 21.2 percent checked after 7 day by health workers.

Out of the total respondents 270 (84.1 percent) of mothers' newborn didn't experience health problem. The mean age of young infants having health problem (experiences health problem) was 40 days with \pm 12 days SD and 34 (67 percent) of young infants were consulted HEWs and went to HP to receive medical services and averagely had visit five times.

Majority of the newborn 262(81.6 percent) were weighed within seven days and from this 233 (88.9 percent) within 24 hours, 13 (5 percent) between 1 and 2 days, four (1.5 percent) at the 3rd day and the rest 12(4.6 percent) after the 3rd day and 248 (95 percent) had normal birth weight and the rest 14 (5 percent) had low birth weight. From these 213(81.3 percent) were weighed at HC, 20 (7.6 percent) at hospital, nine (3.5 percent) at health post and 20(3.6 percent) were weighed at home. For 175(54.5 percent) of mothers the availability of drugs in the HPs were convenient.

Overall health extension workers complied to the national guidelines in 68 percent during the provision of CBNC services; it requiring urgent improvement according to the decision parameter (table: 6).

Table 6: Summary of performance indicators of compliance to national guideline in Geze Gofa district April 2017

s. no	Indicators	Expected in #	Observed in #	Weight (W)	Score (S)	Achiv. in % (S/W*100)	Judgment parameter
1.	Proportion of pregnant women who received at least one ANC by HEWs at HP in the last six months	561	506	3.1	2.8	90	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
2.	Proportion of live births identified from HH level in the catchment area in the last six months	561	396	3.1	2.18	70.5	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
3.	Proportion of newborns who received PNC visits by HEWs within 48 hours in the last six months	561	193	3.1	1.07	34.5	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
4.	Proportion of sick young infants who assessed for more than 12 tasks from 16 tasks during observation	27	13	3.1	1.5	48	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor

5.	Proportion of sick young infants who are asked for main problem/chief complaint	27	20	3	2.22	74	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
6.	Proportion of neonatal sepsis cases who are treated in a given catchment area in the last six months	44	44	4.7	4.7	100	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
7.	Proportion of neonatal sepsis cases who received treatment in a given catchment area by HEWs in the last six months	51	30	4.7	2.8	59	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
8.	Proportion of very sever diseases (VSD) treated with initial dose with appropriate antibiotics in the last six months	21	14	4.7	3.1	66	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
9.	Proportion of VSD referred by HEWs in the last six months	21	16	3.2	2.43	76	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
10.	Proportion of VSD receiving 7 consecutive days of gentamycin in the last six months	21	5	4.7	1.2	24	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
11.	Proportion of treated neonatal sepsis cases whose treatment outcome has improved in the last six months	28	23	4.7	3.85	86	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
12.	Proportion of NS cases referred by HEW in the last six months	51	16	3.7	1.2	31	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
13.	Proportion of neonatal sepsis cases correctly classified in the last six months	51	40	4.6	3.6	78	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
14.	Proportion of neonatal sepsis cases correctly treated in the last six months	40	32	4.6	3.68	80	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
Over all compliance of HEWs				55	37.44	68	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor

6.3. Satisfaction of mothers with CBNC services

6.3.1. Socio-Demographic and socio-economic characteristics

The age range of mothers in this study was between 18 and 42 years. The mean age was 27.6 (SD \pm 5) years. Majority of mothers (75.7 percent) were married and five (percent) were single. As to the religious background, 46.7 percent mothers were protestant and 8.7 percent were Muslim.

Regarding to educational status, 43.9 percent of mothers were attended elementary school followed by 30.8 percent were unable to read and write, 13.1 percent were attended high school, 6.6 percent were able to read and write but no formal education, and the rest 5.6 percent were attended college and above.

Among mothers in this study 71.7 percent were house wife and 5.6 percent were merchants. The mean parity of mothers in this study was 3.4 (Range; 1-11 and SD \pm 1.9) children. Regarding wealth quintile, 30.2 percent were in the middle quintile (Table: 7).

Table 7: Socio-demographic and economic characteristics of respondents of survey in Geze Gofa district, April 2017.

Variables	Frequency(N=321)	Percent
Age in years		
<24	95	29.6
24-35	211	65.7
>35	15	4.7
Marital status		
Single	16	5
Married	243	75.7
Widowed	27	8.4
Divorced	35	10.9
Religious status		
Protestant	150	46.7
Orthodox	112	34.9
Muslim	28	8.7
Catholic	31	9.7
Educational status		
unable to read and write	99	30.8
able to read and write	21	6.6
Elementary school (up to grade 8)	141	43.9
High school	42	13.1

Collage and above	18	5.6
Occupational status		
Gov't employee	13	4
Merchant	25	7.8
Daily labor	21	6.5
Farmer	32	10
House wife	230	71.7
Ethnicity		
Gofa	216	67.3
Gamo	55	17.1
Wolayita	26	8.1
Others*	24	7.5
Parity		
Primipara	53	16.5
Multipara	268	83.5
Wealth quantiles		
Lowest	55	17.1
Second	54	16.8
Middle	97	30.2
Fourth	47	14.7
Highest	68	21.2

* Amhara, Guraghe, Kembata

6.3.2. Mothers satisfaction on services provided

Half of clients satisfied with the counseling services about CBNC services they received. Accordingly, 168(52.3 percent) were satisfied and 22(6.9 percent) were very satisfied with mean of 3.34 and ± 1.019 SD.

On the appropriateness of visiting time to receive CBNC services 181(56.4 percent) clients were satisfied and four (1.2 percent) were very unsatisfied.

The level of clients' satisfaction on the appropriateness of consultation time about the services 151(47 percent) were satisfied and 1(0.3 percent) were very unsatisfied with the mean of 3.50 and ± 0.874 SD.

The knowledge/competency of HEWs made satisfaction for 137(42.7 percent) and very satisfied for 39(12.1 percent) clients with a mean of 3.53 and ± 0.912 SD on CBNC services they received.

Thirty-one of clients (99 mothers from 321) were satisfied were very satisfied but 72(22.4 percent) and 57(and 17.8 percent) were unsatisfied and very dissatisfied with a mean 2.80 and ± 1.165 SD with the availability of drugs at health post.

Nearly half of, 145(45.2 percent) caregivers were satisfied with the courtesy of HEWs, 47(14.6 percent) were neutral, 25(7.8 percent) were very satisfied.

Cumulatively the proportion of clients satisfied with the overall implantation of CBNC services in Geze Gofa district is 228 (71.02 percent) (table:8).

Table 8: Level of clients' satisfaction on each satisfaction measuring items of CBNC services provided in Geze Gofa district April 2017.

Satisfaction item	Very dissatisfied (%)	Dissatisfied (%)	Neutral (%)	Satisfied (%)	Very satisfied (%)	mean	SD
How you are satisfied with counseling services about CBNC services you received from HEWs.	6(1.9)	90(35)	35(10.9)	168(52.3)	22(6.9)	3.34	± 1.019
How you are satisfied with appropriateness of visiting time to receive CBNC service	4(1.2)	52(16.2)	55(17.1)	181(56.4)	29(9)	3.56	± 0.910
How you are satisfied with appropriateness of consultation time about CBNC service?	1(0.3)	49(15.3)	90(28)	151(47)	30(9.3)	3.50	± 0.874
How you are satisfied with the competence/Knowledge of the HEWs?	9(2.8)	27(8.4)	109(34)	137(42.7)	39(12.1)	3.53	± 0.912
How you are satisfied with convenience of appointment date/time to receive CBNC services	0(0)	61(19)	86(26.8)	143(44.5)	31(9.7)	3.45	± 0.907
How you are satisfied with	2(0.6)	70(21.8)	97(30.2)	122(38)	30(9.3)	3.34	± 0.942

convenience of working hour of health post?							
How you are satisfied with the availability of drugs at health post?	57(17.8)	72(22.4)	81(25.2)	99(30.8)	12(3.7)	2.80	±1.165
How you are satisfied with the Courtesy of HEWs?	0(0)	104(32.4)	47(14.6)	145(45.2)	25(7.8)	3.28	±1.005
How you are satisfied with the cleanness of health post waiting area?	5(1.6)	91(28.3)	58(18.1)	146(45.5)	21(6.5)	3.27	±0.996
How you are satisfied with the appropriateness of health post waiting area?	8(2.5)	84(26.2)	41(12.8)	162(50.5)	26(8.1)	3.36	±1.033

The level of Caregivers satisfaction was classified; into two categories satisfied above a specified cut point and dissatisfied below that point. This point is calculated using the **demarcation threshold formula**: $[(total\ highest\ score - total\ lowest\ score)/2] + total\ lowest\ score$ (66).

Table 9: clients' satisfaction category on each satisfaction measuring items of CBNC services provided in Geze Gofa district April 2017.

s.no	Satisfaction item	Satisfaction category (N=321)	
		Dissatisfied (%)	Satisfied (%)
1.	How you are satisfied with counseling services about CBNC services you received from HEWs.	96(29.9)	225(70.1)
2.	How you are satisfied with appropriateness of visiting time to receive CBNC service	56(17.4)	265(82.6)
3.	How you are satisfied with appropriateness of consultation time about CBNC service?	50(15.6)	271(84.4)
4.	How you are satisfied with the competence/Knowledge of the HEWs?	36(11.2)	285(88.8)
5.	How you are satisfied with convenience of appointment date/time to receive CBNC services	61(19)	260(81)
6.	How you are satisfied with convenience of working hour of health	72(22.4)	249(77.6)

	post?		
7.	How you are satisfied with the availability of drugs at health post?	129(40.2)	192(59.8)
8.	How you are satisfied with the Courtesy of HEWs?	104(32.4)	217(67.6)
9.	How you are satisfied with the cleanness of health post waiting area?	96(29.9)	225(70.1)
10.	How you are satisfied with the appropriateness of health post waiting area?	92(28.7)	229(71.3)

Bivariate analysis of satisfaction survey

In the bivariate analysis, independent variables age, marital status, occupational status, wealth status, and convenience of availability of drugs at health posts are considered as a candidate for multivariate analysis having P-value ≤ 0.25 (Table:10).

Table 10: Bivariate analysis of factors affecting satisfaction of clients on the overall implementation of CBNC services in Geze Gofa district April 2017

Variables	Category		COR	95% CI	p-value
Age in years	Satisfied (%)	Dissatisfied (%)			
≤ 24	72(22.4)	23(7.1)			
25-35	145(45.2)	66(20.6)	0.702	0.404-1.219	0.209
≥ 36	11(3.4)	4(1.3)	0.878	0.255-3.026	0.837
Marital status					
Single	9(2.8)	7(2.2)			
Married	171(53.3)	72(22.4)	1.847	0.663-5.150	0.241
Widowed	22(6.9)	5(1.6)	3.422	0.857-13.673	0.082
Divorced	26(8)	9(2.8)	2.247	0.647-7.804	0.203
Educational status					
Unable to read and write	70(21.8)	29(9)			
Able to read and write	16(5)	5(1.6)	1.326	0.444-3.957	0.613
Elementary school (up to grade8)	97(30.2)	44(13.7)	0.913	0.521-1.600	0.751
High school (Grade 9-12)	32(10)	10(3.1)	1.326	0.577-3.045	0.506
Collage and above	13(4)	5(1.6)	1.077	0.352-3.296	0.896
Occupational status					

Gov't employee	11(3.4)	2(0.6)			
Merchant	15(4.7)	10(3.1)	0.273	0.050-1.502	0.135
Daily labor	18(5.6)	3(1)	1.091	0.157-7.592	0.930
Farmer	25(7.8)	7(2.2)	0.649	0.116-3.641	0.624
House wife	159(49.6)	71(22)	0.407	0.088-1.885	0.250
Parity					
Primipara	41(12.8)	12(3.7)			
Multipara	187(58.3)	81(25.2)	0.676	0.338-1.353	0.268
Wealth quintile					
Lowest	37(11.5)	18(5.6)			
Second	46(14.3)	8(2.5)	2.797	1.094-7.151	0.032
Middle	68(21.1)	29(9)	1.141	0.560-2.324	0.717
Fourth	30(9.3)	17(5.3)	0.859	0.378-1.948	0.715
Highest	47(14.6)	21(6.5)	1.089	0.508-2.335	0.827
PNC Visiting by HEWs					
Yes	154(48)	58(18)			
No	74(23)	35(11)	0.796	0.482-1.317	0.375
Participating/Attending 1 to 5 meeting					
Yes	128(46.2)	60(21.6)			
No	65(23.4)	24(8.7)	1.270	0.725-2.222	0.403
Information about CBNC					
Yes	164(51)	62(19.3)			
No	64(20)	31(9.7)	0.780	0.464-1.311	0.349
Drug availability					
Yes	118(36.8)	57(17.8)			
No	110(34.3)	36(11.1)	1.476	0.903-2.413	0.121

N.B: P-value <0.25 is a candidate for multivariate analysis

Factors associated with satisfaction of mothers

In the multivariate analysis, occupational status and wealth quintile are independently associated with satisfaction level of clients on the process of community based newborn care services implementation. Accordingly, mothers in the second quintiles of economic status were three times satisfied than mothers in the lowest quintiles of economic status (AOR=3.114, 95 %CI (1.160-8.362), p-value=0.024). Moreover, mothers who are merchant 84.5percent less likely satisfied than mothers who are government employee (AOR =0.155, 95%CI (0.025-0.971), p-value= 0.046) (table:11).

Table 11: Multivariate analysis result of satisfaction survey in Geze Gofa district April 2017

Variables	Satisfaction category		AOR	95% CI	p-value
Age in years	Satisfied (%)	Dissatisfied (%)			
≤24	72(22.4)	23(7.1)			
25-35	145(45.2)	66(20.6)	0.715	0.392-1.306	0.276
≥36	11(3.4)	4(1.3)	1.353	0.355-5.159	0.658
Marital status					
Single	9(2.8)	7(2.2)			
Married	171(53.3)	72(22.4)	2.148	0.677-6.815	0.194
Widowed	22(6.9)	5(1.6)	3.294	0.711-15.267	0.128
Divorced	26(8)	9(2.8)	2.258	0.559-9.120	0.253
Occupational status					
Gov't employee	11(3.4)	2(0.6)			
Merchant	15(4.7)	10(3.1)	0.155	0.025-0.971	0.046**
Daily labor	18(5.6)	3(1)	0.754	0.093-6.112	0.791
Farmer	25(7.8)	7(2.2)	0.404	0.062-2.648	0.345
House wife	159(49.6)	71(22)	0.214	0.041-1.127	0.069
Wealth quintile					
Lowest	37(11.5)	18(5.6)			
Second	46(14.3)	8(2.5)	3.114	1.160-8.362	0.024**
Middle	68(21.1)	29(9)	1.030	0.474-2.239	0.941

Fourth	30(9.3)	17(5.3)	0.796	0.319-1.984	0.624
Highest	47(14.6)	21(6.5)	1.076	0.469-2.472	0.862
Drug availability					
Yes	118(36.8)	57(17.8)			
No	110(34.3)	36(11.1)	1.484	0.866-2.543	0.150

N.B: p-value ≤ 0.05 is considered as significant

Cumulatively the process of CBNC services as satisfaction (under acceptability dimension) was determined as 75.05 percent; it needs improvement according to the decision parameter (table 12).

Table 12: Summary of performance of satisfaction sub-dimensions' indicators in Geze Gofa district April 2017.

s. no	Indicators	Expected in #	Observed in #	Weight (W)	Score (S)	Achiv. in % (S/W*100)	Judgment parameter
1.	Proportion of mothers who satisfied with counseling services they received.	321	225	2	1.4	70.1	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
2.	Proportion of mothers who perceive visiting time to receive CBNC service is appropriate/good	321	265	2	1.65	82.6	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
3.	Proportion of mothers who perceive consultation time about CBNC service is appropriate/good	321	271	1.69	1.43	84.4	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
4.	Proportion of mothers who perceive CBNC service providers (HEWs) are competent	321	285	2.67	2.37	88.8	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
5.	Proportion of mothers who perceive who receive convenient appointment date/time	321	260	2	1.62	81	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor

6.	Proportion of mothers who perceive the working hour of health post are convenient	321	249	2	1.55	77.6	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
7.	Proportion of mothers who perceive the available drugs are enough at health post.	321	192	3.3	1.98	59.8	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
8.	Proportion of mothers who perceive the approach of HEWs are good.	321	217	1.67	1.13	67.6	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
9.	Proportion of mothers who perceive the waiting area of health post are clean	321	225	1.67	1.17	70.1	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
10.	Proportion of mothers who perceive the waiting area of health post are appropriate	321	229	1	0.71	71.3	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor
Over all compliance of HEWs				20	15.01	75.05	85-100= V-Good 75-84.99=Good 60-74.99= Fair <60= Poor

In summary based on the weight given for each dimension of process; the overall process of CBNC services is determined be 72.67 percent requiring improvement (table 13):

Table 13: Summary of overall performance indicators of process of CBNC services in HPs of Geze Gofa district April 2017

s.no	Dimensions	Relative weight(W)	Score (S)	Achievement in % (S/W*100)	Judgment parameter
1.	Availability	25	20.22	81	Good
2.	Compliance	55	37.44	68	Fair
3.	Acceptability/Satisfaction	20	15.01	75.05	Good
	Overall process of CBNC services	100	72.67	72.67	85-100= Implemented well 70-84.9= Needs improvement <70= Needs urgent improvement

Chapter 7: Discussion

In this evaluation indicator driven approach was used to measure the process of CBNC program implementation. The evaluation finding showed that the overall process of CBNC program implementation in the respective health post was 72.67 percent. The structure component measured by availability of resource was 81 percent. The compliance of HEWs congruence to the national guideline and the satisfaction of clients also measured and gives 68 percent and 75.05 percent respectively. The status of process of the program needs some improvements according to the judgment parameter.

7.1. Availability Dimension

The findings of our study showed that program resources gentamicin, amoxicillin and iron were 100 percent available in Geze Gofa district health posts to the minimum standards according to the CBNC national guideline. Cotton, surgical gloves and gauzes were available in 45 percent of health posts. In the contrary, stock out of medical supplies like chlorohexidine ointment and vitamin k observed for more than six month and resuscitation bag was not available. This stock out was due to no resupply of these drugs from pharmaceutical center and other NGOs since the beginning of program implementation in the district and no budget allocated specifically for the program in the district.

Moreover; there were low trained human resources due to high turnover rate of HEWs and no chance for upgrading to similar field of study. Additionally; no alternative mechanism for training newly assigned HEWs and HCP from health center and health office. CBNC training is also not included in the IRT (Integrated Refreshment Training) of HEWs program.

All health posts had ICCM registration books for 0- 2 month of age, ICCM chart booklet and integrated maternal and newborn card. CBNC key indicators monitoring chart and services delivery tally sheets were 100 percent available in all health posts. The availability includes human resources, material resources and other organizational characteristics. According to the national CBNC guideline of Ethiopia the minimum required program resource for a certain health post to provide CBNC services includes human resources(trained), logistics and supplies, support system (5).

Our evaluation findings were higher than findings of the analysis of routine community based interventions for newborns in Ethiopia (COMBINE) aggregated data showed around 90 percent had ICCM registration books for 0- 2 month of age and 65 percent had ICCM chart booklets. Supplies, clean gloves were available in 64 percent of the health posts and 80 percent had syringes with needles and gentamycin was available in 64 percent of the facilities and over 80 percent had TTC eye ointment. Approximately 80 percent of health posts had family folders (a family-centered information collection tool for integrated health service delivery by HEWs) and a book for pregnant women and outcomes registration. Sixty-eight percent had any family health cards and young infant record forms. (46, 50).

These low trained HCPs had the implication of not providing CBNC services that gives inaccessible services for the beneficiaries supported by findings on newborn visit within the first two days were low.

7.2. Compliance Dimension

The findings of our study show that 68 percent of the process of CBNC services implemented congruent with the national standards. In the process of services delivery there was very good achievement of providing first antenatal care, giving treatment for neonatal sepsis cases and treated neonatal cases whose treatment outcome has improved. But attending delivery by HEWs in case of emergency and identifying live births from HH level in the catchment area was fairly congruent. This was due to week follow up and supportive supervision of HEWs from the respective catchment health center and low home to home visited by HEWs for identification of live births and post-natal care.

Our study findings showed that three-quarter of the health post received weekly follow up and supervision from HC with an interruption but all health posts received quarterly based integrated supportive supervision from district health office and one quarter of them received CBNC program specific supportive supervision from zonal health department. This result is comparable with the findings on baseline evaluation of community based newborn care in Ethiopia; 82 percent of HEWs had received supportive supervision in the three months prior to the survey. Among those that received supervision, 86 percent reported visits from health centers and half from woreda health offices. On average; HEWs received five supervisory visits in the previous

three months. Less than half the HEWs reported that the supervisory visits covered discussions on newborn special condition care; for example, management of very severe disease was discussed with 41 percent of HEWs (46).

According to national CBNC guideline of Ethiopia the minimum CBNC program activities includes: Early identification of pregnancy, Provision of Focused Antenatal Care (ANC), Promotion of institutional delivery, Safe and clean delivery including provision of misoprostol in case of home deliveries or deliveries at health post level, Provision of immediate newborn care, including application of chlorohexidine on the cord, Recognition of asphyxia, initial stimulation and resuscitation of the newborn baby, Prevention and management of hypothermia, Management of pre-term and low birth weight neonates, and Management of neonatal sepsis and very severe disease at community level in collaboration with women health development team(1 to 5 network).

The findings of our evaluation showed involvement of women health development team was 277(94 percent) and during their last pregnancy this is in line with national guideline but only 154(56 percent) attend meeting frequently during their last pregnancy this result explained by interruption of meeting between each network or women health development team.

In our evaluation 51.9 percent of sick young infants measured their body temperature and managed for hypothermia higher than COMBIE aggregated data resulted 43 percent of newborns received management of hypothermia (50).

Moreover, the findings of our evaluation show 65 percent of newborn didn't received first postnatal visit within 48 HRs by HEWs. The possible achievement of low first postnatal visit within 48 hours includes high coverage of home delivery which is 35.8 percent, home to home visit by HEWs was low resulted from PHCU focal persons' interview and HEWs reported that due to limited number of human resources it is difficult to give home to home visits to all newborns. This result is higher than findings of assessment of community-based intervention in Malawi shows 36 percent of women received at least one pregnancy home visit by an HSA, while only 10.9 percent of newborns received a post-delivery home visit within the recommended 3-day windows (11).

But the analysis of routine community based interventions for newborns in Ethiopia (COMBINE) aggregated data showed that 62 percent of newborns were visited by HEWs within 48 hours of birth (50). The variation of this result may be due to study area; COMBINE showed at national level but ours study at district level. This low result had an implication of lower early identification of neonatal sepsis case, referral to HC and treatment.

As per national guideline of CBNC; a mother who give birth irrespective of the birth place should get home to home visit within 48 Hours by HEWs and get registered on ICCM registration book for sick young infants 0-2 months of age that consists the services newborn received.

Our evaluation findings showed majority of mothers 294 (91.5 percent) were aware of health development team (HDT) or women health development team (1 to 5 network), 277 (86 percent) are member and 188 (58 percent) attend meeting in their community during last pregnancy and is lower than national standards which shows all mothers should attending women health development team meeting during their pregnancy this result may be due to unstrengthen of 1 to 5 networks in the community. But our finding was higher than an evaluation result in Malawi; Thirty-four percent of women reported being aware of a core group in their community, and although core groups were not make regular home visits to pregnant women, 9.6 percent received a home visit from a core group member during pregnancy. Awareness of and contact with a core group member were not significantly inequitable (11).

Identification of newborns with signs of possible severe bacterial infection, treatment that is appropriate and initiated as early as possible and Completion of a full seven-day course of appropriate antibiotics is other components of CBNC program to treat newborn sepsis effectively and accessibly. According to ICCM for 0-2 months of age treatment booklet chart young infants with very sever diseases (sever bacterial infection) are referred to HC or hospital with pre-referral gentamicin and dispersible amoxicillin and if referral is impossible treat with gentamicin 20mg/2ml per kg daily and dispersible amoxicillin 125 mg BID for 7 days.

Our Evaluation finding shows 45.5 percent of sick neonates with very server disease referred with initial dose of gentamicin and dispersible amoxicillin, 31.8 percent referred without initial dose and 22.7 percent of VSD treated at health post level with gentamicin 20mg/2ml daily and

125 mg dispersible amoxicillin BID for 7 consecutive days; This low percentage of congruent to the national guideline may be due to the interruption of follow up and supervision of HEWs from the catchment health center. This result is in line with a finding on community based intervention to reduce neonatal mortality in Bangladesh shows Out of the 478 sick neonates identified with VSD during the project period, 34 percent were referred successfully, 43 percent were treated by CHWs due to unsuccessful referral, five percent received care from another source and 18 percent did not receive any outside care (49).

According to National CBNC guideline all case should be registered, classified (diagnosed) based on sign and symptoms according to treatment booklet chart and reported; but our evaluation finding from document review showed 78 percent of neonatal cases correctly classified and from these 80 percent was treated correctly according to the booklet chart. This correctly classification and treatment of neonatal sepsis cases had an implication of increment of improvement of treatment outcome.

Our evaluation findings showed 68 percent CBNC services are congruent to the national standards this is higher than an evaluation examined the newborn care services by community health workers in a low socio-economic area of Karachi, Pakistan. Both qualitative and quantitative information was collected through five focus group discussions, 15 in-depth interviews, and 525 interviews with women who had given birth recently; Results revealed that many of the newborn care services were not consistent with recommended practice (48).

7.3. Satisfaction Dimension

In this Evaluation, the acceptability of services process by mothers (mother's satisfaction) was measured. With regard to satisfaction of mothers to CBNC services, the lowest satisfaction was observed at availability of drugs at health post 59.8 percent, courtesy of HEWs 67.6 percent, counseling services by HEWs 70.1 percent, cleanness and appropriateness of HP waiting area was 70.1 percent and 71.3 percent respectively.

Higher level of mother's satisfaction on convenience of HP working hours, convenience of appointment time/date, appropriateness of visiting time to receive CBNC services and appropriateness of consultation time was observed.

The finding of this evaluation shows occupational status and the wealth of clients statically associated with the satisfaction of mothers by the process of CBNC services provision.

Accordingly, mothers who are in the second quantiles are three times satisfied than mothers who are in the lowest quantiles (AOR=3.114, 95 % CI (1.160-8.362), p-value=0.024). Moreover, mothers who are merchant 84.5 percent less likely satisfied than mothers who are government employee (AOR =0.155, 95%CI (0.025-0.971), p-value= 0.046).

The lower satisfaction level of mother in the lowest quantiles economic status shows home to home services provision for the poorest till lower which was incongruent to the national guideline.

The finding of our study was in line with a study done on community perception and health seeking behaviours in Southern Ethiopia; showed that coverage of home visits by HEWs during pregnancy and the postpartum period was lower than expected, and generally did not significantly favor the poorest households (1).

Moreover, inconvenient time of services provision for merchant might dissatisfied towards the services than government employee. In another way, this might be explained government employee had information about the services than others.

Clients satisfied on the overall process of CBNC services were 75.05 percent which is fair based on the judgment parameter and that needs improvement.

This evaluation finding is in line with an Evaluation of implementation of community based assessment in Ghana shows mothers reported that the community health workers' visits were welcomed and acceptable to families. Mothers were happy that the work of the CHWs was helping them know when their newborns were ill to seek care. Some explained that they were pleased with the assessment visits because it was reassuring to know the state of health of their newborns and the caregivers were convinced that CHWs were knowledgeable (54).

Another study done in Uganda on acceptability of community based newborn care in rural part of the country shows that Mothers accept community based newborn care intervention to improve care of mothers and newborn babies through home visits to households by health workers during pregnancy and in the first week after delivery (55).

The use of three dimension of process makes this evaluation more valid than measuring the process only by one dimension and using both qualitative and quantitative methods (triangulation) also gives strength. The main sources of this evaluation are services document and services users (clients).

7.4. Limitations of Evaluation

During the data collection time use of observation on clients to provider interaction which is difficult to know the true trained of HEWs (hawthorn effect); in order to minimize this, we drop the first and last three observations for observer bias minimization. Recall bias of caregivers about their history of pregnancy before six months especially for their first visit of ANC. Sampling unit selection in case of observation and calculated sample might not enough to get saturated information's are the list of limitations in this evaluation, all services delivered might not registered properly was the other limitation of the evaluation.

Chapter 8: Conclusion and Recommendation

8.1. Conclusion

The primary health care units in Geze Gofa district have minimum requirement resources to provide CBNC services to mothers and newborns in the health posts and community level. There are trained HEWs at minimum requirement and supervisors to supervise the program. Essential drugs and medical supplies for CBNC program provision like gentamicin, dispersible amoxicillin, iron with folic acid for pregnant mothers, weight scale, examination gloves, vitamin A for delivered mothers and syringes are stock in but cotton, surgical glove and gauze, vitamin k, chlorohexidine ointment to apply on the cord immediately after birth, resuscitation bag and sterilized delivery kit are not available. So, the resources need resupply and improvement.

Based on the findings of our evaluation compliance of the HEWs to the national guideline is poor. The compliance of HEWs to during the provision of CBNC services the observed low compliances was providing postnatal care home visit for newborns, identifying/referring neonatal sepsis cases, treating VSD for consecutive 7 days and needs improvement.

More over according to the finding of our evaluation satisfaction of mothers towards the process of CBNC services provided by HEWs is good. The proportion of clients satisfied to the availability of drugs at health post is poor. Proportion of clients' satisfaction with courtesy, the cleanness and waiting area of the health post is fair. Occupational status and the wealth of clients were factors that affect satisfaction.

8.2. Recommendation

Public health facilities of Geze Gofa district:

- ✓ Primary health care unit linkage between HC and health posts should strengthen through regular follow up and supervision for improving CBNC services implementation.
- ✓ Health Extension Workers should provide home to home visit for these who had birth irrespective of place of delivery within 48 hours and identify low birth weight babies.
- ✓ Health Extension Workers should treat/refer VSD neonatal cases according to the ICCM 0-59 months' treatment booklet chart

Geze Gofa district Health office:

- ✓ Additional human power should receive in-services training on CBNC program including health care provider at HC and HEWs.
- ✓ Turnover of HEWs should reduce by giving an opportunity for upgrading their profession
- ✓ Continuous supportive supervision should be provided to the health facilities that focus on program improvement and can be conducted in integration.
- ✓ Program resources like vitamin K, chlorohexidine ointment for applying on the cord, resuscitation bag, surgical gloves, gauze and cottons, home to home services delivery registration books should be availed and consistently supplied.

SNNPR health bureau/Gamo Gofa zonal health department

- ✓ Continuous supportive supervision should be provided to public health facilities of the district.
- ✓ Additional human power should receive basic training of CBNC program; especially for HC and woreda health office staff to give effective supervision and follow up.
- ✓ Community based newborn care training should include in the integrated refresher training of HEWs program.

Chapter 9: Meta- Evaluation

Evaluation Standards

The public health community adopted a set of evaluation standards (Milstein et al., 2000) put forward by the Joint Commission on Standards for Educational Evaluation (67) that inform the practice of public health today. It is “evaluation of the evaluation itself” done by the use of four standards; utility, feasibility, propriety and accuracy with 26 sub-standards with a total of 64 specific criteria. Finally; the overall status of the evaluation was measured 76.5 percent which was very good according to the standards criteria.

Utility: The utility of evaluation findings was ensured by participating program stakeholders throughout the evaluation process. The stakeholders were participated in the evaluation mainly as source of data and facilitator of the evaluation during data collection period. This standard was measured using specific criteria checklist and the result was 80 percent.

Feasibility: The evaluation was feasible as per to cost it has incurred. Its feasibility was ensured through identifying the feasible data collection methods and sources of data during EA. This standard was measured using specific criteria checklist and the result was 87.5 percent.

Propriety: throughout the evaluation process the consent of the participation was respected and consent was taken both orally and in written form. Moreover, based on the specific criteria measured the propriety of this evaluation was 76.5 percent.

Accuracy: The data collection process was undertaken through intensive supervision and daily checked collected data. Mixed method data collection was employed and finally based on the specific criteria measured the accuracy of this evaluation was 81 percent.

Table 14: Summary of meta-evaluation standards result using specific criteria checklist for process evaluation of CBNC program in Geze Gofa district April 2017

Standards	Sub-standard	Total number of specific criteria	Number of specific criteria met	Percentage
Utility (7 standard)	Stakeholder Identification	3	3	
	Evaluator credibility	3	2	
	Information scope and selection	2	2	

	Values identification	3	3	
	Report clarity	3	3	
	Report timeliness and dissemination	2	0	
	Evaluation impact	3	2	
Sub-Total		20	16	80
Accuracy (8 standards)	Reliable information	4	3	
	Valid information	3	2	
	Systematic information	2	2	
	Analysis of quantitative information	2	2	
	Analysis of qualitative information	2	2	
	Justified conclusion	2	1	
	Impartial reporting	2	2	
	Meta-evaluation	2	1	
Sub-total		19	15	79
Feasibility (3 standards)	Practical procedures	3	2	
	Political viability	3	3	
	Cost effectiveness	2	2	
Sub-total		8	7	87.5
Propriety (8 standards)	Services orientation	3	2	
	Formal agreement	2	1	
	Rights of human subject	2	2	
	Human interaction	2	2	
	Complete and fair assessment	3	2	
	Disclosure of findings	1	0	
	Conflict of interest	2	1	
	Fiscal responsibility	2	2	
Sub-total		17	11	64.7
total judgment parameter		64	49	76.5% (>75% - very good)

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Annexes

Annex 1: Definition of Indicators

Table 15: definitions of availability indicators were used in evaluation of CBNC services in Geze Gofa district, 2017

S. No	Indicators	Numerator	Denominator	Source of information(method)	Dimension
1.	Proportion of HEW trained in CBNC services	# of HEW trained on CBNC	Total HEW planned for CBNC training	Human resource inventory	Availability
2.	Proportion of health posts with all HEWs trained in CBNC services	# of HPs with all HEWs trained in CBNC services	Total # of HPs giving CBNC services	Human resource inventory	Availability
3.	Number of HC staff trained in CBNC (including CBNC supervision)	# of HC staff trained on CBNC and supervision	Total HC staff planned for CBNC training	Human resource inventory	Availability
4.	Proportion of HPs with Existence of continued supply & refill of necessary drug &supplies in the last six months	# of HPs with existence of continuous supply & refill of necessary drugs and supplies in the last 6 months	Total number of HPs delivering CBNC services	Drug and supplies inventory (bin card, HPMRR)	Availability
5.	Proportion of HPs with CBNSM medicines (Gentamicin injection and Amoxicillin) in stock during the last six months	# of HPs with CBNSM unexpired medicines in stock during the last 6 months	Total # of supervised CBNSM HPs in 6 months	Drug and supplies inventory (bin card, HPMRR)	Availability
6.	Proportion of HP with medical supplies (gloves, syringe, cotton and antiseptics) in stock during the last six months	Total # of HPs with medical supplies (gloves, syringe, cotton and antiseptics) in stock during the last 3 months	Total # of CBNC services HPs	Drug and supplies inventory (bin card, HPMRR)	Availability
7.	Proportion of HP with functional Spring infant scale with sling on the day of assessment	# of HPs with functional Spring infant scale with sling on the day of assessment	Total number of CBNC HPs	Drug and supplies inventory (bin card, HPMRR)	Availability
8.	Proportion of HP with functional	# of HPs with functional resuscitation bag on the day	Total number of CBNC HPs	Drug and supplies inventory (bin card,	Availability

	resuscitation bag on the day of assessment	of assessment		HPMRR)	
9.	Proportion of HPs with ICCM registration book for 0-2 months of age on the day of data collection	# of HPs with ICCM for 0-2 months of age registration book on the day of data collection	Total number of CBNC HPs	Registration and reporting inventory tool	Availability
10.	Proportion of HPs with ICCM treatment booklet chart for 0-2 months of age on the day of data collection	# of HPs with ICCM treatment booklet chart for CBNC on the day of data collection	Total number of CBNC HPs	Registration and reporting inventory tool	Availability
11.	Proportion of HPs with CBNC implementation guideline on the day of data collection	# of HPs with CBNC implementation guideline on the day of data collection	Total number of CBNC HPs	Job aids, Registration and reporting inventory tool	Availability
12.	Proportion of HPs with Counseling card /Family Health Card in stock during the last six months	# of HPs with Counselling card /Family Health Card in stock during the last 3 months	Total number of CBNC HPs	Job aids, Registration and reporting inventory tool	Availability

Table 16: definitions of compliance indicators were used in evaluation of CBNC services in Geze Gofa district, 2017

S. No	Indicators	Numerator	Denominator	Source of information	Dimension
1.	Proportion of pregnant women who received at least one ANC by HEWs at HP in the last six months	Number of pregnant women that received antenatal care at least once	Total number of expected Pregnancies	Document review	Compliance
2.	Proportion of live births identified from HH level in the catchment area in the last six months	Total # of live births identified in a given catchment area in the last six months.	Total no. of expected deliveries	Document review	Compliance
3.	Proportion of newborns who received PNC visits by HEWs within 48 hours in the last six	Total # of newborns who received a PNC home visit by HEW within 2 days of birth	Total # of expected live births in a given catchment area in the	Document review	Compliance

	months	in a given catchment area in the last six months.	last six months.		
4.	Proportion of sick young infants who assessed for more than 12 tasks from 16 tasks during observation	# of sick young infants who assessed for more than 12 tasks from 16 tasks during observation	Total # of sick young infants' observation.	Observation	Compliance
5.	Proportion of sick young infants who are asked for main problem/chief complaint	# of sick young infants who assessed/ tasked main problem/chief complaint during observation	Total # of sick young infants' observation.	Observation	Compliance
6.	Proportion of neonatal sepsis cases who are treated in a given catchment area in the last six months	Total # of treated neonatal sepsis cases in a given catchment area in the last six months.	Total # of expected neonatal sepsis cases under two month in a given catchment area in the last six months.	Document review	Compliance
7.	Proportion of neonatal sepsis cases who received treatment in a given catchment area by HEWs in the last six months	Total # of newborns classified by HEW as having neonatal sepsis who received adequate antibiotic treatment	# of newborns classified by HEW as having neonatal sepsis	Document review	Compliance
8.	Proportion of very sever diseases (VSD) treated with initial dose with appropriate antibiotics in the last six months	Total # of newborns classified by HEW as having VSD who received initial appropriate antibiotics	# of newborns classified by HEW as having VSD	Document review	Compliance
9.	Proportion of VSD referred by HEWs in the last six months	Total # of newborns classified by HEW as having VSD visited Health post and referred to Higher Health Facility	Total # of newborns classified by HEW as having VSD	Document review	Compliance
10.	Proportion of VSD receiving 7 consecutive days of gentamycin in the last six months	Total # of newborns classified by HEW as having VSD who received 7 days of gentamycin treatment	Total # of newborns classified by HEW as having VSD	Document review	Compliance

11.	Proportion of treated neonatal sepsis cases whose treatment outcome has improved in the last six months	Total # of newborns sepsis cases whose treatment outcome has improved in a given catchment area in the last six months.	Total # of newborns sepsis cases who are treated at health post in a given catchment area in the last six months.	Document review	Compliance
12.	Proportion of NS cases referred by HEW in the last six months	Total # of newborn Sepsis cases who made their initial visit higher Health Facility in the last six months and catchment area	Total # of newborn Sepsis cases visited Health post and by other higher Health Facility in the last six months and catchment area	Document review	Compliance
13.	Proportion of neonatal sepsis cases correctly classified in the last six months	# of neonatal sepsis cases with consistency between assessment and classification	Total number of newborn sepsis cases reviewed	Document review	Compliance
14.	Proportion of neonatal sepsis cases correctly treated in the last six months	# of neonatal sepsis cases with consistency between classification and treatment	Total # of neonatal sepsis cases with consistency between assessment and classification	Document review	Compliance

Table 17: definitions of client acceptability/satisfaction indicators were used in evaluation of CBNC services in Geze Gofa district, 2017

S. No	Indicators	Numerator	Denominator	Information sources	Sub-dimension
1.	Proportion of clients (care givers) who satisfied with counseling services they received.	# of clients who responds that they are satisfied with the services they receive	Total # of clients who responds counseling services they received.	Survey	Satisfaction
2.	Proportion of clients (care givers) who perceive visiting time to receive CBNC service is appropriate/good	# of clients (care givers) who respond visiting time to CBNC services is appropriate/good	Total # of clients (care givers) who responds about CBNC services visiting time	Survey	Satisfaction

3.	Proportion of clients (care givers) who perceive consultation time about CBNC service is appropriate/good	# of clients (care givers) who respond consultation time is appropriate/good	Total # of clients (care givers) who responds about CBNC services consultation time	Survey	Satisfaction
4.	Proportion of clients (care givers) who perceive CBNC service providers (HEWs) are competent	# of clients (care givers) who perceive HEWs are competent.	Total # of clients (care givers) who responds about the competency of CBNC services providers HEWs	Survey	Satisfaction
5.	Proportion of clients (care givers) who perceive who receive convenient appointment date/time	# of clients (care givers) who responds their appointment date is convenient	Total # of clients (care givers) who responds about the convenient of appointment date/time	Survey	Satisfaction
6.	Proportion of clients (care givers) who perceive the working hour of health post are convenient	# of clients (care givers) who responds the working hour of HP is convenient	Total # of clients (care givers) who responds on working hour of HP	Survey	Satisfaction
7.	Proportion of clients (care givers) who perceive the available drugs are enough at health post.	# of clients (care givers) who responds the availability of drugs in HP are enough	Total # of clients (care givers) who responds on availability of drugs in HP	Survey	Satisfaction
8.	Proportion of clients (care givers) who perceive the approach of HEWs are good.	# of clients (care givers) who responds HEWs approach is good	Total # of clients (care givers) who responds on HEWs approach	Survey	Satisfaction
9.	Proportion of clients (care givers) who perceive the waiting area of health post are clean	# of clients (care givers) who responds waiting area of HP is clean	Total # of clients (care givers) who responds on waiting area cleanness of HP	Survey	Satisfaction
10.	Proportion of clients (care givers) who perceive the waiting area of health post are appropriate	# of clients (care givers) who responds waiting area of HP is appropriate	Total # of clients (care givers) who responds on f waiting area appropriateness of HP	Survey	Satisfaction

Annex2: English version of Data collection tools

Process Evaluation of Community Based Newborn Care (CBNC) program Questionnaire

Questionnaire I: interviewer administer questionnaire

Introduction and Consent

My name is _____. I am from Jimma University for conducting a study on community based newborn care services. The program (CBNC) has been helping pregnant women, mothers, and newborns in this district with the objectives of improving maternal and newborn health status. We are here to find out about the health of mothers and newborns to help you and your community to keep mothers and children healthy. We would very much appreciate your participation in this study. This information will help the district to improve its program in the kebele. I assure you that your name will not be shared with anyone else and your answers to my questions will be combined with answers from many other people so that no one will know that the answers you give me today belong to you. Your privacy is protected, and I assure that your answers will be kept confidential.

Your participation in this study is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this study since your views are important.

May I proceed with the questions?

Respondent Agrees to be Interviewed..... 1

Respondent Does Not Agree to be Interviewed..... 2 End Interview &

Thank the Respondent

Section 1: Respondent's (care givers) Background

Q #	Questions	Response	skip
101.	Name of HP	_____	
102.	House number	_____	
103.	Age of care	_____	

	givers(mothers)		
104.	Marital status	1. Single 2. Married	3. Widowed 4. Divorced
105.	What is your religion?	1. Protestant 2. Orthodox	3. Muslim 4. Catholic 5.
106.	Educational status?	1. No education and unable to read and write 2. able to read and write 3. elementary school 4. High school 5. Collage and above	
107.	Occupational status?	1. Gov't employee 2. Merchant 3. Daily labor	4. Farmer 5. House wife 6. Others(specify) _____
108.	What is your ethnicity?	1. Gofa 2. Gamo	3. Wolayita 4. Other (specify)
109.	Number of delivery (both live and still birth)?	_____	
110.	Does your household have the following items? (READ ALL) 1. Stove (gas/ kerosene) 2. Chair 3. Table 4. Bed 5. Mattress 6. Watch(hand/wall) 7. Generator 8. Caw 9. ox 10. Horse/mule 11. donkey 12. Goat/sheep 13. Hen 14. Beehive 15. Bicycle 16. Motorcycle 17. Telephone/mobile phone 18. Television 19. Radio		

Section 2: HEP Services: General and Antenatal

#	Questions	Response	Skip
201.	Do you know the HEWs who serve in your area? Probe: “Female health workers assigned to your kebele and providing health services like immunization, FP etc.....”	1. Yes 2. No	If 2 skip to 206
202.	Please tell me which of the following kinds of help or services does HEWs provide? (Read all responses) 1. Health information including mothers’ groups? 2. Provide advice to pregnant women? 3. Provide advice to post-partum mother? 4. Provide advice regarding newborn? 5. Provide advice and treatment regarding children’s diarrhea? 6. Provide advice and treatment regarding fever, cough Fast breathing and others in newborn 7. Supply condoms and pills? 8. Vitamin A for mother? 9. Provide HIV/AIDS/STI information? 10. Others(specify) -----		
203.	Is there any time you meet with HEWs to get health services or advice in your last pregnancy?	1. Yes 2. No	If 2 skip to 206
204.	If yes, how often did you meet with HEW during your last pregnancy?	# of times:	
205.	Did the HEWs discuss specific plans for any of the following with you during your last pregnancy? (READ ALL RESPONSES) 1. Seek ANC from health worker? 6. Identifying/using a skilled birth attendant?		

	2. Delivery at a health facility 3. Emergency transport for delivery? 4. About source/place of Emergency Obstetric Care? 5. Danger signs during delivery?	7. Proper, balanced diet 8. Finances for delivery care? 9. Identify person to accompany mother in emergency? 10. Others(specify)-----
206.	Is there a mothers group/HDA or 1 to 5 in your area?	1. Yes 2. No If 2 go to sec..3
207.	Are you member of 1 to 30 or 1 to 5 network?	1. Yes 2. No
208.	Did you attend the mothers' group meeting during your last pregnancy?	1. Yes 2. No

Section 3: Antenatal Care

Q #	Questions	Response	Skip
301.	Did you see anyone for antenatal care for the pregnancy prior to your most recent delivery?	1. Yes 2. No	If 2 go to 311
302.	Whom did you see? Ask: "Anybody else?" Continue until no further answers. (CIRCLE ALL RESPONSES GIVEN)	1. Health care provider from HC 2. HEWs 3. HDA 4. TBA 5. Other (specify) _____	If 1 go 303 2 go 304 3 go 305 4 go 306
303.	How many times did you receive antenatal care from a Health care provider from HC during the pregnancy prior to your most recent delivery?	Number of times _____	
304.	How many times did you receive antenatal care from a HEWs during the pregnancy prior to your most recent delivery?	Number of times _____	
305.	How many times did you receive antenatal care from a HDA during the pregnancy prior to your most recent delivery?	Number of times _____	
306.	How many times did you receive antenatal care from a TBA and others during the pregnancy prior to your most recent delivery?	Number of times _____	
307.	What is your pregnancy stage in months in your first contact with any of service provider for your last pregnancy?	Number of months _____	
308.	As part of your antenatal care during the pregnancy prior to your most recent delivery, were any of the following done at least once? (Read each service, circle appropriate response)		

	1. Was your abdomen examined? 2. Did you receive iron tablets? 3. Did you receive deworming tablets? 4. Did you receive TT vaccination? 5. Was your weight measured? 6. Was your blood pressure measured? 7. Did you give a blood sample? 8. Others(specify) _____	
309.	Where did you receive antenatal care for your most recent antenatal care visit? If source is hospital, health center, or clinic, write the name of the place. Probe to identify the type of source and circle the appropriate code to the right _____ Name of place	1. Hospital 2. HC 3. Health post 4. Pvt. Clinic 5. Home 6. Other (specify) _____
310.	During your recent pregnancy, for how many days did you take the iron/folic tablets?	Number of days
311.	Please tell me where you should go for health services if you have any one of the following symptoms (Vaginal bleeding (any amount), Severe lower abdominal pain, Severe headache, Convulsion, Blurred vision or swelling of hands and face) while you are pregnant? (CIRCLE ALL RESPONSES GIVEN)	1. Hospital 2. HC 3. Health post 4. clinic 5. Home 6. Other (specify)_____
312.	What are the symptoms during pregnancy indicating the need to seek immediate care? Ask: "Any others?" Continue until no further answers. (CIRCLE ALL RESPONSES GIVEN)	1. Vaginal bleeding (any amount) 2. Severe lower abdominal pain 3. Severe headache 4. Convulsion 5. Blurred vision 6. swelling of hands and face 7. Other (specify) -----
313.	When you were pregnant, did you experience any of the following problems at any time? (Read out all responses one after another) (Record all responses accordingly.) 1. Blurred vision? 2. Severe lower abdominal pain? 3. Severe headache? 4. Convulsion? 5. Swelling of the hands, body or face? 6. Any vaginal spotting or bleeding? 7. None of the above	

Section 4: Delivery Care

Interviewer: "Now, I would like to ask you some questions about your most recent delivery."

Q#	Questions	Response	Skip
401.	Where did you give birth in your most recent delivery? If source is hospital, health center, or clinic, write the name of the place.	1. Hospital 2. HC 3. Health post	

	Probe to identify the type of source and circle the appropriate code to the right. _____ Name of Place	4. Your home 5. Other (specify) _____	
402.	Who assisted your most recent delivery? Probe: "Anybody else?" (CIRCLE ALL RESPONSES GIVEN)		
	1. Health care provider at hospital 4. HDA 7. Other (specify) _____	2. Health care provider at HC 5. TBA 8. Nobody	3. HEWs 6. Relative/Friend
403.	What was your delivery outcome?	1. Live birth 2. Dead 3. Stillbirth	If 2/3 go 405
404.	Age of the child in days?	_____ days	
405.	Within the first hour after the delivery, did a health worker give you an injection either in the thigh or buttock or medication by intravenous drip?	1. Yes 2. No	
406.	During your delivery, did you experience any of the following problems at any time? (Read out all responses one after another.) (Record all responses accordingly)		
	1. So much bleeding that it wet your clothes and you feared it was life threatening? 2. Convulsions? 3. Prolonged labor (>12 hours)? 4. The baby's hand, leg or cord came out first? 5. None of the above		
407.	What did you do or whom did you consult for the problems that you stated above? Probe: "anything else?" (CIRCLE ALL RESPONSES GIVEN)		
	1. Traditional treatment at home 4. HC 7. Consulted HEW 10. Other (specify) _____	2. Given medicine at home 5. Clinic 8. Consulted a TBA	3. Hospital 6. Bought medicine from pharmacy 9. Consulted relative/neighbor/friend
408.	Did a health worker refer you or advise you to go to a health facility for treatment for any of the problems that you mentioned above (Q406)?	1. Yes 2. No	If 2 skip to sec..5
409.	After you were advised to seek care, did you go to any health facility?	1. Yes 2. No	
410.	If yes, where did you go?	1. Hospital 3. Health post 5. Pharmacy	2. HC 4. Clinic 6. Other (specify) _____

section 5: Post-Partum Care

Interviewer: “Now, I would like to ask you some questions about your health after your most recent delivery.”

Q #	Questions	Response	Skip
501.	At the time of delivery or in the early days after the delivery did you receive a visit from the HEWs?	1. Yes 2. No	If 2 skip to 503
502.	How long after the delivery did that visit happen?	Days.....	
503.	Did the HEWs make any other visits over the following days and weeks	1. Yes 2. No	If 2 skip to 505
504.	When did she make the second visit?	Days.....	
505.	Did the HEWs make third visit over the following days and weeks?	1. Yes 2. No	If 2 skip to 507
506.	When did she make the third visit?	Days.....	
507.	Who checked on your health at that (FIRST) time? <i>PROBE FOR MOST QUALIFIED PERSON.</i>	1. Health care provider from hospital 2. Health care provider from HC 3. HEWs 4. HDA 5. TBA 6. Relative/Friend 7. Other (specify)_____	
508.	What services, help or advice did the HEWs provide you or your newborn during the first two-month following your last delivery? (READ ALL RESPONSES) 1. Diagnose or treat illness in the newborn? 3. Check to see if the mother had a delivery- related problem (e.g. Infection, continuing bleeding)? 5. Make referral to health service provider? 7. others(specify)_____	2. Provide vitamin A for mother? 4 Provide iron tablets for mother? 6. Advice or help with birth registration?	
509.	FOR BIRTHS IN OWN/OTHER HOME, ASK: After [NAME] was born and the health care provider, HDA left your home, did any health care provider check on your health? Note: For women with a stillbirth, ask: “After you lost your baby, and the HEWs or HDA left your home, did any health care provider check on your health?”	1. Yes 2. No	

512.	Which of the following activities were conducted by the health worker during your postnatal checkup within six weeks after delivery? (READ ALL)	
	1. Examination of abdomen?	2. Internal examination?
	3. Asked if you had excessive bleeding / severe abdominal pain?	4. Counseled you about Family Planning?
	5. Counseled you about breastfeeding?	6. Counseled you about immunization?
	7. Provided advice on newborn care?	8. Others(specify)_____

Section 6: Immediate Newborn Care

601.	Did anybody apply anything on the stump after the baby's cord was cut?	1. Yes 2. No	If 2 skip to 604
602.	What did they apply? (Prompt: "Anything else?") (CIRCLE ALL RESPONSES GIVEN)	1. Oil 2. Ash 3. Ointment/powder 4. Animal dung 5. Other (specify) ____	
603.	Who did apply it?	1. Health care provider from hospital 2. Health care provider from HC 3. HEWs 4. HDA 5. TBA 6. Relative/Friend 7. Other (specify) _____	
604.	If a special medicine were available for preventing infections of the cord stump, do you think you would want to use it?	1. Yes 2. No	
605.	Please tell me when should a newborn child be breast fed for the first time after the birth?	1. Within one hour 2. Btween 1 and 24 hours 3. After 24 hours after birth 4. Other (specify) _____	
606.	Where did you get this information?	1. From HEWs 2. From health care provider at HC 3. From HDA/community group 4. From media (radio, TV...) 5. From TBA 6. From relative/friend 7. Others (specify) _____	

Section 7: Newborn Care During the 1st two Month

701.	Do you have any information about CBNC services that delivered by HEWs at health posts and community level? 1) yes 2) No
702.	<p>What are the symptoms of the infant within two month after delivery indicating the need to seek immediate health care? (Prompt: “Any other symptoms?”) (CIRCLE ALL RESPONSES GIVEN)</p> <p>1. Poor sucking or not able to 2. Fast breathing 3. Severe chest in drawing 4. Hypothermia 5. Fever 6. Difficult to wake/lethargic/unconscious 7. Pustules on skin 1 large or more than 10 small ones 8. Severe umbilical infection redness of skin the cord/ foul smelling discharge OR bleeding from the cord 9. Other (specify) _____</p>
703.	<p>What is the status of young infant?</p> <p style="text-align: right;">1. Baby still alive 2. Baby born alive, then died at 2+ months 3. Baby born alive, then died at 0-2 months 4. Baby stillborn</p>
704.	<p>During the first eight weeks or two month after your most recent delivery, did a health professional or HEWs check on your newborn’s health?</p> <p style="text-align: right;">1. Yes 2. No</p>
705.	<p>How many times new born health was checked within four weeks or one month after the delivery?</p> <p style="text-align: right;">Times -----</p>
706.	<p>How many days after birth was the baby checked for the first time by a health worker or HDA? (Write “00” if same day)</p> <p style="text-align: right;">Number of days: -----</p>
707.	<p>Who checked on your newborn’s health at that time? (Ask: “Anybody else?” Continue until no further answers.) (CIRCLE ALL RESPONSES GIVEN)</p> <p>1. Health care provider from hospital 2. Health care provider from HC 3. HEWs 4. HDA 5. TBA 6. Other (specify) _____</p>
708.	<p>Prior to or following your delivery, did a health worker or HDA counsel you at any time on the following newborn issues? (READ ALL)</p> <p>1. Keeping the baby warm? 2. Breastfeeding within the first hour of delivery and continuing exclusively? 3. Newborn danger signs (e.g. fast breathing, ---) 4. Cord care? 5. Immunization? 6. Hand washing with soap and water before touching/handling the baby?</p>

709.	Did (NAME) receive a BCG vaccination against tuberculosis, that is, an injection in the right arm that usually causes a scar?	1. Yes 2. No	
710.	Did your newborn experience any of the following health problems at any time in the first eight weeks following delivery? (Read out all responses one after another and Record all responses accordingly.) 1. Fever? 2. Feeding problem? 3. Trouble breathing? 4. Fast breathing? 5. Chest-in-drawing? 6. Drowsy? 7. Abdominal tenderness? 8. Convulsions? 9. Persistent vomiting? 10. Unconscious? 11. Red/discharging eye? 12. Skin pustules? 13. Skin around cord red? 14. Felt cold? 15. None of the above		
711.	How many days old was your child at that time?	Write in days	
712.	What did you do or whom did you consult for the problems that you stated above? (Prompt: "Anything else?") (CIRCLE ALL RESPONSES GIVEN) 1. Traditional treatment at home 2. Given medicine at home 3. Hospital 4. HC 5. Clinic 6. Pharmacy 7. Consulted HEWs 8. Consulted HDA 9. Consulted relative/neighbor/friend 10. Other (specify) _____		
713.	How long was your child sick before you sought medical help for the first time?	Write in days	
714.	If care was sought from a health facility, was the child admitted?	1. Yes 2. No	
715.	I understand that your child was not admitted but that you visited a health facility. Please specify the number of visits:	Number of visit _____	
716.	Why didn't you seek care for any of your child's health problems from a health facility? (CIRCLE ALL RESPONSES GIVEN) 1. Not felt necessary 2. No reliable service 3. Financial problem 4. Health service not easily accessible 5. Don't know where to go 6. Don't have friend to go 7. Didn't have any health problems 8. Others (Specify) _____		
717.	Was your child weighed within seven days after birth?	1. Yes 2. No	2 skip to sect—8
718.	When was your baby [NAME] weighed the first time after birth?	1. Within 24 hours 2. 1-2 days 3. 3 days 4. After 3 days	
719.	The weight of the child was? (if the birth weight was known write in gram _____)	1. Low birth weight(small) 2. Normal birth weight 3. Over weight(big)	
720.	Where was, the baby weighed for the first time? 1. Hospital 2. HC 3. Health post 4. Clinic		

	5. Your home	6. Other, specify: _____	
721.	If the baby was small; Because your baby was small, did you receive extra visits from a health worker or HEWs?	1. Yes 2. No	
722.	What advice did health worker give when your baby [NAME] was smaller than other babies? Probe: What else advice? (Multiple Response) 1. Frequent breast feeding 2. Keep baby warm 3. Newborn danger signs 4. Repeatedly weigh baby 5. Repeated visit to health facility/health worker 6. Other (specify)_____		
723.	Does all the drugs and medicines are available in the HP convenient to you?	1. Yes 2. No	

Section 8: Satisfaction of caregivers

Instruction for Interviewer: ask these questions only to mothers who received CBNC services if possible it is better for those mothers whose neonate was diagnosed and treated for neonatal sepsis.

s.no	Measurement	Very unsatisfied	Unsatisfied	Neutral	Satisfied	Very satisfied
801.	How you are satisfied with counseling services about CBNC services you received from HEWs.	1	2	3	4	5
802.	How you are satisfied with appropriateness of visiting time to receive CBNC service	1	2	3	4	5
803.	How you are satisfied with appropriateness of consultation time about CBNC service?	1	2	3	4	5
804.	How you are satisfied with the competence/Knowledge of the HEWs?	1	2	3	4	5
805.	How you are satisfied with convenience of appointment date/time to receive CBNC services	1	2	3	4	5
806.	How you are satisfied with convenience of working hour of health post?	1	2	3	4	5
807.	How you are satisfied with the availability of drugs at health post?	1	2	3	4	5
808.	How you are satisfied with the Courtesy of HEWs?	1	2	3	4	5
809.	How you are satisfied with the cleanness of health post waiting area?	1	2	3	4	5
810.	How you are satisfied with the appropriateness of health post waiting area?	1	2	3	4	5

Thank you for your time and cooperation in answering my questions!!

Questionnaire II: Documents review (Protocols for Data collection from ICCM Registration book for sick young infants 0-2 months of age).

Permission requested form

My name is _____ from Jimma University and as part of an overall evaluation we will review ICCM Registration book for sick young infants 0-2 months of age in order to capture information related to the process of CBNC program implementation.

This will help to improve the implementation status of CBNC program in the future. During the review, the confidentiality of the information will be kept in which the reviewed information will not identify the mother and neonate individually and the information will be utilized for evaluation purpose.

May I continue to review the registration book? 1. Yes 2. No (if yes continue if No END)

Table1: Instruction: this questionnaire will be used to conduct document review in order to assess the CBNC services received by mother and newborn in the past six months.

Q#	Questions	Codes			Skip
		Yes	No	NA	
	Is the following information recorded on ICCM Registration book for sick young infants 0-2 months of age				
101.	Name of HPs _____				
102.	Name of catchment HC _____				
103.	Date of data collection ____/_____/____				
104.	HPs HMIS code _____				
105.	Age of neonate in days _____				
106.	Sex of neonate _____				
107.	Weight of neonate in gram _____				
Information about checking general signs					
108.	Check Gestational age				
109.	If checked Gestational age at birth in weeks _____				
	Classification of GA: 1. Pre-term 2. Term 3. Post-term				
110.	If pre-term action taken				

	1. Referral 2. Skin-to-skin contact 3. Frequent breast feeding 4. Other(specify)_____				
111.	Check Birth weight				
112.	If checked Birth weight in grams _____				
	Classification of the birth weight 1. LBW (wt. < 2500 gm) 2. Normal birth wt. (2500-4000gm) 3. over birth wt. (>4000 gm)				
113.	If LBW treatment given 1. Referral 2. Skin-to-skin contact 3. Frequent breast feeding 4. Other(specify)_____				
114.	Bacterial infection				
	Which sign of bacterial infection had the young infant (circle all the sign) 1. Stopped suckling 5. Fever or cold to touch 8. unresponsive or unconscious or lethargic 2. Bulging fontanelle 6. Convulsions 9. vomiting 3. Drainage from the umbilicus 7. Skin bumps containing pus 10. fast breathing (> 60 breathe/min) 4. Local term for pneumonia 11. Others(specify)_____				
115.	Based on the above signs; classification of neonate/young infant infection 1. Sever bacterial infection 2. Local bacterial infection 3. No infection				
116.	If sever bacterial infection Rx given 1. Refer without giving 1 st dose antibiotics 4. Refer to traditional treatment 2. Refer with giving 1 st dose antibiotics 5. Nothing done 3. Treat with gentamicin for seven days 6. Other(specify)_____				
117.	If local bacterial infection Rx given 1. Refer without giving 1st dose antibiotics 4. Refer to traditional treatment 2. Refer with giving 1st dose antibiotics 5. Nothing done 3. Treat with gentamicin for seven days 6. Other(specify)_____				
118.	If No bacterial infection Rx given 1. Refer without giving 1st dose antibiotics 4. Refer to traditional treatment 2. Refer with giving 1st dose antibiotics 5. Nothing done 3. Treat with gentamicin for seven days 6. Other(specify)_____				
119.	Jaundice				
120.	If checked classification of jaundice 1. Jaundice 2. No jaundice				

121.	If jaundice Rx given 1. Refer to HC/Hospital 2. Refer for traditional Rx 3. Gave antibiotics 4. Nothing 5. Other _____				
122.	Diarrhea				
123.	If checked classification of diarrhea 1. No dehydration 2. Some dehydration 3. severe dehydration				
124.	HIV status of mother				
125.	Classification of HIV status of the mother 1. HIV negative 2. HIV positive 3. Unknown status				
126.	Breast feeding				
127.	Classification of breast feeding 1. Able to breast feeding 2. Unable to breast feeding				
128.	Immunization				
129.	Classification of immunization 1. Not up to date 2. Not started 3. started				
130.	PNC				
131.	Assessment of PNC 1. Received 2. Not received				

Table 2: review of integrated maternal and newborn registration Book

s.no.	Services	Plan	Achievement
	ANC-1		
	ANC-4		
	Delivery referral		
	Delivery by HEW		
	PNC		

Questionnaire III: CBNC Resource Inventory Checklist

Instruction: this checklist will be used to conduct an inventory availability of infrastructure and program resources in each HP for the implementation of CBNC program. And it will be answering by interviewing the HEWs.

Name of HP _____

Name of catchment HC _____

Total number of less than two infants’ _____

Number of trained HEWs _____

Complete the following table by asking the HEW or by observing HPMM and Bin card

Part I: Essential Job Aids and Functional Equipment in Place (in Use)

Q #	Item	Available at the time of data collection		Available in the last 3 month		Comment (If no write the reason)
		Yes	No	Yes	No	
101.	CBNC guideline					
102.	ICCM Registration book for sick young infants 0-2 months of age					
103.	Family card (integrated maternal and newborn and child health card)					
104.	Weighing scale- baby lying					

105.	Newborn Ambu-bag					
106.	Thermometer					
107.	Tape meter					
108.	Watch with second's arms					
109.	Reporting format					
Part II: Drugs and Medical Supplies: - Check the availability in the last three months and the expire date for all drugs and supplies						
110.	TTC eye ointment tubes					
111.	Vitamin K ampules					
112.	Gentamicin 10mg/ml or 20mg/2ml ampules					
113.	Dispersible amoxicillin 125 mg tablets					
114.	Paracetamol suppository					
115.	Examination gloves					
116.	Examination syringes					
117.	Surgical gloves					
118.	2 cc syringes and needle					
119.	Chlorohexidine used to apply on cord					
120.	Cotton					
121.	Gauze					

Part III. Human resources

	Professional category	Num ber	Training status		Comment
			Trained	Not trained	
101.					
102.					
103.					
104.					
105.					
106.					
107.					
108.					
109.					
110.					

Thank you!!

Data collector name: _____ date ___/___/___ signature _____

Checked by _____ date ___/___/___ signature _____

Questionnaire IV: observation checklist

Instruction: this checklist will be used to conduct direct observation of HEW at HP while assessing, checking, classifying, treating and counseling services, providing follow up care and other clinical supports with regard to CBNC.

Consent form for HEWs: I want to thank you for taking time to meet with me today. My name is _____ from Jimma University and I am hereby to observe the clinical sessions at this unit. This is part of the overall evaluation and it will help to improve the implementation of CBNC services delivered at this HP. The observation will be conducted while the HEW delivering services and all findings of the observation will be kept confidential. Furthermore; we will ensure that any information we include in our report does not identify you as the respondent. Are you willing to participate in this observation?

1. Yes 2. No (if yes continue. If no END)

_____ _____ _____
Interviewee observer date

Consent form for care givers: Thank you for visiting our HP for receiving services. Today I will provide you services in collaboration with the HEW. I am hereby to observe the clinical process and provide additional support which will help her to provide you better services. During the overall process, your information will be kept confidential and no one will identify you as part of the observation or respondent. Remember, everything will be under based on your will.

Are there any questions about what I have just explained?
Are you willing to participate in this observation? 1. Yes 2. No (if yes continue if No END)
Name of HP _____
Date of observation _____ time of observation _____

Client provider interaction					
Q#	Activities	Yes	No	NA	Comment
401.	Do the HEWs show respect for the caregivers?				
402.	Do the HEWs ask the age of sick neonate/ young infant?				
403.	Do the HEWs ask the gestational age at birth of sick neonate/ young infant				
404.	Do the HEWs measure the weight of sick neonate/ young infant?				
405.	Do the HEWs measure the T° of sick neonate/ young infant?				
406.	Do the HEWs ask the main problem of sick neonate/ young infant from care giver?				
407.	Do the HEWs ask the sick neonate/ young infant is unable to breast feeding?				
408.	<p>If the sick neonate/ young infant is unable to breast feeding what does she do?</p> <ol style="list-style-type: none"> 1. Give Rx only 2. Refer to HC/hospital 3. Give Rx with appointment 4. Others(specify) _____ 				
409.	Do the HEWs ask the if sick neonate/ young infant had convulsion?				
410.	Do the HEWs observe the sick neonate/ young infant had convulsion now?				
411.	If the sick neonate/ young infant had convulsion what does she do?				

	<ol style="list-style-type: none"> 1. Give Rx only 2. Refer to HC/hospital 3. Give Rx with appointment 4. Others(specify) _____ 				
412.	Do the HEWs ask the sick neonate/ young infant is unconscious?				
413.	<p>If the sick neonate/ young infant is unconscious what does she do?</p> <ol style="list-style-type: none"> 1. Give Rx only 2. Refer to HC/hospital 3. Give Rx with appointment 4. Other(specify)_____ 				
414.	Do the HEWs ask the sick neonate/ young infant is unable to breast feed?				
415.	<p>If the sick neonate/ young infant is unable to breast feed what does she do?</p> <ol style="list-style-type: none"> 1. Give Rx only 2. Refer to HC/hospital 3. Give Rx with appointment 4. Others(specify)_____ 				
416.	Do the HEWs count the number of breathing in a minute of sick neonate/ young infant?				
417.	Do the HEWs correctly classified bacterial infection?				
418.	<p>After classifying bacterial infection, what does she do?</p> <ol style="list-style-type: none"> 1. Give Rx only 				

	<ul style="list-style-type: none"> 2. Refer to HC/hospital 3. Give Rx with appointment 4. Others (specify)_____ 				
419.	Do the HEWs ask the sick neonate/ young infant had jaundice?				
420.	<p>If the sick neonate/ young infant had jaundice what does she do?</p> <ul style="list-style-type: none"> 1. Give Rx only 2. Refer to HC/hospital 3. Give Rx with appointment 4. Others(specify)_____ 				
421.	Do the HEWs ask the sick neonate/ young infant had vomiting?				
422.	<p>If the sick neonate/ young infant had vomiting what does she do?</p> <ul style="list-style-type: none"> 1. Give Rx only 2. Refer to HC/hospital 3. Give Rx with appointment 4. Others(specify)_____ 				
423.	Do the HEWs ask the sick neonate/ young infant had diarrhea?				
424.	<p>If the sick neonate/ young infant had diarrhea what does she do?</p> <ul style="list-style-type: none"> 1. Give Rx only 2. Refer to HC/hospital 3. Give Rx with appointment 4. Others(specify)_____ 				

425.	Do the HEWs ask the sick neonate/ young infant care givers HIV status?				
426.	Do the HEWs ask the sick neonate/ young infant immunization status?				
427.	Do the HEWs ask the sick neonate/ young infant received PNC?				

Questionnaire V: key informant interview

5.1. Key informant interview with HEWs

Instruction: this questionnaire /tool will be used to assess the CBNC program services delivery and organization at the HP level and will be answered by HEW.

Consent form

I want to thank you for taking time to meet with me today. My name is _____ from Jimma university and I would like to talk to you about your experiences participating in the CBNC program. Specifically, as one component of our overall program evaluation we are assessing program implementation in order to capture lessons that can be used in future to improve the program. All responses will be kept confidential. Remember, you don't have talk about anything you don't want to and you may end the interview at any time.

Are there any questions about what I have explained?

Are you willing to participate in this interview?

Interviewee	interviewer	date
-------------	-------------	------

I. Background information of HEWs

- a. Does the HEW have House in the kebele _____
- b. Work experience _____
- c. Profession (HEW or HEP) _____
- d. Training status (probe; not only CBNC training other training) _____

II. CBNC service delivery and organization of service at the health post and community

- a. Could you please briefly describe me what and how CBNC services provided in this HP and community?

b. At which level, do you deliver CBNC service (with whom)? _____

III. Resources for CBNC services utilization barriers to implementation

a. Are there program resources in place to deliver CBNC services in this HP and community? If yes list the available resources

b. Had the CBNC service been interrupted due to unavailability of supplies and medicines? If specify

c. In your opinion, from health care provider what are some of the prominent problems or factors affect management of sick young infant during providing the CBNC services at the HP and community?

d. What are some of the common complaints forwarded by your clients on your CBNC services?

IV. Support system

a. Did you ever receive supportive supervision related to CBNC program?

b. If yes, when did last supervision received? _____

c. Who provide the support? _____

d. How often the support provided? _____

e. Did they give feedback? _____

If yes, how (orally or written) _____

- f. Is there plan to deliver CBNC services _____
- g. Is there review meeting; if yes with whom (with kebele administration, with HC, with woreda health office describe in details with time interval) _____

V. Stakeholders involvement and advocacy in CBNC program

- a. Do you advertise or promote the CBNC program in any way to the community?
- b. If yes describe some of the activities

- c. If no, why

5.2. Key informant interview with heads and focal persons

Instruction: this guide will be used to assess program management, barriers to program implementation and measures taken to alleviate the problems. It will be answered by woreda health office and health center head and PHCU focal person

I want to thank you for taking time to meet with me today. My name is _____ from Jimma university and I would like to talk to you about your experiences participating in the CBNC program. Specifically, as one component of our overall program evaluation we are assessing program implementation in order to capture lessons that can be used in future to improve the program. All responses will be kept confidential. Remember, you don't have talk about anything you don't want to and you may end the interview at any time.

Are there any questions about what I have explained?

Are you willing to participate in this interview?

Interviewee

interviewer

date

Identification and background characteristics of the respondent

Date of interview _____

Sex of respondent _____

Age of respondent _____

Profession of respondent _____

Position of respondent _____

How long you have been in this position (in years/months) _____

I. Information related to program management

1. Is there ISS in this health facility for the health extension workers? Yes/No
2. If yes, could you please describe how frequently conducted? _____
3. Who conducted ISS? _____
4. If No, why? _____
5. Is there continuous implementation improvement system in the health posts?
Yes/No
6. If yes, please describe how it is conducted _____
7. If No, why? _____
8. Is there a system to promote CBNC services to community? Yes/No
9. If yes, please describe how it conducted? _____
10. How is the community involved in the program particularly implementation
improvement? _____
11. Is there performance review meeting in the health facility? Yes/No

12. If yes, how frequently conducted? _____

13. If no, why? _____

II. Barriers to services/program implementation

1. What are the barriers to implementation of CBNC program in the health posts?

2. If shortage of resources, why? _____

3. If turnover of HEW, why? _____

4. If lack of regular supportive supervision, why? _____

5. Other (specify) _____

Annex 3: Amharic version of data collection tools

የማህበረሰብ አቀፍ የእናቶችና ጨቅላ ህፃናትን ጤና አገልግሎት አሰጣጥን ለመገምገም በአማርኛ የተዘጋጀ መጠይቅ መጠይቅ 1፡ ለእናቶች የሚጠይቅ መጠይቅ

መግቢያ፡

እኔ _____ እባላለሁ። የመጣሁት ከጅም የኒቨርሰቲ በማህበረሰብ አቀፍ የእናቶችና የጨቅላ ህፃናት ጤና አገልግሎት ላይ ጥናት ለማካሄድ ነው። ይህ ፕሮግራም የእናቶችንና ጨቅላ ህፃናትን የጤና ሁኔታ ለማሻሻል በያዘው አላማ መሰረት በወረዳው ውስጥ ያሉ ዕርጉዝ እናቶችንና ጨቅላ ህፃናትን በመርዳት ላይ ይገኛል። የእናቶችንና የህፃናትን ጤንነት በመጠበቅ አንቺንና ሕብረተሰቡን ለመርዳት የጨቅላ ህፃናትን እናቶችን ጤንነት ለማየት በዚህ ተገኝተናል። ስለዚህ በዚህ ጥናት ላይ ያለሽን ተሳትፎ እጅግ በጣም እያመሰገን የምትሰጭን መረጃ ወረዳው የሚሰጠውን ፕሮግራም ለመሻሻል ይረዳዋል። ስምሽና የምትሰጭው መረጃ ለሌላ ሰነድ ወገን ተላልፎ የማይሰጥና ተለይቶ የማይታወቅ መሆኑንና ሚስጠር እንደሚጠበቅልሽ እገልጻለሁ። በጥናቱ ያለሽ ተሳትፎ በፈቃደኝነት ላይ የተመሰረተ በመሆኑ አንድ ወይም ሁሉንም ጥያቄዎች ያለመመለስ ትችያለሽ ቢሆንም የአንቺ እይታ በጣም አስፈላጊ ስለሆነ በጥናቱ ላይ ትሳተፈላለሽ ብለን እናምናለን። ጥያቄዬን መቀጠል እችላለሁ?

- ተጠያቂ 1. -----ተስማምቻለሁ
 2. -----አልስማማም ጥያቄውን አቁምና አመስግንኝ

ክፍል 1፡ የተጠያቂ አጠቃላይ መረጃ

ተ.ቁ	ጥያቄ	መልስ	አለፍ
101.	የጤና ኬላው ስም	_____	
102.	የቤት ቁጥር	_____	
103.	የእናትዮዋ ዕድሜ	_____	
104.	የጋብቻ ሁኔታ	1. ያላገባች 3. የሞተባት 2. ያገባች 4. የፈታች	
105.	ሐይማኖት	1. ፕሮቴስታንት 3. ሙስሊም 2. ኦርቶዶክስ 4. ካቶሊክ 5. ሌላ ካለ ጥቀሽ _____	
106.	የትምህርት ደረጃ	1. ያልተማረች ማንበብና መጻፍ የማትችል 2. ያልተማረች ማንበብና መጻፍ የምትችል 3. 1-4 4. 5-8 5. 9-12 6. ኮሌጅና ከዚያ በላይ	
107.	የእናት የሥራ ድርሻ	1. የመንግስት ሠራተኛ 4. አርሶ አደር 2. ነጋዴ 5. የቤት እመቤት 3. የቀን ሠራተኛ 6. ሌላ ካለ (ይጥቀሱ) _____	
108.	ብሔር	1. ጎፋ 3. ወላይታ 2. ጋሞ 4. ጉራጌ 5. አማራ 6. ሌላ(ይጥቀሱ) _____	
109.	ስንት ወለድሽ (በህይወት የተወለዱትንና ሞቶው የተወለዱትን ድምር)	_____	
110.	ከዝህ በታች የተዘረዘሩት ነገሮች ይኖሩሻል (ሁሉንም አንብብ/ቢ)		

1. የነዳጅ ምድጃ	2. ወንበር	3. ጠረንጴዛ	4. አልጋ	
5. ፍራሽ	6. ሠዓት	7. ጀኔራተር	8. ላም	9. በሬ
10. ፈረስ/በቅሎ	11. አህያ	12. ፍየል/በግ	13. ዶሮ	
14. የንብ ቀፎ	15. ሳይክል	16. ሞተር	17. መደበኛ ስልክ/ተንቀሳቃሽ ስልክ	
18. ቴሌቭዥን	19. ሬድዮ			

ክፍል 2: የጤና ኤክስቴንሽን ፕሮግራም አገልግሎት: አጠቃላይና ቅድመ-ወሊድ

ጥያቄ	መልስ	Skip
201. በአካባቢያችሁ የምትሰራውን የጤና ኤክስቴንሽን ሠራተኛ ታውቂያታለሽ? አስታውሳት/ሻት: “በአካባቢያችሁ ከአንድ ዓመት በታች ላሉ ሕፃናት ክትባት ፣ የቤተሰብ ምጣኔ አገልግሎትና ሌሎችንም የምትሰጠውን ሴት ጤና ባለሙያ ታውቂያታለሽ?”	1. አዎ 2. አላውቃትም	2 ወደ 206 እለፍ
202. የጤና ኤክስቴንሽን ሠራተኛዎ የትኛውን አይነት ዕርዳታ ወይም አገልግሎት እንደሰጠችሽ ትነግሪኛለሽ (ሁሉንም አንብብ/ቢ) 1. የጤና ትምህርት የእናቶችን ቡድን ጨምሮ 2. ለእርጉዝ እናቶች የምክር አገልግሎት 3. ለወለዱ እናቶች የምክር አገልግሎት? 4. የምክር አገልግሎት ስለ ጨቅላ ሕፃን 5. የምክር አገልግሎትና ህክምና ስለ ተቅማጥ በህፃናት? 6. የምክር አገልግሎትና ህክምና ስለ ትኩሳት፣ ሳል፣ ፈጣን አተነፋፈስ እና ሌሎችም በጨቅላ-ህፃናት? 7. የኮንዶምና የእርግዝና መከላከያ ክንን ዕደላ? 8. ለእናት የቫይታሚን ኤ ዕደላ? 9. ስለ ኤች.አይ. ቪ/ኤድስ/የአባላዘር በሽታ መረጃ 10. ሌላ ካለ ጥቀሽ_____		
203. በመጨረሻው እርግዝናሽ በአካባቢያችሁ የጤና ኤክስቴንሽን ሠራተኛዎን ለጤና አገልግሎት ወይም ምክር ለማግኘት አግኝተሻት ታውቂያለሽ?	1. አዎ 2. አላገኘኋትም	2 ወደ 206
204. መልሷ አዎ ከሆነ በመጨረሻው እርግዝናሽ ጊዜ የጤና ኤክስቴንሽን ሠራተኛዎን ለጤና አገልግሎት ወይም ምክር ለማግኘት ስንት ጊዜ አግኝተሻታል?	_____ ጊዜ	
205. ጤና ኤክስቴንሽን ሠራተኛዎ በመጨረሻው የእርግዝናሽ ጊዜ ከሚከተሉት በየትኞቹ ዕቅዶች ላይ ከአንቺ ጋር የጋራ ውይይት አድርጋለች (ሁሉንም መልሶች አንብብ/ቢ) 1. የቅድመ-ወሊድ አገልግሎት ከጤና ባለሙያ ስለመግኘት? 6. በጤና ባለሙያ የወሊድ አገልግሎት ስለመግኘት? 2. በጤና ተቋም የወሊድ አገልግሎት ስለመግኘት 7. ተገቢና የተመጣጠነ ምግብ አመጋገብ 3. ለወሊድ ጊዜ ስለ ድንገተኛ መጓጓዣ? 8. ለወሊድ አገልግሎት የሚሆን ገንዘብ ስለመቆጠብ? 4. ድንገተኛ የፅንሰ አገልግሎት ስለሚሰጥበት ቦታ? 9. በድንገተኛ ጊዜ ስለሚረዳት ሰው? 5. በወሊድ ጊዜ ስለሚከሰቱ አደገኛ ምልክቶች? 10. ሌላ ካለ ጥቀሽ_____		
206. በአካባቢያችሁ የእናቶች ቡድን/የእናቶች ጤና ልማት ቡድን/ 1 ለ 5 አለ?	1. አዎ 2. የለም	2 ወደ ክፍል 3 እለፍ
207. የእናቶች ጤና ልማት ቡድን/ 1 ለ 5 ትስስር መሪ/አባል ነሽ?	1. አዎ 2. አይደለሁም	
208. በመጨረሻው የእርግዝና ጊዜ በ እናቶች ልማት ቡድን ውይይት ተሳትፈሻል?	1. አዎ 2. አልተሳተፍኩም	

ክፍል 3: የቅድመ-ወሊድ አገልግሎት

ጥያቄ	መልስ	Skip
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301.	ከመውለድሽ በፊት በእርግዝና ወቅት ለቅድመ-ወሊድ አገልግሎት ያየሽ ባለሙያ አለ?	1. አዎ 2. የለም	2 ወደ 311
302.	ማን ነው ያየሽ? ሌላ ማን እያልክ/ሽ መልስ የለኝም እስከምትል ድረስ. መጠይቁን ቀጥል/ይ. (ሁሉንም መልሶች አክብብ/ቢ.)	1. ከጤና ጣቢያ የመጡ ጤና ባለሙያዎች 2. ጤና ኤክስቴንሽን ሠራተኛ 3. የሴቶች ጤና ልማት ቡድን መሪ 4. የልምድ አዋላጅ 5. ሌላ ካለ ይጥቀሱ_____	1 ወደ 303 2 ወደ 304 3 ወደ 305 4 ወደ 306
303.	ከመውለድሽ በፊት ስንት ጊዜ የቅድመ-ወሊድ ክትትል ከጤና ጣቢያ ከመጡ የጤና ባለሙያዎች አግኝተሻል?	_____ ጊዜ	
304.	ከመውለድሽ በፊት የቅድመ-ወሊድ ክትትል ከጤና ኤክስቴንሽን ሠራተኛ ስንት ጊዜ አግኝተሻል?	_____ ጊዜ	
305.	ከመውለድሽ በፊት የቅድመ-ወሊድ ክትትል ከሴቶች ጤና ልማት ቡድን መሪ ስንት ጊዜ አግኝተሻል?	_____ ጊዜ	
306.	ከመውለድሽ በፊት የቅድመ-ወሊድ ክትትል ከልምድ አዋላጅ/ከሌሎች ስንት ጊዜ አግኝተሻል?	_____ ጊዜ	
307.	የመጀመሪያ ጊዜ የቅድመ-ወሊድ ክትትል ስታደርጊ የሰንት ወር እርጉዝ ነበርሽ?	_____ ወር	
308.	ከወሊድ በፊት በእርግዝና ጊዜ በቅድመ-ወሊድ አገልግሎት ከሚከተሉት ውስጥ ቢያንስ አንድ ጊዜ የተሰራልሽ የቱ ነው? (ሁሉንም አገልግሎቶች አንብብ/ቢ ና ተገቢውን መልስ አክብብ/ቢ.) 1. የሆድ ምርመራ ተደርጎልሻል? 2. የአይረን ክረን ወስደሻል? 3. የፀረ-ትላትል ክረን ወስደሻል? 4. የመንጋጋ ቆልፍ ክትባት ተከትባል? 5. ከብደትሽን ተለክተሻል? 6. የደም ግፊትሽን ተለክተሻል? 7. የደም ናሙና ሠጥተሻል? 8. ሌላ ካለ ጥቀሽ _____		
309.	በቅድመ-ወሊድ ክትትል ጊዜ የቅድመ-ወሊድ አገልግሎት ያገኘሽው የትነው? መልሱ ሆስፒታል; ጤና ጣቢያ ወይም ክሊኒክ ከሆነ የቦታውን ስም ጻፍ/ፊ. _____ የቦታው ስም	1. ሆስፒታል 2. ጤና ጣቢያ 3. ጤና ኬላ 4. የግል ክሊኒክ 5. ቤት 6. ሌላ ካለ ይጥቀሱ_____	
310.	በእርግዝናሽ ወቅት ለምን ያክል ጊዜ የአይረን ክረን ወስደሻል?	_____ ቀን	
311.	በእርግዝናሽ ወቅት አደገኛ ምልክት ቢያጋጥምሽ የጤና አገልግሎት ለማግኘት የት ትሔጅ ነበር? (ሁሉንም መልስ አክብብ/ቢ.)	1. ሆስፒታል 2. ጤና ጣቢያ 3. ጤና ኬላ 4. የግል ክሊኒክ 5. ቤት 6. ሌላ ካለ ይጥቀሱ_____	
312.	በእርግዝና ወቅት አስቸኳይ ህክምና የሚፈልጉት ምልክቶች የትኞቹ ናቸው? መጠይቁን መልስ የለኝም እስከምትል ድረስ ቀጥል/ይ. (ሁሉንም መልስ አክብብ/ቢ.)	1. ከማህፀን የሚወጣ የደም ፈሳሽ 2. ከእምብርት በታች ከፍተኛ የሆድ ህመም 3. ከፍተኛ የሆነ ራስ ምታት 4. የሰውነት መንዘፍዘፍ 5. ብሽታ 6. የእጅና የፊት እብጠት 7. ሌላ ካለ ጥቀሽ_____	
313.	በእርግዝና ጊዜ ከሚከተሉት ችግሮች አንዱ እንኳን በማንኛውም ጊዜ አጋጥምሽ ያውቃል? (ሁሉንም መልሶች በየተራ አንብብ/ቢ.) (ሁሉንም መልሶች እንዴሁኔታው መዘግብ/ቢ.) 1. ብሽታ? 2. ከእምብርት በታች ከፍተኛ የሆድ ህመም? 3. ከፍተኛ የሆነ ራስ ምታት 4. የሰውነት መንዘፍዘፍ? 5. የእጅ የሠውነትወይም የፊት እብጠት? 6. ከማህፀን የሚወጣ የደም ፈሳሽ? 7. ሁሉም አጋጥመውኝ አያውቁም		

ክፍል 4: የወሊድ አገልግሎት

ቁ	ጥያቄ	መልስ	Skip
401.	የመጨረሻውን ልጅሽን የትነው የወሊድሽው? መልሱ ሆስፒታል; ጤና ጣቢያ; ክሊኒክ ወይም ጤና ኬላ ከሆነ ስሙን ያፍ/ፊ. የቦታው ስም	1. ሆስፒታል 2. ጤና ጣቢያ 3. ጤና ኬላ 4. ቤት 5. ሌላ ካለ ጥቀሽ_____	
402.	በወሊድ ጊዜ የረዳሽ ማንነው? አስታውሽ ሌላስ ማን ነበር?" (ሁሉንም መልሶች አክብብ/ቢ.)	1. የሆስፒታል ጤና ባለሙያዎች 2. የጤና ጣቢያ ጤና ባለሙያዎች 3. የጤና ኤክስቴንሽን ሠራተኛ 4. የሴቶች ጤና ልማት ቡድን መሪ 5. የልምድ አዋላጅ 6. ዘመድ/ጓዴኛ 7. ሌላ ካለ ጥቀሽ_____ 8. ማንም የለም	
403.	የወሊድሽ ውጤት ምን ነበር?	1. ህፃኑ በህይወት ተወለደ 2. ሲወለድ በህይወት አልነበረም 3. ሞቶ ተወለደ	2/3 ወደ 405
404.	የህፃኑ/ኗ ዕድሜ ሰዓት ነው? (ዕድሜውን በቀን ያፍ)	_____ ቀን	
405.	ከወሊድ በኋላ በአንድ ሰዓት ውስጥ የጤና ባለሙያው/ዋ መድሃኒት በመርፌ ታፋሽ ወይም ቁጥሽ ላይ ሰጥቶሽ/ታሽ ነበር?	1. አዎ 2. አልሰጡኝም	
406.	በወሊድ ጊዜ ከሚከተሉት ውስጥ የትኛው ችግር አጋጥሞሽ ነበር? (ሁሉንም ምርጫዎች በቅደም ተከተል አንብብላት/ቢላት.) (ሁሉንም መልሶች መዝግብ/ቢ.)	1. በጣም ብዙ የደም መፍሰስ ልብሰሽን ያረጠበና ለህይወትሽ አስጊ? 2. የሰውነት መንዘፍዘፍ? 3. ከ12 ሰዓት በላይ የቆዩ ምጥ? 4. የህፃኑ እጅ እግር ወይም እትብት ቀድሞ መምጣት? 5. ሁሉም የለም	
407.	ከላይ የጠቀሽው ችግር ሲከሰትብሽ ምን አደረግሽ ወይም ማንን አማካርሽ? አስታውሳት/ሻት ሌላስ የለም?" (ሁሉንም መልሶች አክብብ/ቢ.)	1. በቤት ውስጥ የባህል ህክምና 2. በቤት ውስጥ ዘመናዊ ህክምና 3. ሆስፒታል ሄድኩ 4. ጤና ጣቢያ ሄድኩ 5. ክሊኒክ ሄድኩ 6. ከፋርማሲ መድሃኒት ገዛሁ 7. የጤና ኤክስቴንሽን ሠራተኛዎን አማካርኩ 8. የልምድ አዋላጅ አማካርኩ 9. ዘመድ/ጎረቤት/ጓዴኛ አማካርኩ 10. ሌላ ካለ ጥቀሽ _____	
408.	ከላይ ለጠቀሽው ችግር የጤና ባለሙያው ወደ ጤና ተቋም እንድትሄጅ የሪፈረ ወይም የምክር አገልግሎት ሠጥቶሽ/ታሽ ነበር?	1. አዎ 2. አልሰጡኝም/ችኝም	2 ወደ ክፍል 5
409.	ወደ ጤና ተቋም እንድትሄጅ ከተነገረሽ በኋላ ሄድሽ?	1. አዎ 2. አልሄድኩም	
410.	የት ሄድሽ?	1. ሆስፒታል 2. ጤና ጣቢያ 3. ጤና ኬላ 4. ክሊኒክ 5. ፋርማሲ 6. ሌላ ካለ ጥቀሽ_____	

ክፍል 5: የድህረ-ወሊድ አገልግሎት

501.	በወሊድ ጊዜ ወይም ከወሊድ በኋላ በቅርብ ጊዜ ውስጥ የጤና ኤክስቴንሽን ሠራተኛዎ ጎብኝታሽ ነበር?	1. አዎ 2. አልጎበኘኝ/ችኝም	2 ወደ 503
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502. ከወሊድ በኋላ በስንተኛው ቀን ነበር?	_____ኛውቀን	
503. የጤና ኤክስቴንሽን ሰራተኛዎ በሌላ ቀንና ሳምንት ሌሎች ጉብኝቶችን አድርጋልሻለች	1. አዎ 2. አላደረገችልኝም	2 ወደ 505
504. ሁለተኛውን ጉብኝት መቼ አደረገችልሽ?	_____ኛውቀን	
505. የጤና ኤክስቴንሽን ሰራተኛዎ በቀጣዮቹ ቀንና ሳምንት ሦስተኛ ጉብኝት አድርጋልሻለች?	1. አዎ 2. አላደረገችልኝም	2 ወደ 507
506. ሦስተኛውን ጉብኝት መቼ አደረገችልሽ?	_____ኛውቀን	
507. ማን ነው ያየሽ?	1. የሆስፒታል ጤና ባለሙያዎች 2. የጤና ጣቢያ ጤና ባለሙያዎች 3. ጤና ኤክስቴንሽን ሠራተኛዎ 4. የጤና ልማት ቡድን መሪዎ 5. የልምድ አዋላጅ 6. ዘመድ/ጓደኛ 7. ሌላ ካለ ጥቀሽ _____	
508. ከወሊድሽ እስከ አንድ ወር ባለው ጊዜ ውስጥ የጤና ኤክስቴንሽን ሰራተኛዎ ለአንቺና ለልጅሽ ምን ዓይነት አገልግሎት; ዕርዳታ ወይም ምክር ሠጠችሽ/ልሽ? (ሁሉንም መልሶች አንብብ/ቢ) 1. የጨቅላ ሕፃን በሽታ ምርመራ ወይም ህክምና? 2. የቫይሮላይን ኤ ዕደላ ለእናት? 3. እናት ከወሊድ ጋር ተያይዞ ችግር ካጋጠማት ማዬት/ማረጋገጥ (ለምሳሌ የደም መፍሰስ የሰውነት መመረዝ?) 4. የአይረን ዕደላ ለእናት? 5. ወደ ጤና ባለሙያ የመላክ ሥራ? 6. የወሊድ ምዝገባ እንድታደርግ መምከርና ማገዝ? 7. ሌላ ካለ ጥቀሽ _____		
509. ቤት ውስጥ ለወለደች እናት, ህፃን _____ ከተወለደ/ች በኋላ ስለ አንች ጤንነት ቤት መጥቶ ያዩሽ ጤና ባለሙያ አለ? ብለህ/ሽ ጠይቅ/ቂ ማስታወሻ: በህይወት የሌለ ልጅ ለወለደች እናት, ልጅሽን ካጣሽ በኋላና የጤና ኤክስቴንሽን ሰራተኛዎ ወይም የጤና ልማት ቡድን መሪዎ ቤት ከተወሸ በኋላ ስለ አንች ጤንነት ቤት መጥቶ ያዩሽ ጤና ባለሙያ አለ? ብለህ/ሽ ጠይቅ/ቂ?	1. አዎ 2. የለም	
510. ከወሊድ በኋላ በስድስት ሳምንት ውስጥ በድህረ-ወሊድ ጉብኝት ጊዜ በጤና ባለሙያ የተሰሩልሽ ስራዎች የትኞቹ ናቸው? (ሁሉንም አንብብ/ቢ) 1. የሆድ ምርመራ? 2. የሰውነት የውስጥ አካል ምርመራ? 3. ከማህፀን የሚወጣ ብዙ የደም መፍሰስ/ከፍተኛ የሆነ ከእምብርት በታች የሆድ ህመም መኖሩን ወይም አለመኖሩን መጠየቅ? 4. ስለ ቤተሰብ ምጣኔ የምክር አገልግሎት? 5. ስለ ጡት ማጥባት የምክር አገልግሎት? 6. ስለ ከትባት የምክር አገልግሎት? 7. ስለጨቅላ ሕፃናት የምክር አገልግሎት? 8. ሌላ ካለ ጥቀሽ _____		
ክፍል 6: የጨቅላ ህፃን እንክብካቤ		
601. የህፃኑ እትብት ከተቆረጠ በኋላ የሆነ ነገር እትብቱን ላይ ያደረገበት ሰው አለ?	1. አዎ 2. የለም	2 ወደ 604
602. ምንድን ነው ያደረጉበት?	1. ዘይት 2. አመድ	

	(አስታውሳት/ሻት: “ሌላስ ምን አደረጉበት?”) (ሁሉንም የተሰጡትን መልሶች አክብ/ቢ)	3. ቅባት/ዱቄት የሚመስል ነገር 4. የከብቶች አበት 5. ሌላም ካለ ጥቀሽ _____	
603.	ማን ነው ያደረገበት	1. የሆስፒታል ጤና ባለሙያዎች 2. የጤና ጣቢያ ጤና ባለሙያዎች 3. ጤና ኤክስቴንሽን ሠራተኛዎች 4. የጤና ልማት ቡድን መሪዎች 5. የልምድ አዋላጅ 6. ዘመድ/ጓደኛ 7. ሌላ ካለ ጥቀሽ _____	
604.	የእትብት መመሪዝን ለመከላከል የተለየ መድሃኒት ቢኖር መጠቀም እፈልጋለሁ ብለሽ ታስቢያለሽ?	1. አዎ 2. አልፈልግም	
605.	ልጅሽ ከተወለደ በኋላ ለመጀመሪያ ጊዜ ጡት የጠባው መቼ እንደሆነ ንገራኝ?	1. ከተወለደ በ 1 ሰዓት ውስጥ 2. 1- 24 ሰዓት 3. ከተወለደ ከ24 ሰዓት በኋላ 4. ሌላ ካለ ጥቀሽ _____	
606.	ስለ ጡት ማጥባት መረጃ ከየት ሰማሽ	1. ከጤና ጣቢያ ከመጡ ባለሙያዎች 2. ከጤና ኤክስቴንሽን ሰራተኛዎች 3. ከሴቶች ጤና ልማት ቡድን 4. ከመገናኛ (ሬድዮ፣ ቴሌቪዥን) 5. ከልምድ አዋላጅ 6. ከዘመድ/ጓደኛ 7. ሌላ ካለ ጥቀሽ-----	

ክፍል 7: በመጀመሪያ ሁለት ወር ለጨቅላ ሕፃን ልጅ የሚደረግ እንክብካቤ

701.	ከዚህ በፊት ስለማህበረሰብ አቀፍ የጨቅላ ህፃናት ጤና አገልግሎት በጤና ኬላና በቤት ለቤት ስለመሰጠቱ መረጃ ሰምተሽ ታውቁያለሽ 1. አዎ 2. አላውቅም		
702.	ከወሊድ እስከ ሁለት ወር ባለው ዕድሜ ውስጥ ላለ ሕፃን አስቸኳይ የህክምና እርዳታ የሚፈልጉ ምልክቶች የትኞቹ ናቸው? (አስታውሱ/ሽ: “ሌላ ምልክት የለም?”) (ሁሉንም የተሰጡ መልሶችን አክብ/ቢ) 1. አነስተኛ የሆነ የጡት አጠባብ/ መጥባት አለመቻል 2. ፈጣን አተነፋፈስ 3. ከፍተኛ የሆነ የደረት መሰርነድ 4. አነስተኛ የሰውነት ሙቀት 5. ትኩሳት 6. መንቃት አለመቻል/ራሱን መሳት 7. በቀዳ ላይ አንድ ትልቅ ወይም ከአስር በላይ ትንንሽ መግል የቋጠሩ ቁስሎች 8. ከፍተኛ የሆነ የእምብርት መመሪዝ /ቆዳ መቅላት/ከእትብት መጥፎ ሽታ ያለው ፈሳሽ ወይም የደም መፍሰስ 9. ሌላ ካለ ጥቀሽ _____		
703.	የተወለደው ሕፃን	1. በህይወት አለ 2. በህይወት ከተወለደ በኋላ ከ2 ወር በኋላ ሞቷል 3. በህይወት ከተወለደ በኋላ ከ0-2 ወር ባለው ጊዜ ሞቷል 4. ሕፃኑ ሲወለድ ሞቶ የተወለደ ነው	
704.	ከወሊድ በኋላ እስከ ስምንት ሳምንት ወይም ሁለት ወር ባለው ጊዜ ውስጥ የጤና ባለሙያ/የጤና ኤክስቴንሽን ሠራተኛዎች ሕፃንሽን አይታልሻለች/ነብኝታልሻለች?	1. አዎ 2. አልነበረች/ልኝም	
705.	በሁለት ወር ውስጥ ስንት ጊዜ ሕፃኑን አይታልሻለች?	-----ጊዜ	
706.	ሕፃኑ ከተወለደ በኋላ በጤና ኤክስቴንሽን ሠራተኛዎች ወይም በጤና ልማት ቡድን መሪዎች በስንተኛው ቀን ተነበኘ? (በተመሳሳይ ቀን ከሆነ “00” ያፍ)	በ-----ቀን	

707.	<p>ሕፃኑን/ኗን በዚያን ጊዜ ያየልሽ/የጎበኘልሽ ማን ነው? (ሌላስ ብለህ/ሽ ጠይቅ/ቂ?" ሌላ መልስ የሌላኝም እስከምትል ቀጥል/ይ.) (ሁሉንም የተሰጡትን መልሶች አክብብ/ቢ)</p> <ol style="list-style-type: none"> 1. የሆስፒታል ጤና ባለሙያዎች 2. የጤና ጣቢያ ጤና ባለሙያዎች 3. ጤና ኤክስቴንሽን ሠራተኛዎች 4. የጤና ልማት ቡድን መሪ 5. የልምድ አዋላጅ 6. ሌላ ካለ ጥቀሽ _____ 	
708.	<p>ከወሊድ በፊት ወይም ከወሊድ በኋላ የጤና ባለሙያ ወይም የጤና ልማት ቡድን መሪ በማንኛውም ጊዜ ስለጨቅላ ሕፃን በየትኞቹ ነገሮች ላይ የምክር አገልግሎት ሠጥተውሻል? (ሁሉንም አንብብ/ቢ)</p> <ol style="list-style-type: none"> 1. ቅዝቃዜን ስለመከለላክል? 2. በመጀመሪያ አንድ ሰዓት ውስጥ ጡት ማጥባትና ከዚያም በኋላ ጡት ብቻ ስለማስቀጠል? 3. አደገኛ ምልክቶች በጨቅላ ሕፃን 4. የእትብት ጥንቃቄ? 5. ስለክትባት? 6. ህፃንን ከመንካት ወይም ከማቀፍ በፊት በንፁህ ውሃና በሳሙና እጅን ስለመታጠፍ? 	
709.	<p>ህፃን ----- በቀኛ ክንድ ላይ የሚሰጠውንና ጠባሳ የሚያመጣውን የሳንባ ነቀርሳ መከላከያ ቢ.ሲ.ጅ የሚባለውን ክትባት ወስዷል?</p>	<ol style="list-style-type: none"> 1. አዎ 2. አልወሰደም
710.	<p>ሕፃንሽ ከተወለደ/ች እስከ ስምንት ሳምንት ባለው በማንኛውም ጊዜ ከሚከተሉት ውስጥ የትኞቹ ችግሮች አጋጥመውት/ዎት ነበር? (ሁሉንም መልሶች በቅደም ተከተል አንብብ/ላት/ቢላትና እንደሁኔታው መልሶቹን አክብብ/ቢ)</p> <ol style="list-style-type: none"> 1. ትኩሳት? 2. የአመጋገብ ችግር? 3. የተረበሽ አተነፋፈስ? 4. ፈጣን አተነፋፈስ? 5. የደረት መሰርጎድ? 6. የድካም ስሜትና የሰውነት መዛል? 7. የሆድ ህመም? 8. የሰውነት መንዘፍዘፍ? 9. ተከታታይ ተውከት? 10. ራስን መሳት? 11. የዓይን መቅላት/ፈሳሽ? 12. በቆዳ ላይ መግል የቋጠሩ ቁስል? 13. በእምብርት አካባቢ የቆዳ መቅላት? 14. የሰውነት መቀዝቀዝ? 15. ምንም የለም 	
711.	<p>በዚያን ጊዜ ልጅሽ ዕድሜው/ዎ ስንት ነበር?</p>	<p>በቀን 9ፍ.....</p>
712.	<p>ከላይ ለጠቀሽው ችግር ምን አደረግሽ ወይም ማንን አማክርሽ? (አስታውሳት/ሻት: “ሌላስ ምን አደረግሽ?” (ሁሉንም የተሰጡትን መልሶች አክብብ/ቢ)</p> <ol style="list-style-type: none"> 1. በቤት ውስጥ የባህል ህክምና ሠጠሁኝ 2. ዘመናዊ ህክምና በቤት ውስጥ ሠጠሁኝ 3. ወደ ሆስፒታል ወሰድኩኝ 4. ወደ ጤና ጣቢያ ወሰድኩኝ 5. ወደ ክሊኒክ ወሰድኩኝ 6. ወደ ፋርማስ ወሰድኩኝ 7. ጤና ኤክስቴንሽን ሠራተኛዎን አመክርኩኝ 8. የጤና ልማት ቡድን መሪዎን አማክርኩኝ 9. ዘመድ/ጎረቤት/ጓደኛ አማክርኩኝ 10. ሌላ ካለ ጥቀሽ _____ 	
713.	<p>ለመጀመሪያ ጊዜ የህክምና ዕርዳታ ስጠይቁ ልጅሽ ዕድሜው/ዎ ስንት ነበር?</p>	<p>ዕድሜውን/ዎን በቀን 9ፍ/ፊ _____ ቀን</p>
714.	<p>ህክምና ከጤና ተቋም ተሰጥቶት ከሆነ ተኝቶ ታክሞ ነበር?</p>	<ol style="list-style-type: none"> 1. አዎ 2. አልተኛም
715.	<p>ልጅሽ ተኝቶ/ታ እንዳልታከመ/ች ገብቶኛል ግን ጤና ተቋም እየተመለሰሽ አሳክመሻል. ስንት ጊዜ ክትትል አደረግሽ?</p>	<p>_____ ጊዜ</p>
716.	<p>ከጤና ተቋም ለታመመው ልጅሽ ለምንድነው ህክምና አገልግሎት ያላገኘሽው? (ሁሉንም መልሶች አክብብ/ቢ)</p> <ol style="list-style-type: none"> 1. አስፈላጊ መሰሎ ስላልታየኝ 2. አስተማማኝ አገልግሎት ስላልሆነ 3. የገንዘብ ዕጥረት 4. የጤና አገልግሎት በቀላሉ ስለማይገኝ 5. የት እንደምሄድ ስለማላውቅ 6. ለመሄድ ጓደኛ ስለሌለኝ 7. ምን የጤና ችግር ስለሌለኝ 8. ሌላ ካለ ጥቀሽ _____ 	
717.	<p>ልጅሽ ከተወለደ/ች በኋላ በሰባት ቀናት ውስጥ ተመዘኛ/ና ያውቃል/ታውቃለች</p>	<ol style="list-style-type: none"> 1. አዎ 2. አልተመዘነም/ችም

718.	ህፃን _____ ከተወለደ/ች በኋላ ለመጀመሪያ ጊዜ የተመዘነው/ችው መቼ ነው?	1. በ24 ሰዓት ወስጥ 2. ከ 1-2 ቀን 3. በ3ኛው ቀን 4. ከ 3 ቀን በኋላ	
719.	የህፃን/ፈ ክብደት ስንት ነበር (የሚታወቅ ከሆነ በግራም ፃፍ ----- ግራም)	1. እነስተኛ ክብደት 2. ትክክለኛ ክብደት 3. ከፍተኛ ክብደት	
720.	የት ነው የተመዘነው/ችው? 1. ሆስፒታል 2. ጤና ጣቢያ 3. ጤና ኬላ 4. ክሊኒክ 5. ቤት 6. ሌላ ካለ ጥቀሽ: _____		
721.	ሕፃንሽ ክብደቱ/ቷ አነስተኛ በመሆኑ ምክንያት ከጤና ባለሙያ/ጤና ኤክስቴንሽን ሠራተኛዎ ተጨማሪ ክትትል/ጉብኝት አግኝተዋል?	1. አዎ 2. አላገኘሁም	
722.	ህፃን _____ ከሌሎቹ ህፃን ክብደቱ/ቷ አነስተኛ በመሆኑ ምክንያት ጤና ባለሙያዎች የሰጡሽ ምክር ምንድን ነው? አስታውሳት/ሻት: ሌላስ ምክር? 1. ቶሎ ቶሎ ጡት ስለማጥባት 2. ሙቀት ስለመጨመር 3. ስለጨቅላ ሕፃን አደገኛ ምልክቶች 4. በተደጋጋሚ ክብደት ስለማስመዘን 5. በተደጋጋሚ ጤና ተቋም/ጤና ባለሙያ ስለመጎብኘት 6. ሌላ ካለ ጥቀሽ _____		
723.	አስፈላጊ መድሃኒቶች ናቸው የምትያቸው በጤና ኬላ ውስጥ አሉ 1. አዎ 2. የለም		

ክፍል 8: በማህበረሰብ አቀፍ የእናቶችና የጨቅላ ህፃናት ጤና አገልግሎት ላይ የእናቶች እርካታ መጠን
ትዕዛዝ: የሚከተለውን ጥያቄ የሚጠየቁት እናቶች የማህበረሰብ አቀፍ የጨቅላ ህፃናት ጤና እንክብካቤ አገልግሎትን ያገኙ ናቸው::

ተ.ቁ	መለኪያ	በጣም አረካም	አረካም	መካከለኛ	አረካቻሉ	በጣም አረካቻሉ
801.	ከጤና ኤክስቴንሽን ሠራተኞች ስለ ማህበረሰብ አቀፍ የእናቶችና የጨቅላ ህፃናት ጤና አገልግሎት ባገኘሽው የምክር አገልግሎት ምን ያክል እረክተሻል?	1	2	3	4	5
802.	የማህበረሰብ አቀፍ የእናቶችና የጨቅላ ህፃናት ጤና አገልግሎት ለማግኘት በጉብኝት ጊዜው ትክክለኛነት ምን ያክል እረክተሻል?	1	2	3	4	5
803.	የማህበረሰብ አቀፍ የእናቶችና የጨቅላ ህፃናት ጤና አገልግሎት ላይ በሚሰጠው የምክር አገልግሎት ሰዓት ትክክለኛነት ምን ያክል እረክተሻል?	1	2	3	4	5
804.	በጤና ኤክስቴንሽን ሠራተኞች ብቃት/አውቀት ላይ ምን ያክል እረክተሻል?	1	2	3	4	5
805.	የማህበረሰብ አቀፍ የእናቶችና የጨቅላ ህፃናት እንክብካቤ አገልግሎት ለማግኘት በሚሰጠው የቀጠሮ ቀን/ሰዓት ትክክለኛነት ላይ ምን ያክል እረክተሻል?	1	2	3	4	5
806.	በጤና ኬላው የሰራ ሰዓት ምቹነት ላይ ምን ያክል እረክተሻል?	1	2	3	4	5
807.	ጤና ኬላ በሚገኙ መድሃኒቶች በቂነት ምን ያክል እረክተሻል?	1	2	3	4	5
808.	በጤና ኤክስቴንሽን ሠራተኞች አቀባበል ምን ያክል እረክተሻል?	1	2	3	4	5
809.	በጤና ኬላው ማረፊያ ክፍል ንፅህና ምን ያክል እረክተሻል?	1	2	3	4	5
810.	በጤና ኬላው ማረፊያ ክፍል ትክክለኛነት ምን ያክል እረክተሻል?	1	2	3	4	5

ጥያቄዬን ለመመለስ ስለሰጣችሁኝ ጊዜና ትብብር በጣም አመሰግናለሁ!!