# IDEAS qualitative study: *understanding processes through which HEWs and the HDA leaders deliver Community Based Newborn Care (CBNC)*

**Protocol (November 2014)**

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## Draft protocol

# 1 CBNC Phase I description

## 1.1 Background on newborn health in Ethiopia

Over the course of 20 years, Ethiopia has reduced under-5 mortality by two thirds, allowing the country to reach its Millennium Development Goal (MDG) three years ahead of the 2015 deadline.[i] In the same period however, neonatal mortality has shown a slow decline.[ii] Approximately 42% of under-5 mortality is among neonates.[iii] The 2013 Levels & Trends in Child Mortality report estimated that there are 29 deaths in the first 28 days of life per 1,000 live births. [iv]

Studies have reported preterm birth, asphyxia and sepsis/meningitis/ tetanus to be major causes of neonatal mortality.[v] Given the high level of home births in Ethiopia (90% from 2011 EDHS[5] and 80% from 2011/2012 HMIS data [vi]), limited care for newborns in health facilities and inadequate newborn care seeking practice, essential newborn care in communities and primary health facilities is a promising way forward.

## 1.2 Community Based Newborn Care

Building on lessons learned from integrated Community Case Management of childhood illness (iCCM), the Community Based Newborn Care (CBNC) programme aims to reduce newborn mortality through strengthening the Primary Health Care Unit (PHCU) approach and the Health Extension Programme (HEP). This goal will be achieved by enhancing linkages between health centres and health posts and the performance of Health Extension Workers (HEWs) and Health Development Army (HDA), to improve antenatal, intrapartum and newborn care through the “four Cs”: (1) prenatal and postnatal **Contact** with the mother and newborn; (2) **Case-identification** of newborns with signs of possible severe bacterial infection; (3) **Care**, or treatment that is appropriate and initiated as early as possible; and (4) **Completion** of a full 7-day course of appropriate antibiotics. CBNC implementation involves the scaling-up of community based maternal and newborn health (MNH) services including:

- Early identification of pregnancy
- Provision of focused antenatal care (ANC)

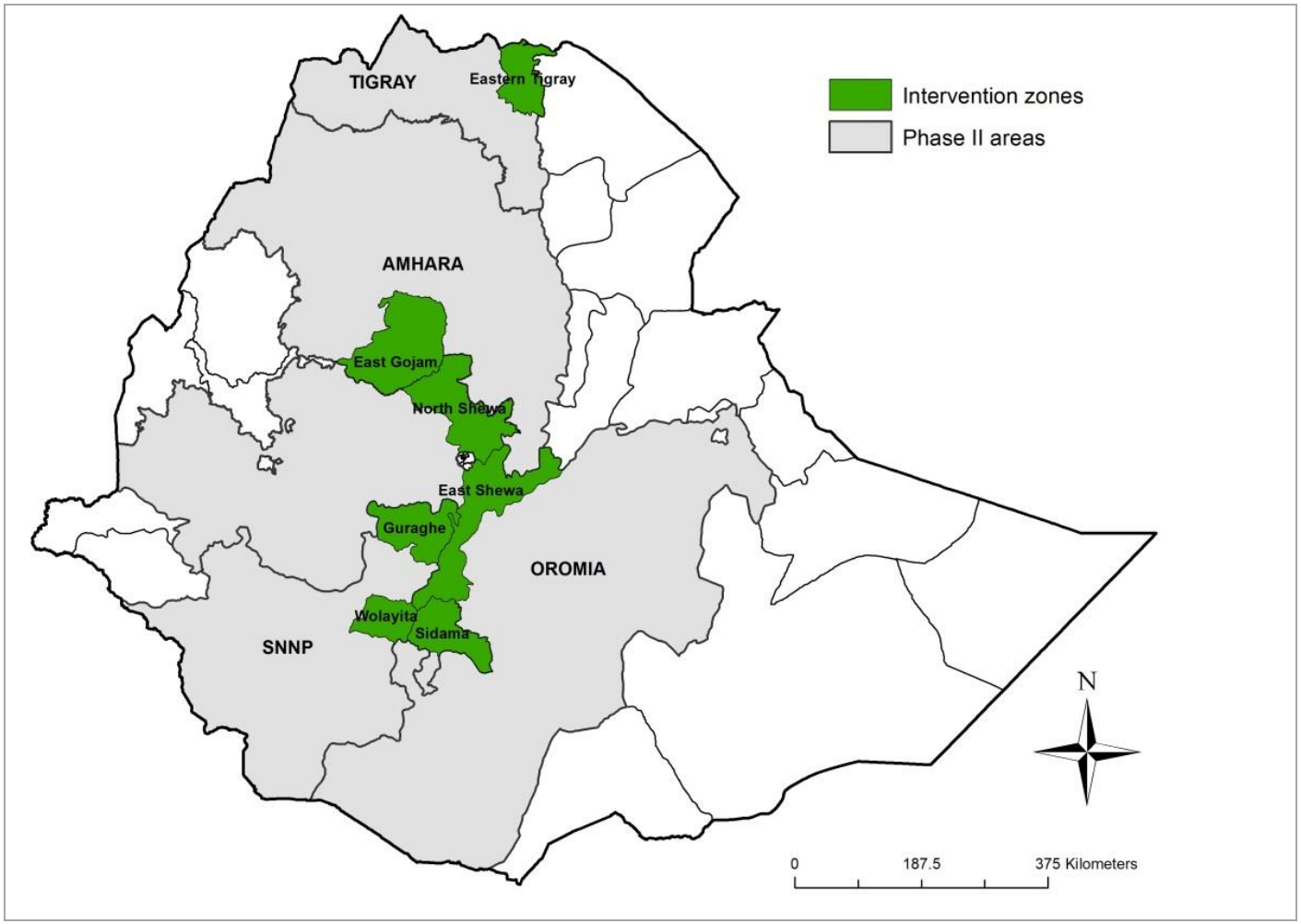
- Promotion of institutional delivery
- Safe and clean delivery including provision of misoprostol in case of home deliveries or deliveries at health post level
- Provision of immediate newborn care, including application of chlorhexidine on the cord
- Recognition of asphyxia, initial stimulation and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

CBNC programme ground work was launched in March 2013 and is planned to be implemented in two major phases. Phase 1 CBNC service provision began in March 2014 as a proof of concept in seven zones across four regions of Ethiopia: Amhara (East Gojam zone), Oromia (North and East Shewa zones), Southern Nations Nationalities and Peoples' Region (SNNPR) (Wolayita, Gurage and Sidama zones) and Tigray (Eastern zone) (Figure 2.1). In these seven zones, a total population of over 12.5 million will benefit from the interventions, with 2.8 million women of reproductive age and over 400,000expected deliveries per year. This initiative will then be scaled-up to the remaining zones in the four regions and beyond (Phase 2), and will be refined on the basis of lessons and experiences from the evaluation of the initial seven zones.

The CBNC programme in Ethiopia has the following overall objectives:

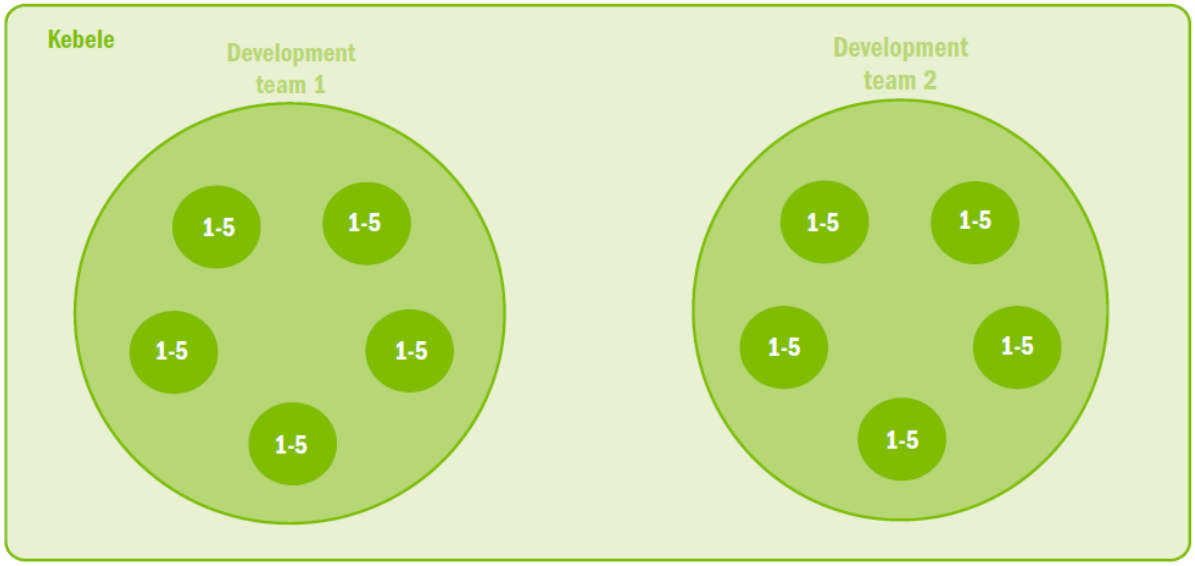
- To further strengthen the PHCU approach and the HEP by improving linkages between health centres and health posts and the performance of the HEWs, to scale up community based MNH services, including the introduction of newborn sepsis management;
- To strengthen the capacity of health centres in providing quality maternal, newborn and child health services
- To further strengthen logistics and information systems within the PHCU context;
- To improve maternal and newborn care practices and care seeking through the HDA and other existing effective community mobilisation mechanisms; and
- To draw lessons and experiences from the initial phase to inform the scale-up phase (Phase 2)

**Figure1- Four regions of Ethiopia showing the seven CBNC Phase 1 implementation zones**



The implementation of CBNC is expected to be supported through the Health Extension Package (HEP) and HDA system which are the major pillars of the CBNC programme. There are two main structures in the HDA, the 1-5 network and the development team. At kebele (village level), 20-30 household from the development team and each team consists of 4-5 networks of 1-5 network leaders (Figure 2). The HDA network plays an important role in mobilizing communities to increase demand and utilization of MNH services; it is designed to expand best practices of health on a large scale within a short period of time. The assumption behind this strategy is that the community will be enabled to produce and sustain their own health through the implementation of all HEP elements.

Figure 2- HDA system linkages




CBNC program will be implemented by the Federal Ministry of Health of Ethiopia , in partmenrship with UNICEF, Save the Children, Inter- Family Health Planning (IFHP) and Last 10 Kilometers.

## 2 CBNC Evaluation

IDEAS (Informed Decisions for Action), in partnership with JaRco consulting, has been tasked by the Government of Ethiopia to conduct an evaluation of the CBNC program.

Part of The London School of Hygiene and Tropical medicine, IDEAS aims to improve the health and survival of mothers and babies through generating evidence to inform policy and practice. Working in

Ethiopia, North-Eastern Nigeria and the state of Uttar Pradesh in India, IDEAS uses measurement, learning and evaluation to find out what works, why and how in maternal and newborn health.

JaRco consulting is an international development consulting company that provides high-quality technical support services for a variety of institutions working across a broad range of development sectors. The company helps clients to maximize the accuracy and reliability of the information that supports their programs, carrying out qualitative and quantitative research, designing monitoring and evaluation systems, and providing extensive capacity building and logistical support.

IDEAS along with JaRco will be conducting the CBNC evaluation. There will be a baseline, midline and endline quantitative surveys to investigate CBNC coverage of key MNH interventions along the continuum of care at health facility and household levels. At the same time, qualitative study will be conducted from the health service provider perspective on CBNC implementation, and at the household level on beliefs, attitudes and care seeking practices. More specifically the evaluation will address the following questions:

1. What is the effect of CBNC on coverage of key MNH interventions along the continuum of care at the health centre, health post and household levels, reflecting each of the nine CBNC components? (assessed through baseline and end-line surveys)
2. ***What are the CBNC processes through which HEWs and the HDA leaders deliver the four Cs and their respective key components? (explored through a qualitative study)***
3. What is the process by which beliefs, attitudes and care seeking for newborn illness is addressed by CBNC at the household level? (explored through qualitative study)
4. What is the quality of CBNC services provided by HEWs at the PHCU level? (assessed through midline survey)

The CBNC baseline evaluation survey (question #1) was conducted between October-November 2013. The survey was undertaken prior to the implementation of the program to understand the status of MNH at the community and health systems levels.

This protocol will focus on the qualitative evaluation question (#2) from the perspective of the service providers, in this case, HEWs and HDA leaders. The study will explore the delivery mechanisms for the four Cs (**Contact**, **Case-identification**, **Care** and **Completion) after the implementation of the CBNC program. The CBNC program was implemented in March 2014, therefore, this assessment will attempt to capture the mechanism of delivery as well as any barriers and facilitators the HEWs and HDA leaders faced in the implementation process.** The community level evaluation question (#3) will assess the beliefs, attitudes and care seeking for newborn illness at the household level. Timing of the study

will be confirmed in consultation with Federal Ministry of Health and the CBNC Technical Working Group (TWG).

This protocol describes the global and local evidence on the effectives of community health workers and volunteers and concludes with the guiding research questions, study significance and proposed study framework (Section 3). This is followed by Section 4 which describes the methodology, including the study area, sampling methodology, sample size, data collection methods, study tools, staffing, training and pilot testing. There is also a brief overview of the data management component and quality assurance, and lastly, an overview of the data analysis and ethical considerations.

In the Annex (1-7) we also provide data management procedures, informed consent ( in relevant language), topic guide (in relevant languages), Model expanded field notes, pre-analysis template, training and field manual and lastly PI-CV.

# 3 Qualitative study: understanding the processes through which HEWs and HDA leaders deliver CBNC

## 3.1 Effectiveness of community health workers and volunteers and gaps in the existing evidence

According to the World Health Organization (WHO), the contributions of Community Health Workers (CHWs) are many. This includes covering the tasks of highly trained health workers, who are unavailable in rural areas, and saving patients in rural communities' money and time by providing health services closer to their homes. Additionally, since most live within the community they serve, they can be effective in establishing trust for health service provision and ensuring ease of communication when addressing health issues.[7] In most low and middle income countries, CHWs have been effective in implementing community interventions, promoting child survival and providing curative treatment, especially for pneumonia, malaria and neo-natal sepsis. [8 ,9, 10] Similarly, community volunteers have been shown to support CHWs and be effective in providing interventions, given the proper training, supervision and supplies. Volunteers also have the potential to establish a rapport with the community they serve. [11, 12]

Community health workers that are supported by volunteers in the same community have greater success in effective coverage, equitable reach and cost efficacy. This was demonstrated from a study in Nepal, where the workload on health workers has been alleviated.[13] Moreover, a care group model, consisting of a group of volunteers who meet with a program supervisor every 2 to 4 weeks to learn key health messages to be shared to 10 of their neighbours, in collaboration with the CHWs has been reported to improve child survival in two separate studies. Using this model there was a 42% reduction

in under-5 death in rural Mozambique, and in rural Cambodia there was a decline by 72% over a period of 5 years.[14,15] Another study in Nepal used women's group to support CHW on both the supply and demand side of health services, employing strategies such us health funds, home visits, production and distribution of clean delivery kits. This resulted in a 30% reduction of neonatal mortality. The success of the intervention was also further attributed to the participatory, rather than instructive, methods of involving community members.[16]

A meta-analysis was also conducted in 2013 looking at an intervention that involved women's group and participatory action cycle, a method of health education involving dialogue and problem solving where communities recognize and address underlying social and political factors that affect health. The analysis showed that participatory learning and action by groups of women led to substantial reductions in neonatal and maternal mortality in rural, low-resource settings. The intervention was also cost-effective.[17]

To understand the gap in effectiveness of CHWs and volunteers within the context of the Ethiopian health system, we also looked at the Saving Newborn Lives (SNL) –COMBINE (Community Based Interventions for newborn in Ethiopia) research study that evaluated a strengthening package of MNH care interventions within the Health Extension Package (HEP). The strengthened package focused on the pregnancy identification and postnatal care (PNC) through active home visits by CHWs (HEWs) and community volunteers (HDA leaders), utilizing tools for reporting. COMBINE also assessed the effectiveness and feasibility of integrating community-based treatment of neonatal sepsis by HEWs (when referral was not possible) in the national ICCM platform. A qualitative assessment conducted in 2013 demonstrated an effective utilization of HEWs and HDA leaders in the provision of services related to pregnancy identification, ANC and PNC visits. The result showed that a strong project management component coupled with a strong network of volunteer system and health worker linkages can in fact significantly improve service provision along the continuum of care. The performance of HDA leaders and HEWs was better when there was regular supportive supervision, ownership of the program, as well as good relationships with officials. Additionally, HEWs and volunteers felt their work was enabled by supervision, meetings with community and availability of telecommunication networks. Volunteers also found monthly meetings with HEWs to enhance their counselling skills. Furthermore, the study showed that community members were very positive about home visits and accepted it as a routine part of antenatal and postnatal experience. The home visits brought convenience to the community provided by the HEWs and volunteers. This study was held within six kebeles and assessed the perspective of volunteers, HEWs, and community members (women who recently delivered, fathers, grandmothers) on their practices and challenges related to the implementation of the program in the context of the four C's. However, the analyses of the four C's process whereby CHW and volunteers provide services were beyond the scope of the study.[18]

Despite the positive contributions of community health workers and volunteers in health service provision, reducing maternal and newborn mortality in many low income countries, including Ethiopia, remains a challenge. High attrition rate of CHW as well as low financial rewards and lack support contribute to the challenge. Furthermore, long distance to health facilities and low demand for available services affect care seeking behaviour. This is further exacerbated by systematic issues of weak economic and health infrastructures. [19] A study in Zambia demonstrated that the weakness in the functionality of CHWs was a result of irregular supply of drugs, indicating that a CHW system is weakened if the health system does not provide the appropriate supply. Additionally, selection of non-appropriate health workers was also a key problem. Community members were not involved in the selection of CHWs, which made them not have a sense of ownership of program. [20] Demand generation for CHW services should involve the community from the initial stages of implementation. Absence of involvement can create political tensions between traditional structures and new health service structures. [21]

Motivation is also a big factor for the effectiveness of a well functioning CHWs system and it can be affected by several factors. Many studies have demonstrated that there are both monetary and non-monetary de-motivating factors such as inconsistent remuneration and delayed payment period and lack of equitable distribution of incentives. Additionally, lack of refresher trainings and supervision and excessive demands on CHWs time and lack of respect amongst health facility staff can be de-motivating factors.[22] Motivation is further affected by fear of blame if health care is not successful. The value that is placed on CHW by the community they serve also influences health worker motivation. [23] As a result, lack of appreciation has been reported to be de-motivating. [24] Studies have also shown that, despite the process improving the motivation of health workers, there is a gap in the feedback mechanisms between the community and health workers. [25] Furthermore, a recent Cochrane review showed that even in communities where health workers are seen as important members of the health system, some CHWs still lacked motivation, an indication of the multidimensional factors influencing motivation. Lack of motivation was particularly higher among CHWs that perceived their training as being irrelevant to their work.

COMBINE study in Ethiopia also highlighted the importance of motivation for the success of the program. Monthly meetings that imparted knowledge motivated HEWs. Volunteers, specifically, were motivated by public recognition and status, a positive perception of volunteerism, seeing value in their work, witnessing positive change, personal relevance, having a broader role in the community, training and skills development, and the start of a savings (money) club. HEWs level of commitment to their work also impacted the volunteers' morale.[18]

There is scarcity of information on how CHWs provide services, including the effectiveness of health workers versus volunteers, and the quality of care provided.[26] There are also gaps in information on the status of interactions between the health workers and volunteers, and how those interactions facilitate

health outcomes. Many studies do not delineate the role of volunteers and paid health workers that demonstrate their own individual challenges and how they are linked to the health system. A review in 2012 of CHWs effectiveness looking at the overall current evidence on CHWs programs to reach MDGs showed that there are very few studies providing CHWs "voice" about their work challenges and how they think programmes can help them to achieve set goals. Additionally, the review recommended that large scale CHW programs need to be studied to see how they are effective, what influences their effectiveness and current strategies that have led to better effectiveness.[27]

There is also gap in the information that demonstrates the point of view of health workers and volunteers regarding how they are perceived by their community. In connection, further investigation is needed on the existing feedback mechanisms between these groups and the functionality of the mechanism. Further investigation into monetary and non-monetary incentives would also contribute to knowledge on how to sustain or improve CHWs and volunteers' motivation. Studies utilizing qualitative methods can shed light on these gaps.

Building on the global and local (COMBINE) evidence, the proposed study aims to investigate the processes involved in the implementation of CBNC program from the perspective of the health system, namely Woreda (district) Health Bureau heads, HEP coordinators, HEWs and HDA leaders. It will assess how and when HEWs and HDA leaders contact newborns early and find sick newborns, as well as how HEWs initiate and, when referral is not possible, complete treatment. Additionally motivation, demand for services, supervision, and linkage to the health system will be explored. These factors will be investigated within the context of the processes used by HEWs and HDA leaders to deliver the 4 Cs. Through this investigation we hope to shed light on HEWs and HDA leaders' views on their work, what facilitates and inhibits service provision, and how the health system can better support them to maximise their potential to deliver the CBNC programme, with an emphasis on sepsis treatment at the community level.

## 3.2 Research Questions

Using qualitative methods, this study aims to explore the following CBNC evaluation question (evaluation question #2):

***What are the CBNC processes through which HEWs and the HDA leaders deliver the four Cs and their respective key components?***

Within this framework we will address the following primary and secondary questions:

1. Primary Question: what are the CBNC processes through which HEWs and HDA leaders:
    - *Contact newborns early,*
    - *Identify cases,*
    - *Provide treatment (HEWs only) and*

- *Ensure treatment completion (HEWs and HDA leaders)?*

Overall, this question will investigate the mechanisms that are used by HEWs and HDA leaders to deliver the 4 Cs.

2. Secondary Question: how are the HEWs' and HDA leaders' potential to contact newborns early, identify cases, provide treatment and ensure completion affected by:

- *Motivation,*
- *Demand for newborn services f*rom *the perspective of health workers,*
- *Supportive supervision and*
- *Linkages to the health system (from the community level to the health centre)?*

The secondary questions will explore the barriers and facilitators in delivery of the 4 Cs.

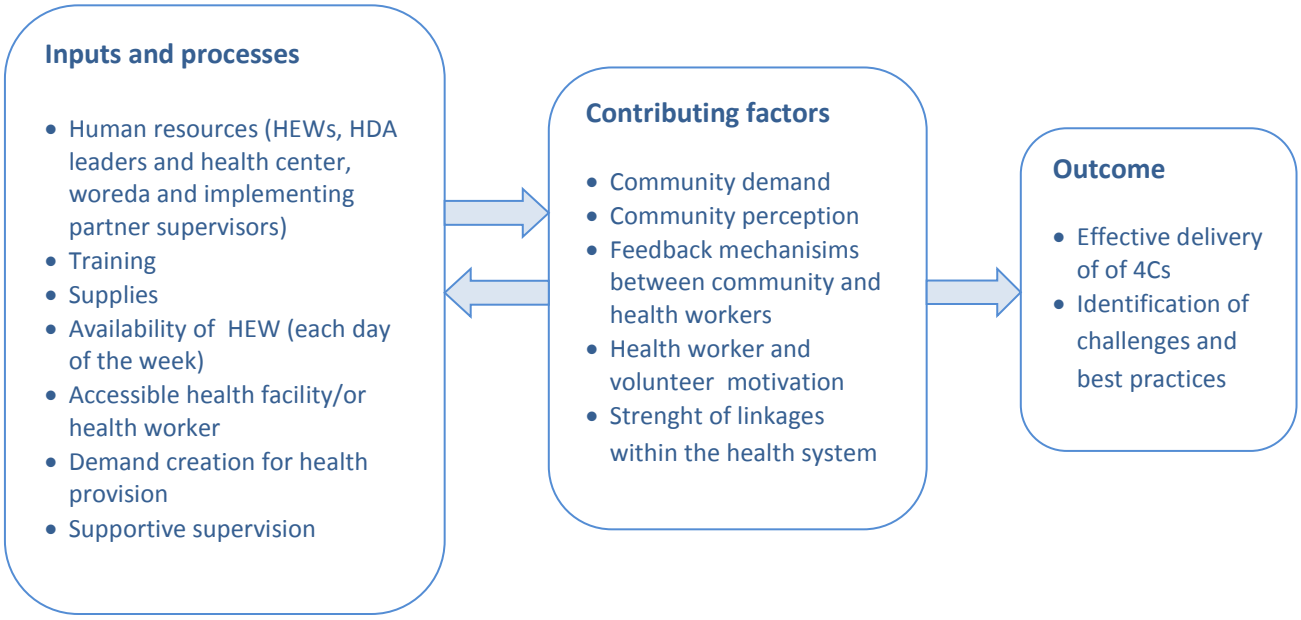
## 3.3 Study significance and potential implications

Finding from the study can inform Ministry of Health and CBNC program implementers on:

- The operational as well as cultural challenges and opportunities to the delivery of CBNC components related to *contacting newborns early*, *identifying cases, providing care, and ensuring treatment completion.*
- Critical factors that affect motivation of HEWs and HDA leaders in delivering the 4 Cs
- Important factors related to level of demand for newborn care from the perspective of health workers (HEWs and HDA leaders)
- The linkage opportunities and challenges (including communication, supportive supervision and referral) of the health system between health workers and the volunteers in delivering CBNC components focusing on care to newborns
-The study will also add to the existing knowledge on the effective implementation of MNH programs that use CHW and volunteers

Based on the literature review and formative research done for the CBNC baseline evaluation survey, we have determined a framework that can explain the process, contributing factors and outcome. **Figure 3** presents the proposed framework for the qualitative study. The framework shows the inputs and processes involved for the delivery of the 4 Cs from the health system perspective. This is followed by the contextual factors that may facilitate or inhibit the delivery of the 4 Cs. These include external factors outside of the health system such as perception and motivation factors that affect CHW and volunteers. The last column shows the expected outcomes of the contributing factors to the inputs and process which is the effective delivery of the four C's and the identification of challenges and best practices about the program.

**Figure 3- Framework of provision of the four Cs at the community level.**




# 4Methodology

## 4.1 Study timeline

The preparation and formative research for the CBNC qualitative study among HEWs and HDA started in July 2013.The qualitative study will be conducted in CBNC implementation woredas over a course of 4 weeks period from November-December 2014.

## 4.2 Study participants

The study participants will include woreda head or MCH officers, HEP Supervisors or MCH officers at health centres, HEWs and HDA leaders.

## 4.3 Proposed study area

The study will be conducted in woredas located in the 6 CBNC implementation zones (Figure 1) of Oromia, Amhara, Tigray and SNNP regions. Study will be conducted in all four regions due to the considerable variations expected in the strength of the HEP and HDA systems that affect delivery of MNH interventions as well as variations in cultural practices, attitudes and belief systems that affect uptake MNH services.

## 4.4 Proposed Sampling

PHCU sampling: Using data from implementing partners we will first categorize PHCUs into those that have treated a high number of Very Severe Disease (VSD) cases since the initiation of the CBNC program, and those that have treated a low (no) number VSD cases . Then from each stratum, we will randomly select PHCUs to be included in the qualitative study. Including PHCUs where VSD cases have been treated by HEWs will allow us to learn more about the processes used for initiating and completing treatment as well as factors facilitate and inhibit treatment. We will also go to PHCUs with minimal/no VSD case treatment to understand factors related to the lack of service uptake.

Study participant selection: Purposive sampling will be used to select study participants. Within each PHCU, we will conduct an In-Depth Interview (IDI) with either the woreda health office head or an MCH officer. After that, we will conduct an IDI at the health centre with the staff member who serves as an HEW coordinator as well as an MCH officer who has been working at the selected health centre for a year. Additionally, the person should be well aware of the CBNC program and its main components of implementation.

With the aid of the health centre staff, we will identify health posts with the most and least number of VSD cases treated in high and low treatment PHCUs, respectively. Where possible, in each PHCU we will conduct two IDIs with HEWs. One FGD with HEWs will also be conducted. We will purposively select HEWs who have been working in the community longer and have taken the CBNC training. In each PHCU, HDA leaders will be identified with the aid of the HEWs for one FGD. IDIs will also be conducted with two HDA leaders from each PHCU. Interviews and discussions will include both 1 to 5 HDA network leaders and 1 to 30 HDA team leaders who can speak about their role in their community and who work with HEWs.

Overall in each PHCU we will conduct:

- One IDI with Woreda head or MCH officer
- One IDI with HEW coordinator/MCH officer
- Where possible two, if not one, IDIs with HEW(s)
- One FGD with all available HEWs in the health post
- Two IDIs with HDA leaders
- One FGD with HDA leaders

Sampling method will take into consideration the characteristics of the sites, or types of groups/persons to be interviewed. Sampling will start at the health centre level, followed by the health post, and lastly HDA leaders in the community.

## 4.5 Data collection methods

Two qualitative data collection techniques will be Utilized: focus group discussions (FGDs), and in-depth interviews (IDIs). Combining these two data collection methods improves the persuasiveness of the data, answers different evaluation questions and triangulates the information gathered from different the types of participants. Furthermore, utilizing the different qualitative data collection techniques will reduce the chance of bias and provide a comprehensive understanding of the topic.

## 4.6 Sample Size

For this study, we propose to go to six CBNC implementation zones across the four regions. Since Amhara (East Gojam) and Tigray (East Tigray) regions each only have one implementation zone, we will go to four woredas in each zone. In Oromia (North Shoa and East Shoa) and SNNP (Sidama and Wolyaita)[1] regions we will go to 2 woredas in each implementation zone.

In each woreda, we will go to one PHCU consisting of one health center and five health posts. At the health center, there will be a coordinator/supervisor that supervises approximately 10 HEWs in the health posts (total 5 health posts). Under each health center there are approximately 5 health posts,

[1] Based on the recommendation of CBNC TWG members (as well as resource implications),

each consisting of 2 HEWs. Under each Health Post, there is approximately a population of ~5000 with about ~136 HDA networks leaders (1 to 5 leaders) or ~24 Health developmental army team leaders.[2]

In the woreda where the selected PHCU is located, we will conduct one IDI with either the MCH officer or Woreda Health Bureau head. From the selected PHCU, we will also conduct one IDI with the HEW supervisor/coordinator or MCH officer at the health centre. One FGD will be conducted with 6-8 HEWs from the 5 health posts under the selected health centre. In each PHCU we will also interviews two HEWs. We will also conduct one FGD with 6-8 HDA leaders from one of the health post catchment areas. IDIs with two HDA leaders will also be conducted in each PHCU. Overall, this study will include 16 PHCUs across the four regions. Detailed breakdown of IDIs and FGDS by region is shown in Table 1.

The sample size shown in Table 1 will act as a guide. Sampling will be conducted to saturation and as such, total number of interviews and discussion in each region might increase or decrease depending on the level of information captured.

**Table 1 - Sample size for FGDs, and IDIs at the community, health post, health centre and woreda levels.**

| Region | Woreda* | FGD | | IDI | | | |
|---|---|---|---|---|---|---|---|
| | | HEW | HDA | HEW | HDA | Supervisor | Woreda |
| Oromia | 4 | 4 | 4 | 8 | 8 | 4 | 4 |
| SNNP | 4 | 4 | 4 | 8 | 8 | 4 | 4 |
| Amhara | 4 | 4 | 4 | 8 | 8 | 4 | 4 |
| Tigray | 4 | 4 | 4 | 8 | 8 | 4 | 4 |
| Total | 16 | 16 | 16 | 32 | 32 | 16 | 16 |

[2] Berhanu, D (2014) Community Based newborn Care: baseline report summary, Ethiopia octoer 2014. London: IDEAS, London School of Hygiene & Tropical Medicine.

## 4.7 Data collection tools

A topic guide (**Annex 2**) will serve as a source of questions and will guide researchers and note takers on the flow and structure of the interviews and discussions. The topic guide will consist of guiding questions by subtopic focusing on mechanism used by HEWs and HDA leaders for delivering 4 Cs, and how HEWs' and HDA leaders' motivation, demand, supportive supervision and linkages with the health system affect the, delivery of four C's . Table 2 provides a summary of information to be collected through IDIs and FGDs. The topic guide will provide probing questions along with areas of emphasis. All topic guides will be translated into Oromiffa, Amharic and Tigrenga.

A pre-analysis template form (**Annex 5**) will also be provided. This will assist the researchers and note takers to identify emerging themes from their fieldwork, allowing for a more dynamic and open study design. It will also allow data collectors to reflect on the overall experience during the interview or discussion. Such themes will be explored in subsequent interviews, and hence modifications to the topic guide may be needed over the period of the qualitative data collection.

Table 2: Summary of information to be collected

| | Focus Group Discussions | In-Depth Interviews |
|---|---|---|
| Woreda Head/MCH officer | | • Overall program implementation<br>• Their expectations for the CBNC program<br>• Barriers and facilitators to program implementation<br>• Their recommendation for program improvement |
| HEW Supervisor/Coordinator | | • Activities held to support HEWs in delivery of the four C's<br>• Supervision with regard to the four C's (facilitators and challenges)<br>• Health centre level VSD treatment, particularly y from |

| | | |
|---|---|---|
| | | health post referrals<br>• Health system linkage<br>• Supplies |
| HEWs | • Process of delivery of the four C's and barriers and facilitators to delivery<br>• The interaction between HEWs and HDAs related to delivery of the four c's<br>• Their motivation, demand for their services, supervision and linkage to the health system, feedback mechanism | • Process of delivery of the four C's and barriers and facilitators to delivery<br>• Facilitators and barriers to service provision<br>• Their motivation, demand for their services, supervision and linkage with health centre and HDA leaders |
| HDA leaders | • Their role in identifying pregnant women, promotion of focused ANC, Birth preparedness and newborns<br>• Role in notifying delivered mother<br>• Role in identification of sick cases<br>• Type of activities held to ensure sick newborns are identified<br>• Interaction with HEWs<br>• Their motivation, supervision and linkages to the health system, feedback mechanism<br>• HDA selection criteria | • How they identify pregnant women and newborns<br>• Details of how they support HEWs in delivery of the four C's<br>• Their motivation, demand for their services, supervision and linkages to the health system |

## 4.8 Staffing, training and pilot testing

### 4.8.1 Qualitative study team

The qualitative study team will consist of a JaRco qualitative specialist, a technical advisor, four interviewers and four note takers. The overall study will be coordinated by the IDEAs country coordinator. Technical input will also be provided by IDEAS scientific coordinator and other members of the IDEAS team based at LSHTM. Interviewers and note takers will be assigned to the four regions based on their language skills relevant to the region.

### 4.8.2 Topic guide development

Topic guides were developed based on formative research conducted in woredas where iCCM and COMINE were implemented. Moreover, study teams also attended HEW CBNC training and reviewed training materials. After implementation, study team also visited CBNC woredas and interacted with CBNC program implementing partners, woreda health officers, health center staff members, HEWs and HDA leaders for further refinements of guides. Once the topic guide is developed in English, it was translated into the local languages and will be pre-tested in a CBNC implemented woredas.

### 4.8.3 Training of field staff and pilot testing

JaRco technical advisor and qualitative specialist will recruit and train interviewers and note takers. Training will last for four days. The first two days will focus on the aims and methodology of the facility level qualitative study and a thorough review of the topic guides. Once all personnel have adequately practiced the recording techniques and feel comfortable with their performance, interview simulations and exercises will be conducted to ensure that the team has the skills to collect high quality data. On the third day, the qualitative study team will pilot-test the topic guides through interviews and FGDs with HEWs and HDA leaders. Pilot interviews will be conducted in districts (woredas) near Addis Ababa where CBNC has been implemented. On the last day of the training, the study team will refine the qualitative tools based on the results of the pilot test.

Overall, training will cover the following key topic areas:

- Administrative issues

- Study objectives
- Organization of the study team and responsibilities
- Sampling procedures
- Logistics management
- Data collection, recording, and standardization of procedures
- Ethical handling of notes , taking consent and recordings
- Communication with technical advisor and IDEAS country coordinator
- Pre-test of the data collection

A field manual (Annex 6) will be utilized to ensure that interviewers are coordinated to collect data on the main objectives and in a similar manner across all the study sites. Field manuals will be provided to the team for reference during the fieldwork. Additionally, annotated topic guides will be provided along with job descriptions detailing the roles and responsibilities of each team member and expected day-to-day deliverables.

## 4.9 Data capture

Expanded field notes with sound recordings will be the main method for data capture. During each discussion and interview, the note taker will capture important points. The Interviewer will also capture brief notes. Following each interview, the interviewer will complete expanded field notes translated from the local language to Amharic. The notes will be based on the notes captured by both the note taker and interviewer for confirmation after having a debriefing exercise on the topic covered, along with the sound recordings to fill in gaps where required. They will then complete the expanded field notes template to demonstrate important points and informative quotes to provide a full picture and context of the discussion/interview. Using this approach will help capture data and simultaneously conduct analysis. Interviewers will also write up main interpretations and emerging hypothesis for further exploration.

The digital sound recordings will be used for all interviews, subject to agreement and consent with the respondent. This method will assist in backing up the interviewer's notes and, capturing accurate information during interviews and discussions. Moreover, this will serve for quality checking and for debriefing exercise.

Notes will also be used to populate a 'pre-analysis' template. Researchers, with the assistance of note takers, will populate the templates on an ongoing basis. This will be an effective means for identifying major emerging themes while in the field, comparing accounts of different types of interviewees (i.e., HDA, HEW and supervisors), triangulating data by identifying consistencies and inconsistencies across different interviewee accounts. They will be able to compare emerging themes and identify gaps that will be addressed in subsequent interviews. Regular de-briefing meetings will be held between the

JaRco technical advisor, qualitative specialist, researchers and note-takers. They will discuss progress, identify emerging themes, and think through any necessary adjustments to the topic guide.

## 4.10 Data management

A standard referencing methodology format for qualitative data management will be in place for each interview. Each interview will have a specific identifier on each of the expanded field notes template forms, voice recordings and full transcripts (Annex 3).

## 4.11 Data quality assurance

The interviewers and note takers will be provided with field manuals containing the necessary guidelines and documents to assist them in collecting quality data. The JaRco technical advisor will work closely with each data collection team to ensure that the expanded field notes, pre-analysis templates, recordings, translations are appropriately completed. The JaRco technical advisor along with qualitative specialist will also assist in clarification of questions and ensure that emerging themes are followed up in subsequent IDIs and FGDs.

Researchers will be responsible for checking the transcription and translation of interviews and field notes. Both researchers and note takers will be responsible for completing the expanded field notes directly after each interview. They will also contribute to field team de-briefings. Researchers will also make some reflective notes after each interview considering the context and atmosphere of each interview, major emerging themes and possible adjustments to the topic guide or to the sample if appropriate.

Within 48 hours of the interviews, interviewers will email expanded field notes to the JaRco technical advisor. Additionally, they will send updated pre-analysis forms every five interviews. The JaRco technical advisor along with qualitative specialist will review and comment on field notes within 24 hours of receipt and pre-analysis forms at regular intervals as they are populated. As a means of quality assurance, throughout the period of data collection, four randomly selected interviews from each of the four teams will be requested for translation and transcription.

## 4.12 Data analysis

The qualitative specialist will collaborate with JaRco technical advisor and IDEAS LSHTM staff to analyze the qualitative data. This will involve undertaking and exploring emerging themes to be synthesized by tabulating. It will also be important to adopt data triangulation and investigator triangulation approaches to enhance validity of the findings. Data triangulation involves cross-checking different interviewees' accounts for consistency, and in cases where accounts disagree, conducting further

analysis or data collection. Investigator triangulation involves multiple analysts contributing to the analysis and in cases where interpretations differ, data being re-examined before reaching an agreed interpretation.

Overall, the qualitative analysis will involve multiple stages:

- Note takers and interviewers will complete expanded field notes after each interview
- Pre-analysis templates will be regularly filled by interviewers and note takers to capture major themes with inputs from the qualitative consultant
- Qualitative specialist will develop and provide coding structure and system for the emerging themes
- Regular debriefing sessions and brainstorming will be held to surface and agree upon major themes with JaRco technical advisor and qualitative specialist
- Major themes will be drawn out and summarized and coded in consultation with IDEAS , qualitative specialist, technical advisor and researchers and note takers
- An analysis workshop will be held in Addis Ababa involving the interviewers, and note takers qualitative specialist, technical divisor and IDEAS researchers to synthesis and agree on main messages and triangulate different investigator interpretations
- A final report will be developed based on the thematic areas explored in the analysis and shared with Ministry of Health and implementing partners
- Once feedback has been provided from MOH and partners dissemination workshop will be held to share results to a wider audience

## 4.13 Ethical Consideration

## (Refer to Annex 1 for consent form)

**Purpose of the Study**

The overall purpose of this study is to improve the health of mothers and their babies by improving policies and individual health practices.

The work being carried out has two main purposes. First, to find out more about the way in which families get health care in their own homes, at health posts and at health centers. In particular, for women and babies it is important to know how many times families get health care and how good that health care is. With this information we will be able to give advice about the type of families who need more help and the services that still need to be strengthened. Second, to find out more about the things that people are already doing to improve the health of mothers and babies. With this

information we will be able to give advice about the activities that are successful, and those that need strengthening.

**Confidentiality**

The names and other identifiers of participants will not be disclosed to anyone

**Procedures**

Specifically, I am going to ask you information about types of health services you have provided related to maternal, newborn and child health issues. You were selected to participate in this study because you are believed to have significant knowledge and experience in issues relating to maternal, newborn and child health.

**Risks / benefits to subjects**

Risks to study participants for involvement in the qualitative evaluation are low. There may be emotional risks associated with discussion of sensitive questions regarding health and survival of mothers and children. Interviewers will be trained to minimize this risk. Participants will also be informed of their right to refuse answering any questions with which they are uncomfortable. Respondents will not gain any direct benefits by participating in the evaluation study. However, information obtained will be used to improve health service delivery in the community as well as at health facilities.

**Costs and compensation**

Respondents will not receive monetary compensation and they will not incur any out-of-pocket costs.

**Confidentiality assurances**

Confidentiality of every respondent will be guaranteed. Unique identifiers will be constructed for use of the questionnaire and no identifiers will be released. All questionnaires will be stored under lock and key, with access restricted to selected study investigators. Data collection and entry will be conducted by JaRco Consulting with technical assistance from IDEAS. All data will be stored on password-protected computers with access only to the investigators. All questionnaires will be destroyed after completion of the study.

**Conflict of interest**

There are no other gains from taking part in this study other than the normal scholarly gains.

**Ethical clearance**

The investigators have obtained a letter of approval from the Institutional Review Boards of the London School of Hygiene & Tropical Medicine, the Ethiopian Science and Technology Ministry. Investigators will also obtain approval from Oromia, Amhara, Tigray and SNNP regional health bureaus.

# Annexes

## Annex 1. Qualitative Informed Consent Form (English)

**QUALITATIVE INFORMED CONSENT FORM – ( Woreda Head, Health Extension Supervisor, Health Extension Worker/Health Development Army)**
**INFORMED DECISIONS FOR ACTIONS (IDEAS)**
**MEASUREMENT, LEARNING AND EVALUATION**

**1. Participant Information Sheet**
"Good morning /Good afternoon"

My name is ---------- I am working in the research team organized by JaRco consulting firm and London School of Hygiene and Tropical Medicine as a data collector. You were selected to participate in this study because you are believed to have significant knowledge and experience in issues relating to maternal, newborn and child health. I will ask you some questions about issues related to maternal and newborn health for some minutes. Before the question I will provide you full information of the study so that you will make an informed decision to my request.

**Project title**

Measurement, Learning and Evaluation Study on the Improvement of Health and Survival of Mothers and Babies in Ethiopia.

**Duration of the study**

It will take up to one hour to one and half hour for each interview or discussion to be completed.

**Purpose of the Study**

The overall purpose of this study is to improve the health of mothers and their babies by improving policies and individual health practices.

This study is about how front line worker are able to access newborns in their community, particularly sick newborns and how frontline workers are able to provide care, treatment and completion. It is within this context, the study aims to explore what facilitates their work and what hinders their work. And by doing this study we aim to provide information that can improve the care frontline workers can provide to newborn in the community.

**Confidentiality**

Your name and other identifiers will not disclosed to anyone outside of the study.

**Procedures**

Specifically, I am going to ask you information about types of health services you have provided related to maternal, newborn and child health issues.

**Risk and Benefits of the Study**

By participating in this study and answering our questions you will not receive any direct benefit. However, you will help to increase our understanding about Maternal, Children and Newborn Health in Ethiopia. The result of this study will contribute in generating evidence and knowledge to inform policy and practice at national and global levels. This study involves your provision of information through pre-developed questionnaires and the organization will keep your data in a safe place which can only be accessed by the study team. Therefore I want to assure you that your participation in this study will not involve any risks to you.

**Rights**

Your participation in this study is voluntary and you have the right to refuse to participate or to not answer any questions that you feel uncomfortable. If you change your mind about participating during the course of the study, you have the right to withdraw at any time. The decision not to participate or to withdraw will not affect any aspect of your social life, and future medical care you should require or any other benefits to which you are entitled. If there is anything unclear or you need further information about, I am happy to provide it.

**Whom to contact**

In any case if you need any information. You can contact in the following address:

*The Federal Democratic Republic of Ethiopian Ministry of Science and Technology,*
*National Research Ethics Review Committee*
*Secretariat*
Address: P. O. Box 2490, Addis Ababa, Ethiopia
Tele: 0913906779
Fax: 251-011-1-562749
E-mail: nrerc2002@gmail.com

*JaRco consulting Firm Director*: Tsegahun Tessema
Address: P.O.B: 43107 Addis Ababa Ethiopia
Tel: 0113724656/0113724657
Fax: 0113724655
E-mail: Tsegahun@jarrco.info

**2. Declaration of the Volunteer Study Participant**

I understand that the purpose of the study is to collect information regarding maternal, child and newborn health. I have read the above information, or it has been read to me. I have had the opportunity to ask questions and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate in this study and understand that I have the right to withdraw at any time without in any way affecting my social life or medical care.

Signature of Informant _____ Date_____

Name of Informant_____

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Signature of Witness _____ Name of Witness _____

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Signature of Data Collector _____ Name of Data Collector_____

**Demographic of participants-Focus Group Discussion**

| | **Age** | **Length of service as HEW/HAD?** | **Educational background?** | **CBNC training month and date? (for HEW only)** | **Participation? (Yes/No)** |
|---|---|---|---|---|---|
| Respondent 1 | | | | | |
| Respondent 2 | | | | | |
| Respondent 3 | | | | | |
| Respondent 4 | | | | | |
| Respondent 5 | | | | | |
| Respondent 6 | | | | | |
| Respondent 7 | | | | | |
| Respondent 8 | | | | | |
| Respondent 9 | | | | | |
| Respondent 10 | | | | | |

**Demographic of participants-In-depth Interviews**

Can you tell me how old you are?
Can you tell me how long you have worked as HEW/HDA/Supervisor?
Can you tell me a little about your education background?

CBNC training month and date (for HEW only)?

## Annex 2. Topic Guide (English)

**All topic guides will be translated into local language (Oromiffa, Amharic and Tigrigna)**

**Interview- Woreda Health Office- MCH officer**

1. Can you briefly describe your current role in the woreda?
2. What is your role with regard to MNCH activities?
3. Who was involved in the CBNC training? How would you describe your participation in the training of CBNC?

***(If not involved in training)*** What do you know about the program?

4. Can you tell me about your role in the overall CBNC program?
5. Can you tell me about the HDA system in this woreda? How would you describe their interaction with HEWs? What is there level of engagement in MNH activities in the community? What aspects would you say would improve the HDA members in performing their role in the community with respect to MNH?
6. Can you describe how you support in the planning and execution of the CBNC program? What are the challenges you face in planning? What are the challenges you face in providing support (to health centers and health extension workers)?
7. Can you describe other challenges in delivering the CBNC program at the woreda level? At the community level? (Probe: accessibility, availability of drugs and others)
8. What do you think should be improved with regard to delivering the CBNC program at the woreda level? At the community level?
9. What kind of activities/measures would further support in strengthening the delivery of CBNC program? For your office? For the PHCUs?

**In-depth interview (at health center)-Health Extension Supervisor/ Maternal and Child Case team officer /PHCU head**

| Questions and probes | Moderator notes |
|---|---|
| **Roles, Supervision and Linkages, and Mechanisms for Provision of Treatment and Completion** | |
| **Role** | |
| **1. Can you briefly describe your current role?**<br>**Related questions:**<br>1.1 What is your role in MNH Activity?<br>1.2 What was your involvement in CBNC training? | *Supervisors' role is to supervise the HEWs, provide care for referrals. Could be trained in CBNC* |
| **2. How are newborns in this community identified?**<br><br>**Related questions:**<br>2.1 How do HEWs you work with find out about births in their community? Do they capture all, most, some or few? In general how soon after birth do they have contact with newborns?<br><br>2.2 With respect to identification of newborns, what do you think are the major challenges? What can be improved? | *Ensure newborn definition is within the first 28 days of life within the 0-2 months category*<br><br>*Strategies might include Home visitation , Meeting with HDAs and Health campaigns* |
| **Supervision and Linkage** | |
| **3. Can you describe a typical activity you perform to support HEWs?**<br>**Related questions:**<br><br>3.1 What activities does supportive supervision include?<br>3.2 Can you describe a typical supervisory visit?<br>6.3 What is the process of communication between health centers and health posts?<br>4.1 What do you think about the level of knowledge of HEWs? (probe: in contacting newborns, identification of cases, care and treatment, and completion)<br><br>3.3 What facilitates your provision of support to HEWs? Challenges?<br><br>**Potential factors to explore:**<br>• Community attitude for services to home visits and care seeking for newborns (demand for services) especially in the first 30 days<br>• community support or lack of support (motivation) for HEWs | *3.Possible strategies include supportive supervision, Feedback on their work, providing motivation, technical support* |

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| • Accessibility of household | |
| | |
| **6. Can you describe what happens to newborns that have been identified as having very severe disease (**ask if it is sepsis or bacterial infection)**?**<br>**Related questions**:<br><br>6.1 How does the health center monitor HEW activities in the treatment of cases?<br><br>6.2 How do you rate/evaluate the knowledge level of HEWs to provide treatment with gentamycin and amoxicillin at the health post?<br><br>6.3 How does the availability of supplies of antibiotics (gentamycin and amoxicillin) affect the provision of care and treatment? At health post? | *6.Sick newborn may be treated at the HP or referred to the HC*<br><br>*6.1 Support and reporting: are there standardized forms used for providing support and for monitoring treatment*<br><br>*6.3If supplies are an issue, how does health center mange stock out?* |
| **7. Can you describe what activities you perform at the health center to <u>provide treatment</u> for sick newborns?**<br><br>**Related questions :**<br>7.1 What is the common referral structure HC to HP**?**<br>7.2 How does the health center follow up on the cases referred by the health posts?<br>7.3 How do health extension workers follow-up the cases of newborns they refer for treatment?<br>7.4 What can be improved with regard to provision of treatment? | *Try to separate the factors by facilitators and challenges* |
| **Completion of treatment** | |
| **8. What is the mechanism used for ensuring that the newborn completes treatment?**<br><br>**Related questions**:<br><br>8.1 At the health center?<br>8.2 What are the challenges in ensuring completion of treatment<br>8.3 What can be improved and changed with regard to | *8.1At the health center, if referral is provided from health posts either treatment is completed there or there might be cases when referral to health post is conducted for the HEW to complete treatment* |

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| completion of treatment?**?** | |
| **Anything else you would like to mention with regard to provision of treatment and completion for sick newborns ?** | |
| **Thank you!** | |

**In-depth interviews – Health Extension Worker**

| **Mechanisms for contacting newborns early, identifying cases, provision of treatment and completion for sick newborns** | | |
|---|---|---|
| **Questions and probes** | **Moderator notes** | **Section** |
| **Contact for Newborn Care** | | |
| **1. Can you briefly describe your current role?**<br>**Related Questions:**<br>1.1 How long have you been an HEW?<br>1.2 What is your educational background?<br>**If trained in CBNC ask the following:**<br>1.3 When were you trained in CBNC?<br>1.4 What did you learn from the CBNC training?<br><br>**2. How do you identify pregnant women in this community?** | | |
| **3. Think of the last time you had contact with a newborn baby can you describe how you came to learn about the newborn?**<br>**Related Questions:**<br><br>3.1 How long after birth did you contact the newborn?<br>3.2 How does contact time affect if the mother gave birth at health center? Health post? Home?<br>3.3 What were the factors that facilitated contact?<br><br>**Ask the following if contact was made after 48 hours :**<br>3.4 What were the factors that prevented earlier contact?<br>3.5 Can you describe the major inhibiting factors?<br>3.6 What would have enabled you to identify the newborn sooner, for example within 48 hours of birth?<br><br>**Potential factors to explore:**<br>▪ Accessibility to household<br>▪ Traditional beliefs and customs<br>▪ Local leadership and politics<br>▪ Community attitude for services to home visits and care seeking for newborns (demand for services) in the first 30 days | *3.Potential strategies for contact may include home visits, health campaigns, pregnant women conference, meeting frequently with HDA, demand creation activities*<br><br>*Ensure newborn definition is within the first 28 days of life within the 0-2 months category*<br><br>*early identification is after birth during PNC visit between 24 hours-48 hours*<br>***(use potential factors listed if discussion lags)*** | **Contact for Newborn Care** |
| **Identification of Cases** | | |
| **4. Thinking about the last time you had contact with a sick new born, can you describe how you came to learn about the newborn's illness?** | *4. Possible strategies used include home* | |

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| **Related Questions**:<br>4.1 Describe the factors that helped you contact the sick newborn?<br><br>4.2 Can you describe the type of symptoms the sick newborn had?<br><br>4.3 What was the diagnosis? If no diagnosis is made what actions did you take?<br>4.4 What were factors that <u>facilitated</u> identification of cases (for any cases)?<br>4.5 What are the major problems for you in identifying sick newborns (for any cases) in your community?<br>4.6What would enable you to identify the sick newborns?<br><br>**Potential factors to explore:**<br>▪ Community attitude about services to home visits and care seeking for newborns (demand for services)<br>▪ HDA role in the identification of sick newborns<br>▪ Accessibility to household | *visits, health campaigns, pregnant women conference, meeting frequently with HDA, demand creation activities*<br><br>*Try to also ascertain on the types of activities conducted at the community level to identify cases* | **Identification of Cases** |
| **Provision of Care and Treatment**<br>**Note to interviewer:**<br>***Go over the questions 5.1-5.5*** *If the sick newborn that was mentioned above is a very sever disease case. If only referral go to questions 5.6-5.7 ask why they only referred, as some HEWs might just only refer to the health center then go to questions on supervision.* | | |
| **5. Think of the last very sever disease/sepsis you identified after you were trained in CBNC, can you tell me what actions you took?**<br>**Related Questions:**<br>5.1 How did the family/caregiver react to the situation? What were the circumstances that lead to their decision?<br>(if treated at health post go to the next section)<br>***If only referral was conducted ask why they only referred.***<br>5.6 What was done prior to referral? What was the process of referral?<br>5.7 What was done to follow up after referral to the health center?<br>**Potential factors to explore:**<br>• Community attitude for services to home visits and care seeking for newborns (demand for services) especially in the first 30 days<br>▪ Availability of supplies | ***Note to the interviewer****: ensure that the HEW is aware that the symptoms for severe newborn infection - chest in drawing, fever, convulsions, fast breathing…etc)*<br><br>5.6*If referred check to see if pre-referral dose provided.*<br>*Check to see if a referral form was used* | **Provision of Care and Treatment** |

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| | *or if there was a back referral form from the health centre.* | |
| **Completion of treatment**<br>**Note to interviewer:** ***Go over the following questions only if treatment was provided by HEWs.*** | | |
| **6. Can you describe the course of treatment provided at the health post for the above sick newborn?**<br><br>**Related Questions:**<br>5.2 What kind of treatment was provided? (i.e. antibiotics like gentamycin and amoxicillin) At home or health post?)<br><br>5.3 If treatment at the health post; how often was treatment provided?<br>5.4What factors facilitated your ability to provide treatment?<br>5.5What inhibited your ability to provide treatment?<br><br>6.2 How was the progress of the newborn monitored?<br>6.3 What was the level of compliance of treatment at home by caregivers?<br>6.4 What was the level of the compliance to the treatment that was provided by you?<br><br>6.7 How are community members made aware of the fact that treatment for sick newborn is available at health post?<br>**Potential factors to explore:**<br>• Community attitude for services to home visits and care seeking for newborns (demand for services) especially in the first 30 days Accessibility to household<br>▪ Availability of supplies | *Potential areas for exploration Strategies used such as family come for the treatment,*<br>*Meeting with HDA leader for follow up after initial treatment , Referral to health center or hospitals*<br><br>*If the newborn was referred to the health center find out if the HEW followed up on the sick newborn (directly or indirectly through an HDA leader.* | **Completion of treatment** |
| **Case stories** | | |
| **7. Can you share a story that you recall of how you provided care to a sick newborn and completed treatment?**<br>**Related Questions**<br>7.1What did you find particularly helpful?<br>7.2What are things that you had issues with? | | |
| **Linkage with PHCU and supportive supervision** | | |
| **<u>Linkage</u>**<br>**8. Can you tell me about the linkage that you have with the health center?** | *Try to relate the discussion to the four C's* | |

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| 8.1What is referral like between health post and health center?<br>8.2What is the system you use for reporting on sepsis cases and management?<br><br><br><br>**<u>Supervision</u>**<br>**9. What does a typical supervision provided to you look like?**<br>**Probe**:<br>9.1 Who provides the supervision?<br>9.2 How often to you meet with each supervisor?<br>9.3 How do supervisors communicate with you?<br>9.4 What is most helpful in the supervision that is provided to you? What is least helpful? | | |
| **Linkage with HDA and supportive supervision** | | |
| **Linkage:**<br>**10. Can you describe your interaction with HDA?**<br>**Probe**<br>10.1How often do you meet with HDA?<br>10.2What information do you obtain from the HDA?<br>**Supervision**<br>**10.3** How do you support the HDA leaders? | *Try to relate the discussion to the four C's* | |
| **11. Anything else you would like to mention with regard to contact with newborns early, identifying cases, provision of treatment and completion for sick newborns ?** | | |
| **Thank You!** | | |

## In-depth interview –Health Development Army

| **Mechanisms for contacting newborns early, identifying cases, provision of treatment and completion for sick newborns** | | |
|---|---|---|
| **Questions and probes** | **Moderator notes** | |
| **Contact for Newborn Care** | | |
| **1. Can you briefly describe your current role as an HDA?**<br>**Related Questions:**<br>1.1 How long have you been an HDA?<br>1.2 How many houses in your network?<br>1.3 What orientation have you received in maternal and newborn health? From whom? What is the status of maternal and newborns health in your network of houses?<br>1.4 How do you discover pregnant women in your community? What happens once you learn that there is a pregnant woman?<br><br>**Potential factors to explore**<br>• Pregnancy identification methods<br>• Community attitude about ANC | *1. HDA role is conduct home visit and promote and advice on birth preparedness, check for danger signs, and encourage pregnant women to deliver at health center and to visit health extension worker for ANC. They are also expected to refer on pregnant women, new delivery, PNC to HEWs* | |
| **2. Thinking about the last time you visited a newborn, how did you come to know about the newborn?**<br>**Related Questions:**<br>2.1 Can you describe your contact with the newborn?<br>2.2 What were the factors that facilitated contact?<br>2.3 How long after birth did you contact the newborn? What helped you contact the baby?<br><br>**Ask if above 48 hours:**<br>2.4 What were the factors that inhibited making contact with a new born baby soon after birth (within two days of birth)? What would have enabled you to identify the newborn soon after birth?<br><br>**Potential factors to explore**:<br>• Tools like Family Health Cards used to counsel families<br>• Local leadership role<br>• Community beliefs and customs about newborn especially in the first 30 days (includes how household look at visitors) | *2.Possible strategies used include home visits, health campaigns, pregnant women conference, meeting frequently with HDA, demand creation activities* | **Contact for Newborn Care** |
| **Identification of Cases, Provision of Care and treatment and Completion** | | |
| 3. Please describe what you do, step by step, once you contact a newborn in your community.<br><br>**Guide the narration in terms of:** | *Let the respondent provide step by step directions to each of the questions and try* | **Identification of Cases** |

| | | |
|---|---|---|
| 3.1 In the case of sick newborns<br>3.2 Newborns with symptoms of very severe disease/sepsis,<br>3.3 Support provided to the family,<br>3.4 Referral and follow-up,<br>3.5 Role in the completion of treatment,<br>3.6 Challenges and facilitating factors. | *to check what is facilitates and challenges in each aspect* | |
| **Linkage Process** | | |
| **4. Can you describe your working relationship with the health extension worker?**<br>**Related Questions:**<br>4.1 How often do you meet?<br>4.2 Types of activities conducted together? Referral?<br>4.3 How does the HEW help with your work? If not what is lacking in the support?<br>4.4 What do you find very helpful in working with HEW? Least helpful?<br>4.5 Is there anyone else outside of the HEW who supports your work? | *Try to relate the discussion to the four C's on how HEWs support in each case* | |
| **Extent of support** | | |
| **5.**In what ways do the kebele /Command post support you with your work? | *Try to relate the discussion to the four C's* | |
| **6. Anything else you would like to mention with regard to newborns early, identifying cases, provision of treatment and completion for sick newborns ?** | | |
| **Thank You!** | | |

## Focus Group Discussion-Health Extension Workers

| | | |
|---|---|---|
| **Mechanisms for contacting newborns early, identifying cases, provision of treatment and completion for sick newborns** | | |
| **Introduction to the study**<br>**Introduction of Interviewer**<br><br>**Kebelle/PHCU:**<br>**Name:**<br>**Age:**<br>**Time working as HEW:**<br>**Educational background:**<br>**CBNC training month/date:** | | |
| **Questions and probes** | **Moderator notes** | **Section** |
| **A: Early Contact with Newborn** | | |
| **1. We would like to find out your views on some of the tasks you do as a HEW. Each of these cards has a task written on it.**<br>1.1 A. I would like you to work as a group and arrange the cards with the task you think is most challenging at the top, and the task you think is easiest at the bottom.<br><br>B. Now you have ordered the cards can you help meunderstand why you put them in that order?<br><br>1.2 A. Now I would like you to arrange the cards with the task that you enjoy most at the top, and the task you enjoy least at the bottom.<br><br>B. Now you have ordered the cards can you help me understand why you put them in that order?<br><br>1.3 A. Finally I would like you to arrange the cards with the task that you feel you get most support from the health | ***This is a Ranking Exercise***<br><br>*On the cards/pictures:*<br><br>1. *Visiting the house on the day of delivery*<br>2. *Findings newborns who may be sick*<br>3. *Weighing the newborn and checking for signs of illness*<br>4. *Deciding what treatment to give*<br>5. *Administering treatment*<br>6. *Making sure families complete treatment* | |

| | | |
|---|---|---|
| system on the top, and the task you are least supported on at the bottom.<br><br>B. Now you have ordered the cards can you help me understand why you put them in that order? | | |
| **2. Can you describe the ways newborns in your community are identified?**<br><br>2.1 What is a typical time period within which a newborn is usually contacted? | *Ensure individuals mention their own experience.* | |
| **3. Root cause exercise:**<br><br>**Visiting households on the day of delivery can be difficult. We would like to do an activity to help identify the difficulties HEWs face and what causes these difficulties.**<br><br>3.1 Based on your experiences what are reasons HEWsdo not visit newborns or visit them later than the day of delivery? Any other reasons?<br><br>**Probes-only to be used if needed**<br><br>– Any other reasons to do with community attitudes or acceptance?<br>– Any other reasons to do with logistics and time?<br>– Any other reasons to do with collaboration with HDAs or supervisors?<br><br>*N.B. If the HEWs mainly talk about the babies that they were not informed about – e.g. because the HDA did not inform them – ask the follow-up question:*<br><br>3.2 What about the newborns that the HEWS were informed about? What could be a reason that the HEW cannot visit those newborns? | ***This is a Root Cause Exercise***<br><br>*Try out:*<br><br>*Use "a HEW" or "you" in the sentence.*<br><br>*Respondents discuss the reasons why newborns ae contacted late, and the factors that influence each reason* | |

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| 3.3 Of these reasons which are the most important?<br><br>***For the most important 2 – 3:***<br><br>3.4 You have said _____ is important, why do you think that reason happens? (Repeat for the most important 2-3 reasons) | | |
| **B. Identification of sick newborns** | | |
| **4. Q-statements:**<br>**I am going to read out a statement, I would like you to tell me the first thing that comes to mind when you hear the statement:**<br><br>*4.1*<br>*Statement 1:HEWs find injecting a newborn frightening.*<br><br>*Statement 2: HEWs never make mistakes counting breaths.*<br><br>*Statement 3:HEWs prefer referral over home*<br><br>*Statement 4: Families give a full course of amoxicillin to their newborns if requested by HEW*<br><br>**Probe:** Does anyone else have a different reaction?<br><br>4.2 Why do you think you reacted to the statement in this way?<br><br>4.3 Do you have anything you would like to add about assessing, treating or following up newborns? | ***This is a Q-statement Exercise:***<br><br>*Statements could be read using "I" or "a HEW"/"most HEWs"* | |
| | | |

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|---|---|---|
| **C. Provision of Care and Treatment** | | |
| **5. Unfinished/Predictive story telling**<br><br>**I am going to read you a story about an HEW called Aster who works in a village like yours:**<br><br>*"Aster is a mother of 3, and has recently been trained in CNBC. She likes her job but has many families to visit. Her husband and mother-in-law have commented on Aster's busy schedule, and say her tasks at home are suffering. Aster has to visit 3 more newborns today, but her mother-in-law is angry."*<br><br>5.1 How do you think this story ends?<br>**Probe:** What do you think influenced her decision?<br><br>5.2 Aster is treating a newborn with injections, on the 5th day of treatment her own child gets sick. What do you think Aster will do?<br>**Probe:** What do you think influenced her decision?<br><br>**If time allows:**<br><br>5.3 Over time Aster's workload gets even heavier, and she decides she can't do all her HEW tasks. What will she do now?<br>**Probe:** What do you think influenced her decision? | ***This is a Predictive Story Telling Exercise:*** | |
| **D. Treatment completion** | | |

| | | |
|---|---|---|
| **6. If you have provided treatment at the health post, can you share steps you took after a newborn starts treatment?**<br><br>**Probe**:<br><br>6.1 How do families treat their newborns at home?<br>6.2 How do you ensure cases you treat complete treatment?<br>6.3 What are the challenges in ensuring treatment completion?<br><br>**Potential factors to explore:**<br><br>▪ Community attitude for services to home visits and care seeking for newborns (demand for services) in the first 30 days<br>▪ Confidence to provide injection treatment<br>▪ Availability of supplies<br>▪ Having to work 7 days of the week to provide treatment?<br>▪ Others? | *Ensure individuals*<br><br>*mention their own experience* | **Treatment completion** |
| **E.Other** | | |
| **7. Q-Statements**<br><br>**I am going to read out a few more statements. This time they are sets of statements about the same topic. You can discuss in the group and decide which one is most in line with your situation:**<br><br>7.1<br>*Set 1:*<br><br>• *The HDAs help me complete my tasks*<br>• *The HDAs complicatesthe completion of my tasks*<br>• *The HDA has no impact on the completion of my tasks* | ***This is a Q-statement Exercise:***<br><br>*Statements could be read using "I" or "a HEW"/"most HEWs"* | |

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| *Set 2:*<br><br>• *I feel proud to be a HEW*<br>• *I feel frustrated in my job as an HEW*<br>• *I don't have strong feelings about my work as an HEW: it is like any other job* | | |
| **8. Most significant change**:<br><br>8.1 What is the biggestchallenging you have overcome as an HEW? How did you overcome it??<br>8.2 What are you most proud of in your role as HEW/HDA | ***This is a Most Significant Change Exercise:*** | |
| **Thank you** | | |

**Focus Group Discussion-Health Development Army**

| **Mechanisms for contacting newborns early, identifying cases, provision of treatment and completion for sick newborns** | | |
|---|---|---|
| **Questions and probes** | **Moderator notes** | **Section** |
| **Contact of Newborn Early** | | |
| **Roles**<br>1. Can you briefly describe your current role as an HDA?<br>Probe:<br>1.1 What is your role in providing MNH activities?<br>1.2 Can you describe the type of orientation you have received on maternal health? Newborn health?<br>1.3 How did you identify pregnant women in your community? | | |
| **2. Identification of New Born**<br>2.1. What is a typical way newborns in your community are identified?<br>**Probe:**<br>2.2. How long after birth is a newborn usually contacted?<br>2.2. What are the factors that make it easy to contact newborns?<br>2.3. What do you think are the most challenging factors to contact newborns?<br><br>**If above 24 hour (1 day) period**<br>2.4. If you say you haven't gone within 24 hours, what important factors limited your early visit?<br><br>**Potential factors to explore:**<br>▪ Tools used to counsel families (family health guide)<br>▪ Local leadership role<br>▪ Community beliefs and customs about newborn especially in the first 30 days<br>▪ Visitor to household acceptability | *Ensure individuals mention their own experience*<br><br>*newborn contact within 24 hours up to - 48 hours after birth*<br><br>*2.Possible strategies used could include home visits, health campaigns, pregnant women conference, meeting frequently with HDA, demand creation activities*<br><br>*Use list of factors to suggest possible ideas if discussion is not initiated. However, ensure the respondents suggest ideas first* | **Contact of Newborn Early** |

| | | |
|---|---|---|
| | | |
| **Identification of sick newborns** | | |
| **3. Identification of sick Newborn**<br>3.1. Describe your role in identification of sick newborns?<br>**Probe:**<br>3.2. How do you find the newborns that are sick?<br>3.3. What do you usually do when you find a sick newborn?<br>3.4. If you provide recommendations, how do parents react to your suggestion?<br><br>**Potential factors to explore:**<br>• Community beliefs and customs about newborn especially in the first 30 days<br>• Accessibility to household<br>▪ Others? | *Ensure individuals mention their own experience*<br><br>*Ensure of strategies used could include home visits, health campaigns, pregnant women conference, meeting frequently with HEWs, demand creation activities* | **Identification of sick newborns** |
| **Provision of Care and Treatment** | | |
| **4. Support to families with sick Newborns**<br>4.1. Describe support you usually provide to families with sick newborns?<br><br>**Probe**:<br>4.2. Share about what and how you do to support HEWs when you find a sick newborn?<br>4.3. What is your communities' attitude towards HEWs providing treatment? (injections)<br>4.4. Describe factors facilitating and hindering support to NB?<br>4.5. How do you support a family once they return from the health facility?<br>**Potential factors to explore:**<br>• Community beliefs and customs about newborn especially in the first 30 days Support from Health Extension or lack of (supportive supervision)<br>▪ Accessibility of household<br>▪ Others? | *Ensure individuals mention their own experience*<br><br>*4.Possible strategies used include Home visitation, ask if they had a Meeting with HEW for follow up, Referral to health post or health center* | **Provision of Care and Treatment** |

| | | |
|---|---|---|
| **Overall support** | | |
| **5. What is your community's' attitude towards you providing services to sick newborns?**<br><br>**Probe**:<br>5.1 What factors facilitated for you to support the HEW?<br>**5.2** The factors hindered for you to support the HEW? | *Ensure individuals mention their own experience* | **Treatment completion** |
| **6. Anything else you would like to mention with regard to identification of newborns early; identifying cases; provision of care and treatment; and completion of treatment of sick newborns?** | | |
| **Thank You!** | | |

## Annex 3. Data management procedures

Each interview will be assigned a unique code reference based on the following:

*Interviewtype_WoredaName_Kebele name_ Type of Person_order number_*

**Interviewee type:**

FGD Focus Group Discussion

IDI In-depth Interview

**Woreda Name:**

**Kebele Name:**

**Type of Person**: S-Supervisor l, HEW- Health Extension Worker, HDA -Health Development Army

Order Number: 1, 2, 3...

For example an in-depth interview held in the Debre Libanos woreda and Dere kebele with the first HEW would be IDI_**Debre Libanos_Dere__HEW_1**

An excel log sheet will be developed to add information pertaining to each interview and the interview reference number will also be included. This will be a valuable tool for managing the data collection process, and will also serve as a useful record. One form for each team, depending on their assigned region, will be provided. Each team will be responsible for updating their forms and sharing these with the IDEAS/JaRco team in Addis Ababa on a regular basis.

All voice recordings, expanded field notes, pre-analysis templates, interview notes, log sheets and other related documentation will be stored in JaRco in a secure place/network space in order to maintain anonymity and confidentiality.

## Annex 4. Model expanded field notes

*Interview 01_01__01_WO_IDI_011013*

***Woreda Interview***

A.1 Extent of woreda level support for CBNC program?
A.2 The strength of HDA engagement in MNH activities in the community? Weakness?
A.3 The strength of HDA engamgement with HEW in the community ? Weakness?
A.4 The facilitators in the planning and execution of CBNC program ? Challenges in planning and executiion?
A.5 The facilitators in providing support to health center/PHCU? Challenges in support to health center/ PHCUs?
A.6 The chanllenges in delivering CBNC program at the woreda leve? At the community level?
A.7 Areas of improvement for delivery of CBNC program at the woreda level? At the community level?
A.8 Measures for strengthening the deliver yof CBNC? For the woreda? For the PHCUs?

**Health center**

**A.1** What are the mechanisms for early contact with newborns (within 48hours) ?
A.2 What are the enablers for early contact with newborns (within 48 hours)? Barriers?
A.3 What are the mechaims of supportive supervision to HEWs? Communication with HEWs?
A.4 What are the facilitators for provision of support to HEWs? Challenges ?
A.5 What are the mechanisms of monitoring HEW activities with regard to treatment of cases?
A.6. What is the confidence level of HEWs to provide teatement with gentamycin and Amoxicilin?
A.7 What are the common referral structure ? the follow up?
A.8. What can be changed with regard to provision of treatment for sick newborns with VSD?
A.9. What are the mechsims used for ensuring newborns complet treatment at the health center?
A.10 What are the enables for ensuring newborns complete treatment ? barriers?

**Background**

A.1 What is the mechanisms for early contact with newborns (within 48hours) ?
A.2 What are the enablers for early contact with newborns (within 48 hours)? Barriers?
A.3 What are the specific enablers for demand of services, and motivation, for early contact with newborns? Barriers?
A.4 What are the specific enablers for supportive supervision and linkage to the health system for early contact with newborns? Barriers?

B.1 What are the mechanisms for early identifications of sick newborns?
B.2 What are the enablers for identification of sick newborns? Barriers?
B.3 What are the specific enablers for demand of services, and motivation, for identification of sick newborns? Barriers?
B.3 What are the specific enablers for supportive structure and linkage to the health system for identification of sick newborns? Barriers?

C.1 What are the mechanisms for provision of treatment and care for sick newborns?
C.2 What are the enablers for provision of treatment and care for sick newborns? Barriers?
C.3 What are the specific enablers for demand of services, and motivation, for treatment and care for sick newborns? Barriers?
C.4 What are the specific enablers for supportive structure and linkage to the health system for treatment and care for sick newborns? Barriers?

D. 1 What are the mechanisms for completion of treatment for sick newborns?
D.2 What are the enablers of completion of treatment for sick newborns? Barriers?
D.3 What are the specific enablers for demand of services, and motivation, for completion of treatment for sick newborns? Barriers?
D.4 What are the specific enablers for supportive structure and linkage to the health system for completion of treatment for sick newborns? De-motivators?
E. Cultural practices that are enables to health seeking behavior?
F. Cultural practices that are barriers to health seeking behaviors
G. General impressions:

## Annex 5. Pre-analysis Template

| | | | |
|---|---|---|---|
| **What are the main mechanisms used for early contact of newborns?** | | | |
| **What are the *most important* barriers/ enablers for early contact with newborns?** | | | |
| **What are factors *enable*?** | **How/why do they *enable*?** | **What factors *inhibit*?** | **How/why do they *inhibit*?** |
| | | | |
| **What are the main mechanisms for identification of sick of newborns?** | | | |
| **What are the *most important* barriers/ enablers for identification of sick newborns?** | | | |
| **What are factors *enable*?** | **How/why do they *enable*?** | **What factors *inhibit*?** | **How/why do they *inhibit*?** |
| | | | |
| **What are the main mechanisms for provision of treatment and care for sick of newborns?** | | | |
| **What are the *most important* barriers/ enablers for provision of treatment and care for sick newborns?** | | | |
| **What are factors *enable*?** | **How/why do they *enable*?** | **What factors *inhibit*?** | **How/why do they *inhibit*?** |
| | | | |
| **What are the main mechanisms for completion of treatment for sick newborns?** | | | |
| **What are the *most important* barriers/ enablers for completion of treatment for sick newborns?** | | | |
| **What are factors *enable*?** | **How/why do they *enable*?** | **What factors *inhibit*?** | **How/why do they *inhibit*?** |
| | | | |
| ***Motivation factors*: What are most important barriers/enablers in the context of early contact, identification of sick newborns, provision of treatment and care, and completion of treatment for sick newborns?** | | | |
| What are factors *enable*? | How/why do they *enable*? | What factors *inhibit*? | How/why do they *inhibit*? |
| | | | |

| | | | |
|---|---|---|---|
| ***Demand of services:*** **What are most important barriers/enablers in the context of early contact, identification of sick newborns, provision of treatment and care, and completion of treatment for sick newborns?** | | | |
| What are factors *enable*? | How/why do they *enable*? | What factors *inhibit*? | How/why do they *inhibit*? |
| | | | |
| ***Supportive supervision:*** **What are most important barriers/enablers in the context of early contact, identification of sick newborns, provision of treatment and care, and completion of treatment for sick newborns?** | | | |
| What are factors *enable*? | How/why do they *enable*? | What factors *inhibit*? | How/why do they *inhibit*? |
| | | | |
| ***Health system linkage:*** **What are most important barriers/enablers in the context of early contact, identification of sick newborns, provision of treatment and care, and completion of treatment for sick newborns?** | | | |
| What are factors *enable*? | How/why do they *enable*? | What factors *inhibit*? | How/why do they *inhibit*? |
| | | | |

## Annex 6. Study Training and Field Manual

**1: Preparing for interviews**

1.1 Prepare and print topic guide for each interview

1.2 For each interview always ensure that you have your essential equipment/materials with you with the following items:

- Sound recorder with fresh batteries and sufficient memory space to record the interview;
- Spare batteries for the sound recorder;
- The topic guide for that interview;
- Study consent forms;
- Sufficient paper/notebook and pens.

1.3 For every interview ensure to be early and not arrive late for an interview: never keep interviewees waiting. Arriving on time or earlier would have several benefits for you where

A. you can have enough time to conduct the interview in the allotted time and providing you in-depth information

b. The interviewee will likely be more cooperative to respond as you are respecting their time

**2: Introducing participants about the study**

2.1 Before the interview ensure that it will be conducted in a private place. If other people come to listen to the interview, explain what you are doing and politely ask them to leave.

2.2 For focus group discussion, ensure that it will be conducted in a private place as well.

2.3 Explain the IDEAS CBNC qualitative evaluation project and the purpose of the interview (using the interview consent form script).

2.4 Give interviewees or focus group participants the opportunity to ask any questions they may have before starting the interview. Answer their questions honestly and openly as far as you can, and refer any question you cannot answer to the qualitative supervisor. Ensure you follow up to the interviewee with answers to any outstanding questions.

2.5 Always obtain informed consent for every interview consisting of the following steps:

- Give the interviewee a copy of the study information sheet and allow them time to read it, or alternatively summarize the main points verbally if the interviewee prefers;
- As part of the introduction (written into the interview consent form script) the principle of informed consent should be explained to the interviewee. This involves clarifying that the interviewee is free to choose to participate in an interview, they are free to withdraw at any time, they are free to decide whether interviews are sound recorded or not and that it is their decision about whether they agree they can be quoted verbatim in any study outputs;

- When you are satisfied that the interviewee understands the study and you have answered their questions, ask if they agree to be interviewed or not. Be mindful not to coerce a participant to be in the study.
- (If they say that can't be interviewed or are too busy ask for a convenient time when you can return to interview them. If they still refuse thank them for their time and report any refusals to your supervisor)
- If the person agrees to be interviewed explain that we want to keep a record of the fact that they have willingly agreed to participate. Ask them to sign and date the consent form. You must also sign and date the form;
- You can now start the interview.

2.6 Interviewers should always avoid distressing or upsetting interviewees, and will clarify that interviewees are free to withdraw from an interview at any time.
2.7 If a participant withdraws from the interview, their data should not be used. If the interview is not completed for other reasons any collected data can be used.

**3: Conducting interviews**

3.1 You should be professional and courteous when dealing with interviewees or the community. Interviewers and supervisors should avoid being abrupt, disrespectful, or inconsiderate to interviewees, including not making or receiving mobile phone calls or sending text messages while conducting an interview.

3.2 Conduct the interview in the preferred language of the participant, using a translator if necessary.

3.3 Record the interview using the voice recorder and ensure the recorder is near the interviewee to capture better sound quality. Make sure to record the recording number on the field notes.

3.4 During the interview use techniques that would encourage the respondent to speak and try to make them comfortable and at ease. This would allow capturing better information.

3.5 Address as many topics listed in the topic guide. Remember that the topic guide does not have to be answered like a questionnaire but rather follow the discussion but ensuring all the topic at hand are investigated. During the process you might have to do the following;

- rephrase questions to get detailed responses;
- Sometimes rearrange order of topics if flow of discussion changes;
- ensure to ask clarifications when needed;
- Probe for further information and follow up on interesting leads;
- Use your experience from one interview to feed into the next.

3.6 Write down key points in your notebook (any language you feel comfortable)

3.7 Observe the context of the interview and record this in your notebook (e.g. where the interview took place, how the interviewee behaved etc).

3.8 Finish the interview by thanking the interviewee for her/his time and asking them if they would mind being interviewed again in the future if you have further questions for them. Ensure they have a copy of the study information sheet before you leave.

**4: Conducting Focus Group Discussions;**

4.1 You should be professional and courteous when dealing with interviewees or the community. Interviewers and supervisors should avoid being abrupt, disrespectful, or inconsiderate to interviewees, including not making or receiving mobile phone calls or sending text messages while conducting an interview.

4.2 Conduct the interview in the preferred language of the participant, using a translator if necessary.

4.3 Record the interview using the voice recorder and ensure the recorder is near the group to capture better sound quality. Make sure to record the recording number on the field notes

4.5 Before asking the first focus group question, an icebreaker can be used to increase comfort.

4.6 During the interview use techniques that would encourage the respondent to speak and try to make them comfortable and at ease. This would allow capturing better information.

4.7 Address as many topics listed in the topic guide. Remember that the topic guide does not have to be answered like a questionnaire but rather follow the discussion but ensuring the entire topic at hand are investigated. During the process you might have to do the following;

- rephrase questions to get detailed responses;
- Sometimes rearrange order of topics if flow of discussion changes;
- ensure to ask clarifications when needed;
- Probe for further information and follow up on interesting leads;
- Use your experience from one interview to feed into the next.

4.8 The focus group moderator has a responsibility to adequately cover all prepared questions within the time allotted. S/he also has a responsibility to get all participants to talk and fully explain their answers. Some helpful probes include:

*"Can you talk about that more?"*

*"Help me understand what you mean"*

*"Can you give an example?"*

4.9 Try to paraphrase and/or summarize long, complex or ambiguous comments. This will help clarify comment for everyone in the group.

4.10 Because the moderator holds a position of authority and perceived influence, s/he must remain neutral, refraining from nodding/raising eyebrows, agreeing/disagreeing, or praising/denigrating any comment made.
4.11 Write down key points in your notebook (any language you feel comfortable)

4.12 Observe the context of the interview and record this in your notebook (e.g. where the interview took place, how the interviewee behaved etc).

4.13 The interviewer has to strategies to deal with sometimes challenging participants and discussions. Try to always ensure quiet participants are engaged using certain probes such as:

*"Thank you. What do other people think?"*

*"Let's have some other comments."*
*And try to not let one person dominate the discussion*

4.14 When the focus group is complete the moderator thanks all participants

4.15 Immediately after all participants leave, the moderator and note taker should debrief

**5: Writing up interviews**
5.1 For both the researcher and note taker ensure at every interview or focus groups meeting you write your own interview notes. This will assist you in ensuring to write the expanded field notes
5.2 Always write up your expanded field interview notes on the day of the interview, or if that is not possible within 24 hours of carrying out the interview while it is still fresh in your mind. Expanded field notes should be transcribed from the language the interview was conducted to English and typed directly into the Word format.

5.3 Use the sound recorder to help with the expanded notes. You can write the expanded notes without the tape recorder and then listen to the recording and add in quotes from the recording, or you may prefer to listen to the recording as you type up each section.

5.4 The expanded field notes should contain the following:

- Capture as much detail as possible, including information that puts responses in context;

- Include plenty of verbatim statements (quotes). Put exact quotes in "…….";
- Try to capture the voice of the interviewee, this means that you should use their exact words and tone as much as possible;
- Where you had to probe an interviewee on a particular topic, indicate by writing [**probed**] in the expanded notes;
- Make references to other sections, for example if an interviewee talked about something connected to question 3.1 in question 1.1 you should write in section 3.1 *'(See section 1.1 for information on XX)'.*
- Include your comments and observations on each interview. These could be things you noticed during the interview, reflections on the responses or things that help the reader understand the interview. Put these in a comments and reflections section of the text;
- Your writing up will speed up over time; remember you do not need to have perfect English and grammar.

5.6 The supervisor and note taker should discuss and compare notes after each interview to clarify missing points and to provide feedback to the note taker where probing should be conducted for future interviews.
5.7 Use catch up days to catch up on write ups and review progress.

**6: Data storage and management**

6.1 It is always important to try to have a debriefing session between the supervisor and note-taker to discuss progress and provide feedback. This will also be the opportunity to look for recurring themes and identify interesting/surprising findings. Look for gaps in the data to be filled in possible subsequent interviews, and identify possible additional interviewees (snowballing).

6.2 Maintain interviewees' confidentiality at all times. This includes:

- Not discussing your interviews with people outside of the project team (but you can and should discuss problems encountered during interviews with your supervisor and other members of the project team);
- Not writing full names in your notebooks or typed expanded notes;
- Handing completed consent forms to your supervisor at the end of each day;
- Keeping your note books, consent forms, any interview printouts, voice recorders, laptops, USB sticks etc. secure at all times and storing them in a locked drawer/cabinet when not in use;
- Password protecting your computer;
- Giving your notebook to your supervisor at the end of the study so they can be stored under and key.

6.3 Each interview is assigned a unique reference based on the following

WoredaNumber_Kebele Number_ InterviewNumber _ IntervieweeType_Interviewtype_Date:

**Woreda Number:** Number #01

**Kebele Number: #01**
**Interviewee number:** sequentially starting with 01 in each PHCU
**Type of Person**: WO Woreda Official, KO Kebele Official, HEW Health Extension Worker, HDA Health Development Army, HH Household:
**Interviewee type:**
FGD Focus Group Discussion
IDI In-depth Interview
KII-Key Informant Interview
**Date:** day, month, year format dd/mm/yy
For example an in-depth interview held with woreda official in the first woreda and kebele on 1st October 2013 would be **01_01__01_WO_IDI_011013**

6.4 The interview reference should be included at the head of each set of expanded field notes.

6.5 Save your data using the following format:

- On the computer create two main folders (one for the expanded field notes and another for the sound recordings): expanded field notes_*your initials* and sound recordings_*your initials*.
- Save your draft expanded field notes in the expanded field notes folder using the correct ID number as a file name (see above).
- Save your sound recordings in sound recordings folder using the correct ID number as a file name (see above). You will ultimately need to delete the original recording from the sound recorder, but do not do this until your supervisor has made backups.
- When your supervisor or another team member comments electronically on your expanded notes, they should give the new version a file name with their initials e.g. **E_1_IG_010512_EL**. Save this in your expanded field notes folder.
- When your expanded notes have been finalized save the final version called '*ID_final'* e.g. **E_1_IG_010512_final**

**6.6 Keep your work safe by:**

Scanning any USB stick that has been in an external computer for viruses;

**7: Roles and responsibilities of qualitative supervisors/note takers**
7.1 Coordinate the scheduling of participants
7.2 Complete the interview log daily and routinely monitor respondents being interviewed. Keep track of refusals and participants who withdraw from the study.
7.3 Meet to go over expanded field notes and pre-analysis templates

7.4 Collect consent forms.
7.6 Ensure sound recordings and expanded field notes are labeled and filed correctly.
7.7 Backup all sound recorded data files. Data should be backed up onto an external hard drive which should be stored securely or a secure server.
7.8 Meet with qualitative lead to discuss progress and get feedback. Look for recurring themes and identify interesting/surprising findings. Look for gaps in the data to be filled in subsequent interviews
7.9 Expanded field notes should be emailed or sent to qualitative lead within 24 hours after review
7.10 Based on the expanded field notes and debriefing meetings fill the pre-analyses template on an ongoing basis. Use this to guide debriefing meetings.
7.11 Send the updated interview log sheet and updated pre-analysis template weekly.

## Annex 7. Principal Investigator CV

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**AREAS OF EXPERTISE:**

Public health evaluation, epidemiology, maternal and child health, multidisciplinary work, large-scale household surveys, development of public health intervention strategies and their evaluation in large-scale real-life settings, equity, health care systems in low and middle income countries. Joanna has over 20 years of collaborative health research experience, the majority of which is focused on newborn and child health in African settings.

**EMPLOYMENT:**

**2006-present**
**Reader in Epidemiology and International Health**
London School of Hygiene and Tropical Medicine (LSHTM)

**2002-2006**
**Senior Lecturer in Epidemiology**
Gates Malaria Partnership, LSHTM.

**1995-2002**
**Research Scientist, Ifakara Health Research & Development Centre**
Ifakara, Tanzania and Swiss Tropical Insitute, Basel.

**1990-5**
**Research Fellow (90-2) & Lecturer (92-5), Tropical Health Epidemiology Unit**
LSHTM

**1990**
**Freelance statistical/epidemiological consultant**
MRC Laboratories (The Gambia), WHO Leprosy Unit (Geneva), and others.

**1988-90**
**Statistician**
MRC Laboratories, The Gambia.

**1987-8 Statistician, Statistical Services Centre**
Department of Applied Statistics, Reading University.

**1985-7 Data Analyst, Statistics Department**
Janssen Pharmaceutical, Wantage, Oxon.

**Honorary appointments**
**2002-present Honorary Chief Scientist**
Ifakara Health Research & Development Centre.

**2001-2 Honorary Senior Lecturer**
LSHTM.

**1995-2001 Honorary Research Fellow**
LSHTM.

**EDUCATION:**

**2001 PhD in Epidemiology**
Basel University.

**1987 MSc in Biometry**
Reading University

**1984 BA (Hons) in Mathematics**
Trinity College, Oxford University

**RECENT PUBLICATIONS:**

1. Karim AM, Admassu K, Schellenberg J, Alemu H, Getachew N, Ameha A, Tadesse L, Betemariam W. Effect of Ethiopia's Health Extension Programme on Maternal and Newborn Health Care Practices in 101 Rural Districts: A Dose-Response Study. *PLOS One* 2013.

2. Penfold S, Shamba D, Hanson C, Jaribu J, Manzi F, Marchant T, Tanner M, Ramsey K, Schellenberg D, Schellenberg J. Staff experiences of providing maternity services in rural

southern Tanzania - a focus on equipment, drug and supply issues. *BMC health services research* 2013.

3. Haws RA, Mashasi I, Mrisho M, Mshinda H, Armstrong Schellenberg J, Darmstadt GL, Winch PJ. These are not good things for other people to know: how rural Tanzanian women's experiences of pregnancy loss and early neonatal death may impact survey data quality. In Press, *Social Science & Medicine*.

4. Armstrong Schellenberg J, Shirima K, Maokola W, Manzi F, Mrisho M, Mushi A, Mshinda H, Alonso P, Tanner M, Schellenberg D. Community effectiveness of Intermittent Preventive Treatment for infants (IPTi) in rural southern Tanzania. *American Journal of Tropical Medicine and Hygiene* 2010.

5. Hanson K, Marchant T, Nathan R, Mponda H, Jones C, Bruce J, Mshinda H, Armstrong Schellenberg JRM. Household ownership and use of insecticide treated nets among target groups after three years of implementation of a national voucher programme in the United Republic of Tanzania: plausibility study using three annual cross sectional household surveys. *British Medical Journal* 2009 339 b2434.

6. Masanja H, de Savigny D, Smithson P, Schellenberg J, John T, Mbuya C, Upunda G, Boerma T, Victora C, Smith T, Mshinda H. Child survival gains in Tanzania: analysis of data from demographic and health surveys. *Lancet* 2008; 371: 1276–83

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8. Are health interventions implemented where they are most needed? District uptake of the IMCI strategy in Brazil, Peru and Tanzania. Victora CG, Huicho L, Amaral JJ, Armstrong Schellenberg JRM, Manzi F, Mason E, Scherpbier R. *Bulletin of the World Health Organisation* 2006.

9. Armstrong Schellenberg JRM, T Adam, H Mshinda, H Masanja, G Kabadi, O Mukasa, T John, S Charles, R Nathan, K Wilczynska, L Mgalula, C Mbuya, R Mswia, F Manzi, D de Savigny, D Schellenberg, C Victora. Effectiveness of facility-based Integrated Management of Child Illness (IMCI) in Tanzania. *Lancet* 2004 **364** 1583-94.

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11. Victora CG, Wagstaff A, Armstrong-Schellenberg J, Gwatkin D, Claeson M, Habicht JP. Applying an equity lens to child health and mortality: More of the same is not enough. *Lancet* 2003 **362** 233-41 *Part of Lancet Child Survival Series*.

12. Armstrong Schellenberg JRM, Abdulla S, Nathan R, Mukasa O, Marchant TJ, Kikumbih N, Mushi AK, Mponda H, Minja H, Mshinda H, Tanner M, Lengeler C. Effect of large-scale social marketing of insecticide-treated nets on child survival in rural Tanzania. *Lancet* 2001 **357** 1241-47.

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