JSI Research and Training Institute: The Last 10 Kilometers (L10K)

Emergency referral for pregnant women and newborns: A Rapid Community and Health System Assessment

BETA Development Consulting Firm

June 2012, Addis Ababa

Acknowledgments

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The data collectors, and the focus group discussion facilitators and note takers are keenly acknowledged for documenting the field information to expectations and make this report happen. Last but not least, the data manager and the data entry clerk were marked pivotal for processing the field information that eased the challenges to write the report and vividly surface the findings.

We hope in some modest way that the results of this rapid assessment contribute to improving the lives of women and their children as well as others who face unexpected medical emergencies.

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Acronyms

AMDD	Averting Maternal Death and Disability program
ANC	Antenatal Care
CHWs	Community Health workers
CSPro	Census and Survey Processing System
EDHS	Ethiopian Demographic and Health Survey
EmONC	Emergency Obstetric and Newborn Care
FGD	Focus Group Discussions
GIS	Geographic Information System
GPS	Geographic Positioning System
GOE	Government of Ethiopia
HDA	Health Development Army
HEP	Health Extension Program
HEWs	Health Extension Workers
KII	Key Informant Interview
L10K	Last 10 Kilometers
MDGs	Millennium Development Goals
MWHs	Maternity Waiting Homes
PHCU	Primary Health Care Unit
PNC	Postnatal Care
RMNCH	Reproductive, Maternal and Child Health
SNNP	Southern Nations, Nationalities and People's
SPSS	Statistical Package for Social Sciences
vCHWs	voluntary Community Health Workers
WHO	World Health Organization

Executive summary

A cross-sectional rapid community and health system assessment was conducted on emergency referral for pregnant women and newborns in 71 health centers located in 18 woredas in the regions of Amhara, Oromiya, SNNPR, and Tigray. The 18 woredas were selected because they are among the woredas where the Last 10 Kilometers Project (L10K) has conducted its foundational strategies since 2007, but were not assessed during the 2008 National Emergency Obstetric and Newborn Care Assessment. Both quantitative (71 health facility assessments) and qualitative (16 focus group discussions, and 64 key informant interviews) data collection activities were undertaken. The FGD discussants were mothers who had deliveries in the 12 months prior to the survey. Key informants were facility- and community-based health workers who were on duty at the time that the health center assessment was undertaken.

This community and health system assessment has provided important information regarding women's and health workers' perceptions of emergency referral and the status of health centers to perform basic emergency obstetric and newborn care (EmONC). The study results are expected to contribute to L10K's efforts to demonstrate innovative processes and solutions that improve effective care seeking and response for critical maternal and newborn health conditions.

Results of the facility assessment revealed that only one health facility in Amhara (Hamusit health center) provided basic EmONC (performing all seven signal functions in the last 3 months prior to the assessment) and nearly 4 in 10 health facilities performed at least 4 signal functions. Several of the signal functions were missing in the majority of health centers surveyed: parenteral anticonvulsants, assisted vaginal delivery, or removal of retained placenta. Many of these facilities lacked the necessary equipment/drugs or qualified staff.

The survey also showed regional variation in terms of basic EmONC signal function performance. Parenteral antibiotics and manual removal of placenta were more likely to have been provided in Amhara health centers (78.9% and 100%, respectively) than in the health centers of other regions while parenteral oxytocics were performed in all the health centers surveyed in Tigray. Across all regions, the signal function least likely to have been observed was the administration of parenteral anticonvulsants, ranging from no facilities in Tigray to 10.5% in Amhara region.

Reasons given for not performing the signal functions revealed that parenteral antibiotics were not given in 70.3% of health centers surveyed because no patients required the use of antibiotics and 48.6 % of the health centers claimed "lack of drugs." Among all 13 health centers that failed to provide parenteral oxytocics in Amhara, Oromia and SNNP, 23% reported that they had no patients with the appropriate indication, while equal proportions (15.4%) reported "no trained human resources" and "management issues."

Parenteral anticonvulsants were not performed because no patient required them (70.1%) and because 58.2% lacked the necessary drugs (magnesium sulphate or diazepam); these two reasons were the most frequent explanations for all regions. Twelve health centers in Tigray, Oromia and SNNP reported no manual removal of retained placenta (one of the most important EmONC signal functions). The main reasons mentioned for non-performance were no indication (91.7%) and lack of trained human resources (33.3%).

Staffing patterns of the visited health centers were found to be inadequate to provide the basic signal functions. Only 13.7% of the surveyed health centers had the recommended staffing of 2 midwives and one health officer. This percentage is comparable with the results of the 2008 national assessment where 17% of the health centers had the recommended staff.

The availability of facility-owned functioning communication (telephones in maternity, health center cell phones, radios, etc.) and transportation were also found to be limited in the surveyed health facilities. Particularly critical to facilitate referral are telephones or radio for communication in maternity wards.

Institutional delivery at the health facilities surveyed was also found to be limited: on average these health centers attended only 64 deliveries per year or about 5 deliveries per month per facility. Although most of the health facilities lacked some required supplies, other barriers that hinder pregnant women from visiting the health institutions were described by most FGD participants.

According to the key informants (community- and facility-based health providers), few enabling conditions exist to make the referral system efficient. The key informants described a shortage of inputs such as staff training in referral, the availability and use of referral guidelines, and of a standardized referral slip. Three out of four key informants reported a pre-determined and functional facility to which a woman or a newborn experiencing a complication can be referred. A feedback mechanism from a receiving facility back to the sending facility is the exception rather than the rule; only 15% reported they had referred a patient and had received feedback from the higher health facility.

Most of the staff at PHCUs seems to have had some previous experience referring difficult cases to higher levels, with more experience referring mothers than newborns. The most common obstetric and newborn complications requiring referral were bleeding, prolonged labor, or abnormal presentation as well as newborns with serious health problems.

In the FGDs, home delivery was clearly identified as the norm and this affects health care seeking behaviors even in emergencies. Those who face complications seem to understand that HEWs cannot manage adverse conditions at health posts and they prefer to go directly either to a hospital or a health center.

The occurrence of a life-threatening complication necessitates immediate transport to a facility where the complication can be adequately managed. This assessment revealed a lack of

modern transport. A locally made stretcher ("*Kareza*" or "*Sansa*") carried by community members was the most commonly used means of transportation for cases requiring referral. Maternity waiting homes, where women who live far from facilities or who have been diagnosed with one or more risk factors can wait for the onset of labor in close proximity to a hospital, were unheard of or nonexistent in the areas where these health centers are located.

The major obstacles that affect the referral system reported by both the health workers and mothers were: 1) financial barriers (for transportation and service payments at health facilities), 2) lack of means of transportation, 3) distance, and 4) lack of awareness of services and the importance of services. Additionally, FGDs participants reported geographic barriers (mountains), cultural influences, and male dominance in decision making as barriers to seeking health care from health facilities.

Decision making to visit a health facility is one of the factors known to affect health service utilization. This study revealed that husbands, parents, respected elders, mothers-in-law or fathers-in-law decided whether a pregnant woman makes health care visits. The exception was Tigray region where women seemed to have more autonomy to make decisions regarding the utilization of health care facilities.

This study also showed, though not uniformly, the existence of different community structures such as community health workers, HEWs, the health development army, and *edir* members who actively support compliance with referral. The *edirs*, in particular, seemed to play a supportive role for mothers with emergency conditions, especially as a source of emergency funding.

Factors associated with health seeking behavior are multidimensional. Socio-cultural and economic problems, lack of awareness, the quality of health services, and infrastructure such as transport services all affect whether and where a woman will seek care, how long it will take to reach care, and whether she receives the appropriate care in a timely fashion. Likewise, solutions must be multidimensional and targeted at strengthening the referral system from home to hospital and ensure that policies address the protection of the most vulnerable members of the population.

Section I Introduction

1.1 Background

Direct obstetric complications account for 85% of maternal deaths in Ethiopia while countless chronic conditions exacerbate this grave situation. Meanwhile newborn deaths contribute to 40% of all deaths to children under five (1). Low rates of skilled care are often cited as one of the prominent causes that contribute to both high maternal and newborn mortality. Nationwide, two-thirds of pregnant women never receive antenatal care from a skilled provider, and only 10% of births are attended by a skilled professional. Even fewer women receive a postnatal checkup within 48 hours of delivery (2).

Ethiopia has seen a dramatic decline in infant and under-5 mortality rates since the introduction of the Health Extension Program in 2003 (3) and the likelihood that Ethiopia will achieve MDG 4 (reducing child mortality) by 2015 is good. But future progress will be increasingly dependent on reducing neonatal mortality, which has not significantly declined since 2005 (2). Similarly, maternal mortality has stagnated according to the two previous Demographic and Health Surveys at around 676 maternal deaths per 100,000 live births (2). Achieving MDG 5 and lowering neonatal mortality are inextricably linked at the biological, intervention, and service delivery levels (4).

The poor and families living in rural areas have the lowest rates of service utilization. However, the government has invested heavily in the expansion of services in the last decade, upgrading clinics and adding health centers and health posts. The Road Sector Development Program has also made great progress to improve the quality and quantity of road infrastructure. In 1997, 79% of the land area lay more than 5 km from an all-weather road; by 2010 it had been reduced to 64%. On average, households have to travel 11 km to get to an all-weather road, but often households are farther from public transport services (5). Recent calculations suggest that 75% of the population of Tigray and Amhara live more than a three hour walking distance from a health center (6).

Even where services exist, issues related to quality, affordability and acceptability accumulate and women stay away. Research findings confirm that no single recipe for strengthening health systems and maternal and newborn care, in particular, will resolve all problems. Scaling-up maternal newborn and child health interventions involves systematic steps to assess local situations and opportunities, improve care within current constraints, and overcome supply and demand constraints –especially, for the poor (7).

The government of Ethiopia (GOE) launched the Health Extension Program (HEP) in 2004 to improve access to and equity of basic health services to the rural population by expanding physical health infrastructure (i.e., establishing health posts) and training and deploying a cadre of Health Extension Workers (HEWs). The HEP is based on the concept that providing the right knowledge and skills to households will lead to the adoption of positive behaviors and

ultimately improve community health outcomes. The HEWs identify, train and support model families and also work with their communities, including voluntary Community Health Workers (vCHWs), now transitioning into the Health Development Army, to produce better health and improve health outcomes. The concept of working with individuals, families and communities is rooted in the Health Promotion approach defined as "a process of enabling people and groups to increase control over, and to improve, their health and quality of life"(8).

Although community-based programs have contributed to considerable success, severe illnesses or conditions require a higher level of medical care, especially among women in the intra-partum period. Thus, a well-functioning referral system is needed to quickly transfer people with acute conditions to higher levels of care. Referral is an old strategy but has never received the global attention it deserves. Recently, however, it has enjoyed new attention as a short and medium term strategy for limiting morbidity while longer term strategies related to investments in human resources and infrastructure are also put in place.

Referral should be broadly defined to include not only transport, but the full range of inputs needed to efficiently move someone across the home-to-hospital continuum (9). In this context of the continuum of care, referral is often associated with the second delay of the three delays model– associated with reaching the appropriate level of care. But in fact, a referral system can reduce all three delays. If a population knows that a system is reliable and affordable, families may make the decision to seek care more quickly (the first delay). By forewarning staff of the imminent arrival and condition of a patient, they should be better prepared to respond quickly and appropriately (the third delay).

Reliable transportation in countries like Ethiopia is often the critical link to timely emergency care. Readily available transport vehicles (ambulance and other motorized vehicles) are necessary to bridge the time between complication onset and receiving definitive care. Emergency referral for maternal and newborn health care can be understood as a complex system to establish and sustain, especially in many high maternal and newborn mortality countries where the health system and public infrastructure are already weak, but it also has great potential for garnering the trust and confidence of the public (10). Implicit in the trust building process are health care facilities that are resourced, well managed and can save lives.

The Last 10 Kilometers project is expanding its scope of activities to include referral. Since its inception in 2007, the project implements a variety of innovative strategies to improve quality and increase demand, access and utilization of high impact Reproductive, Maternal and Child Health (RMNCH) interventions. The project, which is implemented by JSI Research and Training Institute, works in four regions in Ethiopia (Amhara, Oromia, Southern Nations, Nationalities and People's (SNNP) and Tigray). It supports the government HEP, specifically, through strengthening the bridge between households and communities. It primarily mobilizes families and communities to more fully engage them in improved household and community reproductive, maternal, neonatal and child health outcomes and contribute towards achieving MDGs 4 and 5 (i.e., decrease child and maternal mortality).

In 2011, the L10K project expanded its commitments to take proven interventions to scale, and to incorporate the government's new strategy of primary health care units (PHCUs). Thus, L10K is formally engaged with the health center and its new supervisory and management role of health posts. Early care-seeking during pregnancy continues a strong focus, but now linked to strengthening the referral system. In order to set the stage for "demonstrating innovative processes and solutions that improve effective care-seeking and response for critical maternal and newborn health conditions," this rapid assessment on referral was commissioned to explore how referral is currently conducted from a continuum of perspectives.

1.2 Objectives of the assessment

General Objective

The main purpose of this rapid assessment was to develop a broad understanding of how communities and the health system currently manage emergency referral for pregnant women and newborns. The information generated will inform L10K in its development of a change process that leads to referral solutions in the community and within the PHCU itself.

Specific Objectives

Specific objectives of the assessment were to:

- Assess the availability of key enabling factors for referral such as transportation and communication at health centers;
- Determine the existing capacity and functioning status of health centers to provide the necessary basic and life-saving care to pregnant women and their newborns;
- Assess the range of practices related to referrals for obstetric services from health workers and community perspectives;
- Understand the barriers that pregnant women face in early care seeking;
- Learn what resources and coping mechanisms women and their families use when seeking care in an emergency;
- Use the facility-based findings plus results from the 2008 national EmONC assessment to feed into the identification process of the initial 8 woredas where interventions will be developed and tested.

1.3 Outline of the report

This report is organized in four main sections.

- The introduction covers background information including maternal and newborn health in Ethiopia and objectives of the assessment;
- The methodology describes the selection of facilities, data collection instruments and FGD guidelines, field work, data entry and analysis;

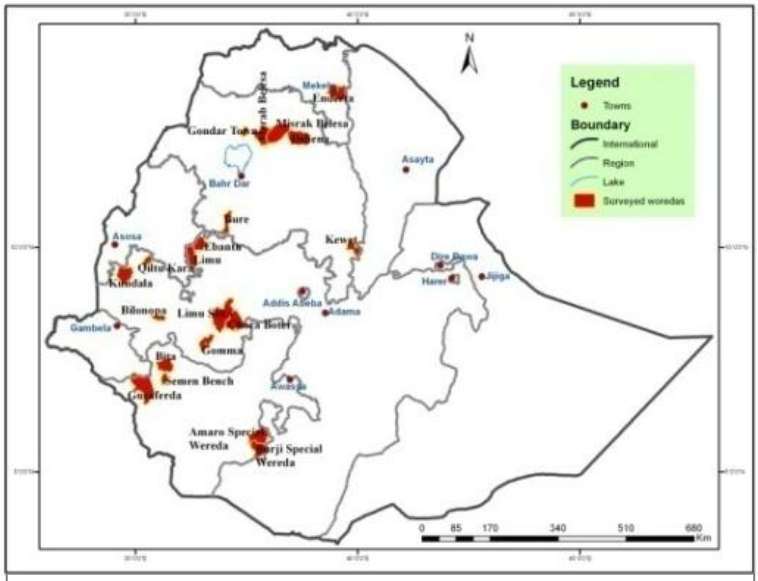
- The findings of the three data collection activities: 1) facility assessment, 2) key informant interviews with health workers, and 3) FGDs with recently delivered women.
- The last section provides a summary of the conclusions and programmatic recommendations.

Section II Methodology

2.1 Study design and sites:

Study design: The rapid assessment used a mixed methods approach to collecting information from a wide array of populations. The most quantitative component was a healthcare facility-based cross-sectional survey that involved a structured questionnaire and individual interviews with facility staff. The second component entailed key informant interviews (KII) with health professionals at the selected facilities and with community health workers in the neighboring communities using a semi-structured questionnaire. The most qualitative component consisted of focus group discussions (FGDs) using open-ended question guides.

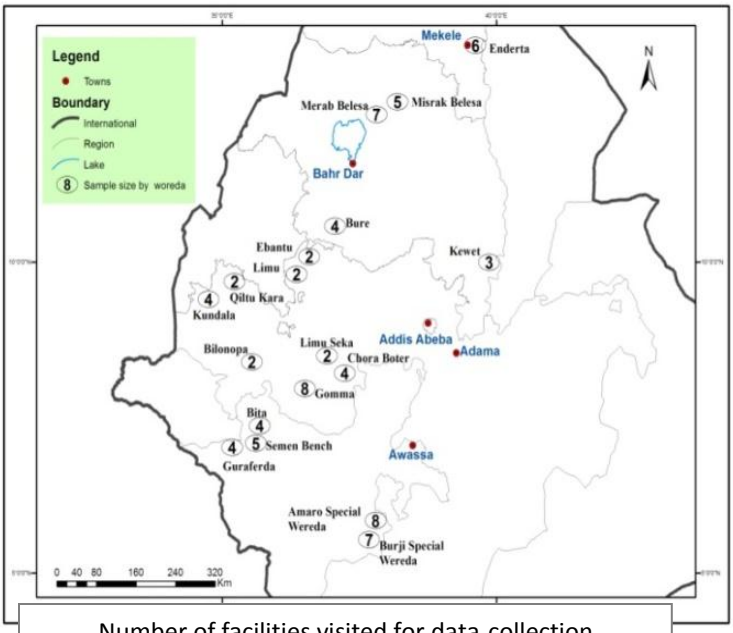
Site selection: L10K has worked in 115 woredas in the four largest regions of the country since October 2007. In all woredas L10K has implemented its foundational strategy to improve the interactions between households, communities and the Health Extension Program. In 56 woredas, special community strategies were implemented during Phase I of the Project (October 2007 – September 2012), leaving 59 woredas with no special interventions. During Phase II of L10K (October 2012 – June 2015), it will implement referral innovations in a subset of these 59 woredas. Health centers and hospitals were assessed in 41 of these woredas in the 2008 Baseline EmONC Assessment, leaving facilities in 18 woredas with no EmONC assessment (11). Thus, these 18 woredas were selected as the area of interest for this rapid community and health system assessment.



Woredas covered in the assessment

Facility assessment sites: A list of 77 health centers that provide delivery services in the 18 woredas was obtained from L10K and these were identified as the assessment sites. However, the facility assessment tool was administered in 71 health centers; 4 were not visited because of their extreme inaccessibility within the timeframe of the study and 2 were found under construction.

The 71 health centers were distributed as follows: 19 in Amhara, 24 in Oromia, 22 in SNNPR, and 6 in Tigray. This assessment used an abbreviated version of the AMDD EmONC needs assessment tools. It included questions on infrastructure (type of facility, communications, emergency transport system, etc.), staffing of health facilities, number of institutional deliveries, and the performance of signal functions. See Annex 2.



Number of facilities visited for data collection

Key Informant Interviews*:* The KIIs were conducted concurrently with the facility assessment but they and the FGDs were administered in two purposively selected woredas per region. Within each woreda, one PHCU i.e., a health center that provided delivery services was also purposively selected. The KIIs were administered to capture information regarding health worker's training in referral, experiences with managing health emergencies, and challenges and solutions for improving the referral system. The study subjects for KII were frontline workers and administrative staff in the health facilities and community representatives (HEWs and vCHWs affiliated with the Health Development Army (HDA)). As proposed by the L10K project, eight (8) KIIs were conducted with persons comprising the study groups mentioned above. Hence, a total of 64 KIIs were conducted in the 8 PHCUs (Table 2.1). A semi-structured data collection tool was used (see Annex 3).

Table 2.1: Selected health facilities for the key informant interviews, March 2012

Region	Woreda	Health facility	# of health workers
Amhara	West Belesa	Mukatera	8
	Bure Zuria	Tiyata	8
Oromia	Goma	Agaro Zureya	8
	Haro Limu	Kalala	8
SNNPR	Guraferda	Bibita	8
	Burgi	Soyamo HC	8
Tigray	Enderta	Romanat	8
		Maimekden	8

Focus Group Discussions: The purpose of the FGDs was to understand how people currently manage emergency referral to a facility that provides definitive care. The FGDs were conducted with women who gave birth in the 12 months prior to the assessment. Two groups of women participated in the FGDs: 1) women who resided within one hour proximity of a health facility that provides basic EmONC, and 2) women who were more than 1 hour from a basic EmONC facility. If two or more facilities met the distance criterion in the woreda, the facility with the highest number of institutional deliveries in the last 12 months was selected. A total of 16 FGDs were conducted. Discussion guides for the FGD were developed by AMDD and adapted by the study team (see Annex 4). The L10K Field Coordinators helped select the participants of the FGDs in consultation with community health workers.

FGD among mothers at Burie Zuria, Denbun kebele

Table 2.2: Distribution of Woredas included for FGDs and number of FGDs conducted, by region, March 2012

Region	No. of Woredas for the entire assessment	# of Woredas selected for FGDs	# of FGDs
Amhara	4	2	4
Oromia	8	3	6
SNNPR	5	2	4
Tigray	1	1	2
Total	18	**8**	**16**

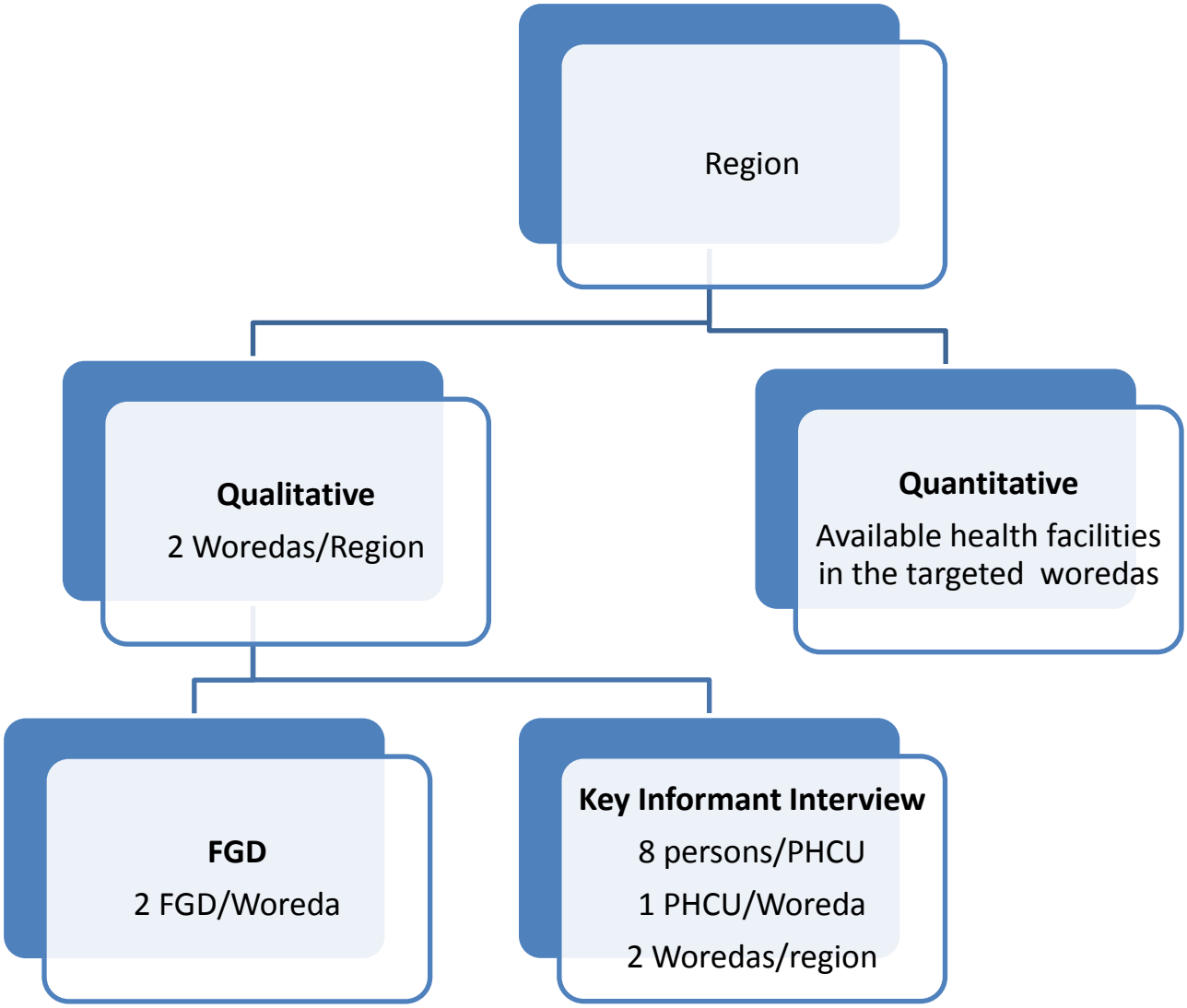


Figure 2.1: Pictorial presentation of data collection process (study participants)

2.2 Data collectors' recruitment and training

L10K recruited six data collectors to collect the quantitative facility data and the KIIs and BETA hired 8 FGD moderators and note takers. Training modules were developed and used to facilitate a two-day training. The training modules were designed to orient data collectors to the concepts used in the data collection tools, purpose of the assessment and how to administer the questionnaires. Brief descriptions of each of the signal functions were included in the training to ensure that data collectors were well informed on the subject matter. They were also instructed on how to use the geographic positioning system (GPS) device by a qualified geographic information system (GIS) expert.

A total of 6 data collectors with a health background (Nurses, Health Officers and Environmental Health professionals) for quantitative and 8 FGD moderators and note takers participated in the training. The training modalities included: presentations, discussions, and role plays (mock interviews). Specifically, the training focused on the concepts and methodology of the survey so that the data collectors were able to conduct the data collection task efficiently and effectively. The mock interview exercise particularly helped the data collectors to better understand each question in the assessment tools. Through this exercise, data collectors identified relevant issues for clarification.

After the training, the data collectors were assigned to the four regions to collect data from the health facilities, key informants and FGD discussants. Data collectors were supplied with sufficient data collection tools including a list of the selected health facilities.

2.3 Data collection

L10K issued a letter to all the targeted health facilities and regional health bureaus requesting their support for the assessment. L10K facilitated all transportation and travel arrangements for the data collectors and closely followed day-to-day progress of the data collection activity.

A total of 6 trained data collectors were deployed to collect data from 71 health facilities and 64 key informants (community and facility-based providers) and 8 experienced data collectors facilitated the 16 FGD sessions. Members of the core assessment team of the consulting firm BETA closely followed the data collection through extensive telephone conversations with the data collectors. Once filled-in, some of the questionnaires were sent to BETA by fax and all the necessary quality checks were made while data collectors were still in the field. Data were collected over a 15 day period from 12 to 27, March 2012.

For focus group discussions, discussants were selected by the community health workers, L10K field staff and FGD facilitators using a pre-determined selection criterion. Most FGDs were facilitated at health posts and all the discussions were tape recorded and immediately transcribed by the facilitators and note takers.

2.4 Data management and analysis

Review of the filled-in questionnaires: To ensure the quality and reliability of the assessment data, the 71 filled-in facility assessment questionnaires and 64 key informant questionnaires were retrieved from the field and reviewed and checked in detail for consistency and completeness prior to the data entry process. During this manual activity some inconsistencies and incomplete responses were encountered and fixed through consulting the respective data collectors. Each questionnaire was assigned a serial number to facilitate easier questionnaire referencing during data processing.

Data entry application development: Following manual verification of the filled-in questionnaires, the data entry application was developed using Census and Survey Processing System (CSPro) version 4.0. CSPro is a software package that has data entry, batch editing and tabulation modules including other tools that are useful in analyzing and organizing survey and census datasets.

In preparing the data entry application, a data dictionary, questionnaire-oriented entry screens, and appropriate skip patterns were developed and tested using the first completed questionnaires. The data entry process was also automated to minimize human errors that can be introduced in accessing application programs and data files.

Orientation for the entry clerk: One data entry clerk was assigned to carry out the survey data entry process. A brief orientation was given to the data entry clerk before carrying out the actual work. This included a brief introduction to the survey questionnaire, the data entry screens and how the entry system works. Finally, before starting the actual work, the data entry clerk was given time to enter data from some filled-in questionnaires to familiarize herself with the data entry procedures.

Data entry process: The data entry work was done on double entry basis. That is the data entry operator did the first phase of data entry and then all the data entered were verified through a re-entering of the data. This significantly helped in improving the quality of data. The overall data entry and verification work took about six working days. At the end of the entry work a backup copy of the captured assessment data was kept in a separate folder for security purposes.

Conversion to SPSS format: Before converting the data to SPSS, basic consistency and completeness checks were done on the data in CSPro or text format using the CSPro batch editing facility. Then necessary variable and value set labels were reviewed and the data were converted to SPSS format.

Data cleaning: The data cleaning process included checking and fixing invalid, inconsistent and incomplete responses by referring back to the filled-in questionnaires when necessary. Frequency distributions of all variables in the dataset and additional cross tabulations were produced to facilitate the cleaning process. Another important part of cleaning the survey data

was making necessary checks to ensure the correctness of the distribution of service delivery facilities in the survey by region and type of facility. To this effect, health facilities in the dataset were checked against the filled-in questionnaires in detail and some discrepancies between the expected and actual health posts were resolved. Also the open-ended responses in the dataset were categorized.

Data analysis: Descriptive statistics were performed using SPSS version 10. Results are presented in tables and graphs using summary measures such as percentages and means. As much as possible the data are disaggregated by different variables to see the relationship between these variables that strengthen the result of the descriptive analysis.

2.5 Limitations of the study

All of the FGD moderators and note-takers were men and all of the FGD participants were women (who gave birth during the last 12 months prior to the assessment). It is possible that the women may have been uncomfortable openly expressing their views and perceptions in front of male facilitators. Also, four of the health centers particularly in SNNPR were inaccessible due to road condition and two health centers that were on the original list were under construction at the time of visit.

Section III: Findings

3.1 Facility assessment

Performance of Signal Functions: Of the 71 health centers surveyed, only 1 (1.4%) health center reported performance of all seven signal functions (basic EmONC) as defined by providing the service or procedure in the three months prior to the interview (Table 3.1). All the remaining health centers were providing either partial or no EmONC services. More than half (53.5%) of the health centers reported performance of 3 to 4 signal functions, while 4.2% had not performed a single signal function at the time of the survey. The finding also showed regional variation in the performance of the signal functions. Only 1 (5.3%) health center in Amhara region reported performance of all the seven signal functions at the time of the survey; however, no facilities in the other regions reported performing all seven signal functions. Of the health centers in Oromia and SNNPR, 8.3% and 9.1%, respectively, were missing one signal function. A significant proportion (13.6%) of health centers in SNNPR reported performance of none of the signal functions. Missing signal functions were more pronounced in the health centers of Tigray region.

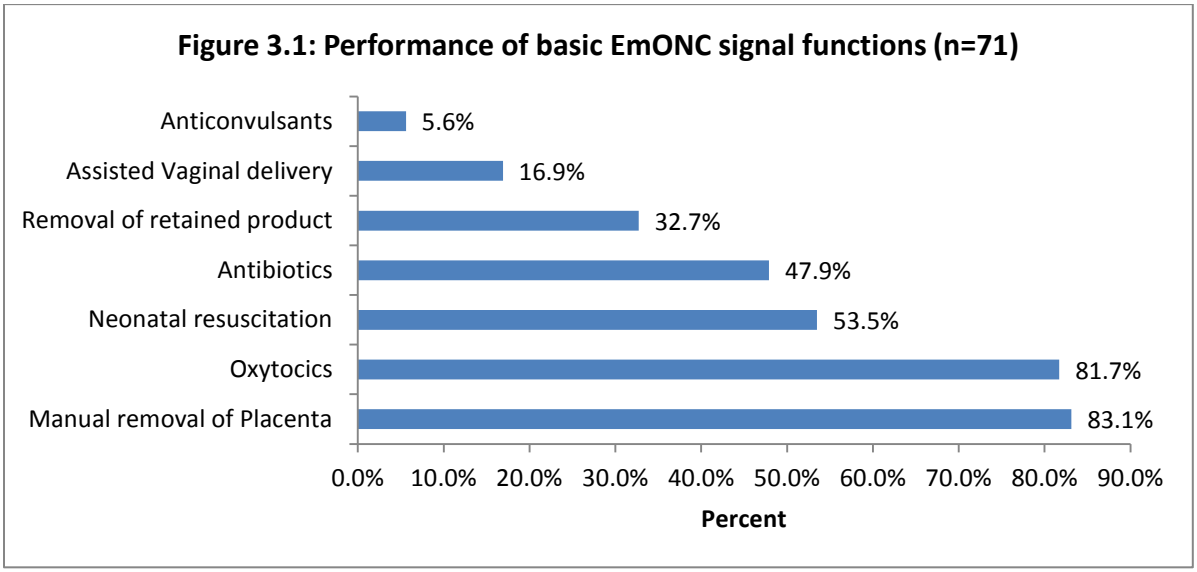
Table 3.1: Percentage distribution of health centers providing basic EmONC signal functions* in the last 3 months, by number of signal functions and region, March 2012

Number of signal functions performed	Tigray n=6	Amhara n=19	Oromiya n=24	SNNPR n=22	Total n=71
7	-	5.3	-	-	1.4
6	-	-	8.3	9.1	5.6
5	-	15.8	12.5	9.1	11.3
4	-	36.8	29.2	18.2	25.3
3	33.3	31.6	25.0	27.3	28.2
2	33.3	-	12.5	13.6	11.3
1	33.3	10.5	12.5	9.1	12.7
0	-	-	-	13.6	4.2
Total	**100%**	**100%**	**100%**	**100%**	**100%**

** The basic EmONC signal functions include parenteral antibiotics, oxytocics, and anticonvulsants, manual removal of placenta, removal of retained products, assisted vaginal delivery and neonatal resuscitation with bag and mask.*

Of the total 71 health centers surveyed, more than 80% performed parenteral oxytocics (81.7%) and manual removal of placenta (83.1%) while about half of the facilities performed parenteral antibiotics (47.9%) and neonatal resuscitation (53.5%) (Figure 3.1).

Figure 3.1: Performance of basic EmONC signal functions (n=71)

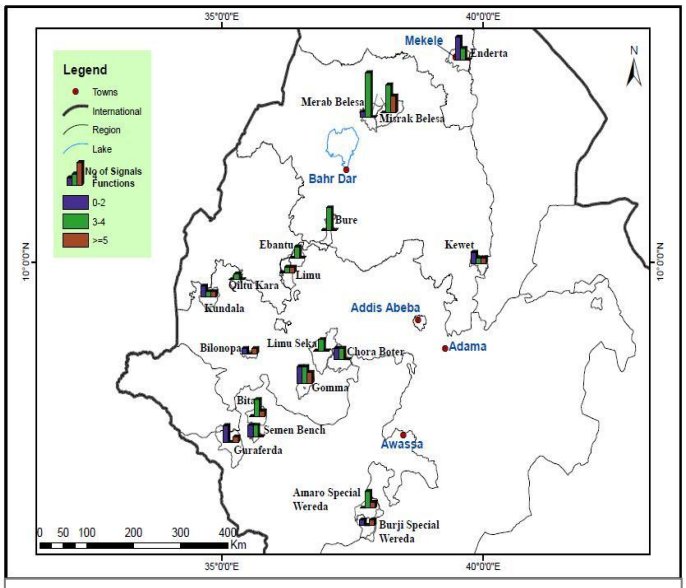


The survey also showed regional variation in terms of performance of basic EmONC signal functions. Parenteral antibiotics were most likely to have been provided in Amhara region (78.9%). Parenteral oxytocics and manual removal of placenta were performed in 100% of the surveyed facilities in Tigray and Oromia regions (Table 3.2). Among all facilities, the least performed signal function was parenteral anticonvulsants (5.6%). The percent of facilities performing parenteral anticonvulsants ranged from none in Tigray to 10.5% in Amhara region. The next least performed signal function was assisted vaginal delivery (16.9%). Very low performance of parenteral anticonvulsants and assisted vaginal delivery was similar to the findings of the 2008 Ethiopian EmONC assessment and appeared across all regions (11). The most performed signal functions, on the other hand, were manual removal of placenta (83.1%), ranging from 50% in Tigray to 100% in Amhara, and parenteral oxytocics (81.7%), ranging from 63.6% in SNNPR to 100% in Tigray region. Routine performance of the seven basic signal functions in the last three months by region and health facility is presented in Annex 1.

Table 3.2: Percentage of health centers providing each basic EmONC signal function in the last 3 months, by signal function and region, March 2012

Signal Function	Tigray n=6	Amhara n=19	Oromiya n=24	SNNPR n=22	Total n=71
Parenteral antibiotics	0.0	78.9	45.8	36.4	47.9
Parenteral oxytocics	100	89.5	87.5	63.6	81.7
Parenteral anticonvulsants	0.0	10.5	4.2	4.5	5.6
Manual removal of placenta	50.0	100	79.2	81.8	83.1
Removal of retained products	0.0	15.8	45.8	40.9	32.4
Assisted vaginal delivery	16.7	10.5	16.7	22.7	16.9
Neonatal resuscitation	33.3	63.2	62.5	40.9	53.5

Facilities that did not perform a signal function in the previous 3 month period were asked whether they performed the signal function in the 12 month period prior to the survey. The findings showed that when the time period was extended to 12 months, 5 additional facilities reported providing parenteral antibiotics, 6 facilities manual removal of the placenta, 4 facilities parenteral anticonvulsants and 3 facilities each performed neonatal resuscitation and assisted vaginal delivery. Table 3.3 shows the number of additional health centers performing signal functions when the time period was extended to 12 months.



Distribution of HFs by number of signal functions performed and woreda

Table 3.3: Number of additional health centers performing signal functions when time period is extended to 12 months, March 2012

Signal Function	Tigray	Amhara	Oromiya	SNNPR	Total
Parenteral antibiotics	-	1	2	2	5
Parenteral oxytocics	-	-	-	-	-
Parenteral anticonvulsants	-	1	2	1	4
Manual removal of placenta	1	-	1	-	2
Removal of retained products	-	1	3	2	6
Assisted vaginal delivery	-	2	-	1	3
Neonatal resuscitation	-	1	1	1	3

Reasons for not performing Signal Functions: All health facilities that did not perform a signal function in the three months prior to the survey were asked reasons for not performing each signal function. Respondents could provide more than one reason. The results are presented in Table 3.4. The most common reasons cited for not providing parenteral antibiotics were absence of patients having an appropriate indication (70.3%) and lack of drugs (48.6%). Among the 13 health centers that did not provide parenteral oxytocics in the three regions (Amhara, Oromia and SNNP), 23% failed to do so because no patient had an appropriate indication while equal proportions (15.4%) reported “no trained human resources” and “management issues” as reasons for not performing the signal function.

Parenteral anticonvulsants such as magnesium sulphate (the sedative diazepam was also considered) were the signal function least performed in all surveyed facilities. The main reasons cited by the 67 facilities that did not provide the drugs were: no patient had an appropriate

indication (70.1%), lack of drugs (58.2%), and lack of trained human resources for this purpose (10.4%). This pattern was repeated in all regions.

Twelve health centers from Tigray, Oromia and SNNP did not perform manual removal of retained placenta (one of the most important EmONC signal functions) three months prior to the survey. The main reasons mentioned for not performing the signal function were no indication (91.7%) and lack of trained human resources (33.3%).

Removal of retained products was not performed in 48 facilities due to the following reasons: no indication (58.3%), lack of equipment (56.3%), no trained human resources (43.8%) and no human resources were available (10.4%). More than half of the health facilities in all regions reported no indication as a main reason for not carrying out removal of retained products three months prior to the survey.

Of the 59 health centers that did not provide assisted vaginal delivery, 80% reported lack of equipment while half (49.2%) cited no indication and no trained human resources for not providing assisted vaginal delivery. About one-fifth (18.6%) of the health facilities did not provide assisted vaginal delivery due to the unavailability of human resources.

More than two-thirds (68.8%) of the 32 health facilities that did not provide neonatal resuscitation with bag and mask reported their non-performance due to a lack of patients requiring resuscitation while more than half of them (56.3%) reported no equipment.

Table 3.4: Percentage of health centers that did not provide the basic EmONC signal function in the last 3 months according to reasons not provided, by signal function and region, March 2012 (multiple responses allowed)

Reasons	Tigray	Amhara	Oromiya	SNNPR	Total
Parenteral Antibiotics	**n=6**	**n=4**	**n=13**	**n=14**	**n=37**
Human resources not available	16.7	0.0	0.0	7.1	5.4
Human resources not trained to do	16.7	0.0	0.0	13.6	10.8
Lack of supplies/ equipment or drugs	50.0	50.0	30.8	40.9	48.6
Management issues	0.0	0.0	0.0	0.0	0.0
Policy issues	0.0	0.0	0.0	0.0	0.0
No patient had appropriate indication	50.0	75.0	76.9	71.4	70.3
Parenteral Oxytocics	**n=0**	**n=2**	**n=3**	**n=8**	**n=13**
Human resources not available	-	0.0	0.0	0.0	0.0
Human resources not trained to do	-	0.0	0.0	25.0	15.4
Lack of supplies/ equipment or drugs	-	0.0	0.0	0.0	0.0
Management issues	-	0.0	33.3	12.5	15.4
Policy issues	-	0.0	0.0	12.5	7.7
No patient had appropriate indication	-	0.0	0.0	37.3	23.1
Parenteral Anticonvulsants	**n=6**	**n=17**	**n=23**	**n=21**	**n=67**

Reasons	Tigray	Amhara	Oromiya	SNNPR	Total
Human resources not available	0.0	17.6	0.0	4.8	6.0
Human resources not trained to do	16.7	23.5	8.7	0.0	10.4
Lack of supplies/ equipment or drugs	16.7	70.6	56.5	61.9	58.2
Management issues	0.0	0.0	4.3	0.0	1.5
Policy issues	0.0	11.8	0.0	4.8	4.5
No patient had appropriate indication	83.3	58.8	65.2	81.0	70.1
Manual Removal of Placenta	**n=3**	**n=0**	**n=5**	**n=4**	**n=12**
Human resources not available	0.0	-	0.0	0.0	0.0
Human resources not trained to do	33.3	-	60.0	0.0	33.3
Lack of supplies/ equipment or drugs	0.0	-	0.0	25.0	8.3
Management issues	0.0	-	0.0	0.0	0.0
Policy issues	0.0	-	0.0	0.0	0.0
No patient had appropriate indication	0.0	-	80.0	0.0	91.7
Removal of Retained Products	**n=6**	**n=16**	**n=13**	**n=13**	**n=48**
Human resources not available	16.7	18.8	0.0	7.7	10.4
Human resources not trained to do	33.3	43.8	69.2	23.1	43.8
Lack of supplies/ equipment or drugs	66.7	62.5	46.2	53.8	56.3
Management issues	0.0	0.0	7.7	0.0	2.1
Policy issues	0.0	6.3	0.0	0.0	2.1
No patient had appropriate indication	50.0	56.3	61.5	61.5	58.3
Assisted Vaginal Delivery	**n=5**	**n=17**	**n=20**	**n=17**	**n=59**
Human resources not available	0.0	35.3	10.0	17.6	18.6
Human resources not trained to do	40.0	58.8	55.0	35.3	49.2
Lack of supplies/ equipment or drugs	80.0	76.5	75.0	88.2	79.7
Management issues	0.0	0.0	5.0	0.0	1.7
Policy issues	0.0	5.9	0.0	0.0	1.7
No patient had appropriate indication	40.0	47.1	55.0	47.1	49.2
Neonatal Resuscitation with Bag & Mask	**n=4**	**n=7**	**n=9**	**n=12**	**n=32**
Human resources not available	0.0	0.0	0.0	0.0	0.0
Human resources not trained to do	25.0	0.0	11.1	0.0	6.3
Lack of supplies/ equipment or drugs	50.0	57.1	33.3	75.0	56.3
Management issues	0.0	0.0	0.0	0.0	0.0
Policy issues	0.0	0.0	0.0	0.0	0.0
No patient had appropriate indication	75.0	28.6	88.9	75.0	68.8

Number and Type of Health Workers: The study also assessed the number and type of health workers currently working in each health center included in the survey. As shown in Table 3.5, nurses were more available than midwives and health officers. On average, about six nurses were working in each of the surveyed health centers in all regions except in Oromia where there was an average of five nurses. The number of available nurses at the health centers ranged from zero to 16. It was also shown that 13.7% of the health facilities included in the survey had the recommended number of staffing (defined as 2 midwives and 1 health officer)

at the time of the survey. Health facilities in SNNPR were found to be in a better position in this regard with 36.4% of facilities having the recommended staffing as opposed to only 5.3% and 3.8% in Amhara and Oromia, respectively. None of the health centers in Tigray had the recommended staffing.

Table 3.5: Average number of health workers available at the surveyed health centers, by type of health worker and region, March 2012

Health workers	Tigray	Amhara	Oromiya	SNNPR	Total
	n=6	n=19	n=24	n=22	n=71
Midwives (BSc, Diploma, Jr)	1	0.63	0.57	1.3	0.85
Range (min, max)	0 (1,1)	2 (0,2)	2 (0,2)	3 (0,3)	3 (0,3)
Nurses (BSc, Diploma, Jr)	5.8	6.1	5.1	5.6	5.6
Range (min, max)	4 (5,9)	9 (3,12)	9 (0,9)	14 (2,16)	16 (0,16)
Health Officers	0.67	0.58	0.81	0.95	0.78
Range (min, max)	1 (0,1)	2 (0,2)	5 (0,5)	4 (0,4)	5 (0,5)
% of facilities with recommended staffing*	0.0	5.3	3.8	36.4	13.7

* Defined as 2 midwives and 1 health officer

Delivery Services Attended: The facilities were assessed for the number of deliveries they carried out over a one year period. Close to two-thirds (62.9%) of the health facilities conducted 50 or fewer deliveries over a year period while about one-fifth (18.6%) conducted between 51 and 75 deliveries in a year's time. A little more than one in 10 (11.4%) of the health facilities were able to manage between 76 and 150 deliveries over the same period while less than one in 10 (7.1%) conducted more than 150 deliveries. The average number of deliveries per year overall was 63.9 with a range of 3 to 797. These averages varied regionally with the lowest observed in Amhara (51.6) and the highest in Oromia (78.7). Table 3.6 shows the percentage of health centers with the number of deliveries they attended in the last 12 months by region.

As shown in the table, the range of deliveries attended by the health centers in the last 12 months was between 20 and 123 deliveries in Tigray, 4 and 230 deliveries in Oromia, 6 and 797 deliveries in Oromiya, and 3 and 276 deliveries in SNNPR.

Table 3.6: Percent distribution of health centers according to the number of deliveries they attended in the last 12 months by region, March 2012

No. of deliveries per year	Tigray	Amhara	Oromiya	SNNPR	Total
	n=6	n=19	n=24	n=22	n=71
0-25	16.7	52.6	8.3	38.1	30.0
26-50	33.3	10.5	58.3	23.8	32.9
51-75	16.7	15.8	25.0	14.3	18.6
76-100	16.7	5.3	0.0	9.5	5.7
101-150	16.7	5.3	4.2	4.8	5.7
> 150	0.0	10.5	4.2	9.5	7.1
Total	100%	100%	100%	100%	100%
Average # deliveries per year	61.7	51.6	78.7	58.8	63.9
Range (min, max)	(20, 123)	(4, 230)	(6, 797)	(3, 276)	(3, 797)

Communication and Transportation: Communication and transportation are two important elements of the referral system that can determine the ultimate health outcomes of mothers and their newborns. In most developing countries including Ethiopia these two aspects of the referral system are feeble. In the current survey 93% of the health facilities were equipped with more than one mode of functional telecommunication. Similar proportions of the facilities had health workers who had functional cell-phones. About 70% of the health centers had cell-phone signal. Unfortunately, however, none of the health facilities visited had a telephone in the maternity room or a functional radio for communication.

About half (49.3%) of the health facilities had one or more modes of motorized transport and a third (33.8%) reported the existence of a motorcycle at the time of the survey. None of the health facilities, however, had a motor vehicle ambulance or an animal drawn cart. Table 3.7 shows the availability of functioning telecommunication and transportation in the surveyed health facilities by mode and region.

Table 3.7: Availability of functioning telecommunication and transportation, by mode and region, March 2012

Mode of Communication	Tigray	Amhara	Oromiya	SNNPR	Total
	n=6	n=19	n=24	n=22	n=71
Telecommunication					
% with ≥ 1 mode of telecommunication	100	89.5	88.5	100	93.2
% with telephone in maternity	0.0	0.0	0.0	0.0	0.0
% with telephone elsewhere	0.0	10.5	20.8	13.6	14.1
% that health centers owns cell phone	0.0	5.3	0.0	0.0	1.4
% with health workers who have cell	100	84.2	95.8	95.5	93.0
% with public telephone in vicinity	0.0	5.3	25.0	9.1	12.7
% with radio	0.0	0.0	0.0	0.0	0.0
% facilities with cell phone signal	50.0	89.5	66.7	63.6	70.4
Transportation					
% with ≥ 1 mode of motorized transport	50.0	31.6	42.3	72.7	49.3
% with motor vehicle ambulance	0.0	0.0	0.0	0.0	0.0
% with non-ambulance vehicle	0.0	5.3	12.5	4.5	7.0
% with motorcycle	50.0	10.5	37.5	45.5	33.8
% with animal drawn cart	0.0	0.0	0.0	0.0	0.0

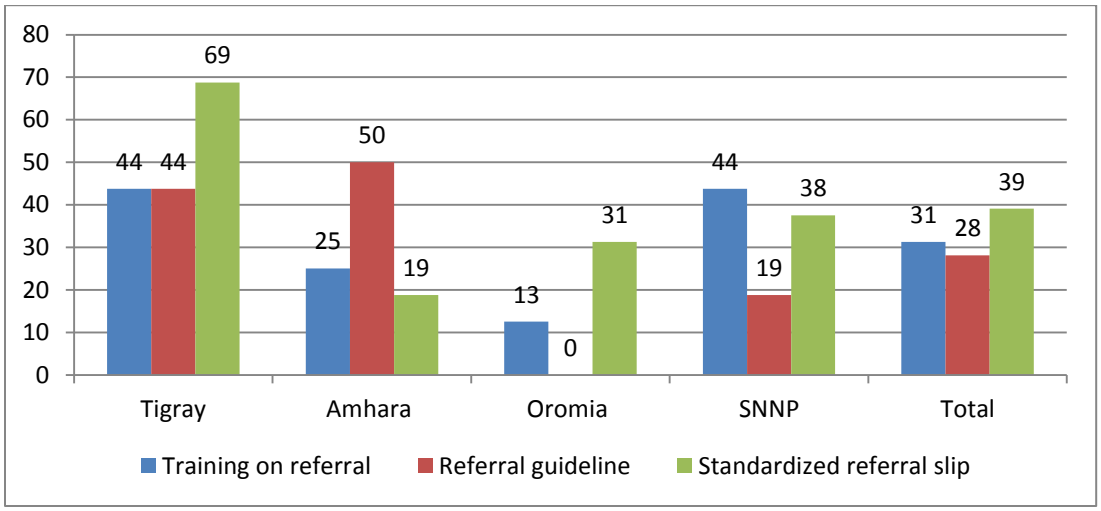
3.2 Referral for EmONC services

3.2.1 Evidence from key informants (facility- and community-based health workers' perspectives)

Availability of referral input: Some of the key inputs for the referral system are: staff training about the importance of referral and when to refer women or babies who have complications during pregnancy or delivery; the availability and use of guidelines; and the availability of a standardized referral slip that can be used across facilities in a region.

Overall, less than one third of the key informants (31%) reported receiving training on referral and only 28% reported the availability and use of referral guidelines, while the availability of a standardized referral slip that is used across facilities in the region was reported by about four out of 10 respondents. Comparisons across regions showed that staffs from Tigray (44%) and SNNPR (44%) were more likely to be trained on referral than those in Amhara (25%) and Oromia (13%). Staffs from Amhara (50%) and Tigray (44%) were more likely to have and use referral guidelines than those in SNNPR and Oromia. Availability of a standardized referral slip was more likely to be reported in Tigray than the rest of the surveyed regions (Figure 3.2).

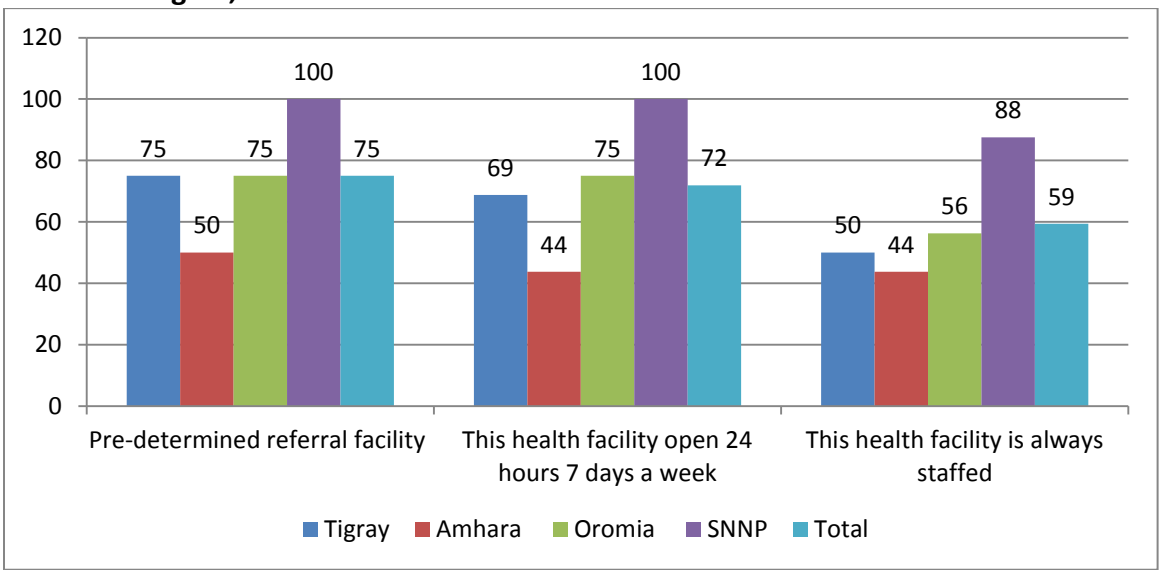
Figure 3.2: Percent of respondents reporting the availability of referral inputs by region, March 2012



Awareness of a pre-determined referral facility: Awareness of a pre-determined facility to which a woman or a newborn experiencing a complication can be referred helps the health workers to readily refer cases in need. These facilities must be open and available 24 hours/day and 7 days a week and always staffed so that mothers or newborns with complications can get appropriate services.

Overall, three out of four (75%) respondents reported being aware of a pre-determined facility; 72% reported these facilities were always open and nearly 60% reported these facilities were always staffed. Participants from SNNPR responded more favorably, followed by participants from Oromia and Tigray (Figure 3.3).

Figure 3.3: Percent of respondents reporting awareness and availability of referral facility, by region, March 2012



Availability of Feedback Mechanisms: Receiving feedback or information about the referred patient from the receiving facility is one characteristic of a good referral system and has several functions: 1) it allows the referring/sending health worker to know the outcome of the patient s/he referred especially if follow up care is needed; 2) it helps the referring health worker to learn more about cases s/he referred to higher level; and 3) it creates a closer more collaborative working relationship between the health workers at sending and receiving health facilities.

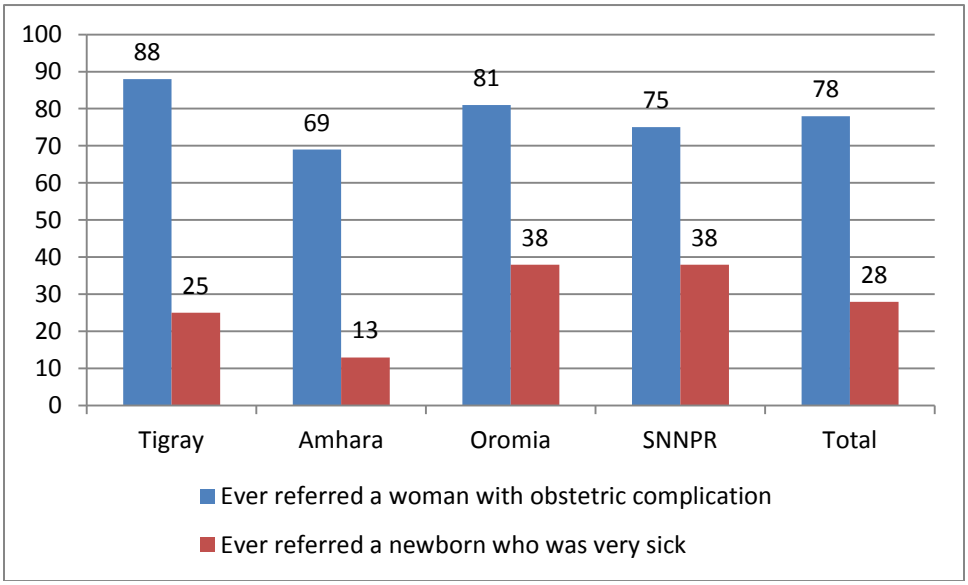
Of the 64 KII participants, 11 (17.2%) reported that they never referred patients to any health facility and only 15% (8 of 53) of the health workers who referred patients to higher level facilities had ever received feedback on the patient. Health workers from SNNPR (25%) and Amhara (13%) were slightly more likely to have received feedback from higher level facilities than those from Tigray and Oromia (Table 3.8).

Table 3.8: Number of respondents who reported receiving feedback or information about the referred patient from the referral facility, March 2012

	Receiving feedback from the referral/receiving facility			
Region	**Yes**	**No**	**Never Referred**	**Total**
Tigray	1	15	0	16
Amhara	2	9	5	16
Oromia	1	12	3	16
SNNP	4	9	3	16
Total	**8**	**45**	**11**	**64**

Experiences with referral: To learn about previous experiences of referring mothers and newborns, health workers were asked if they had ever referred a woman experiencing a complication during pregnancy, labor or delivery, and if they had ever referred a newborn baby who was ill or experienced problems during the first month of life. Across all regions, staff had more experience in referring mothers with complication than newborns (Figure 3.4).

Figure 3.4: Percent of staffs with referral experience by region, March 2012



According to 61% of KII participants, they had a referral slip that accompanies the woman or baby when they referred, or if they were to refer. A higher proportion of participants in Tigray (75%) and Amhara (62%) reported this than in Oromia (56%) and SNPPR (50%). Information included in the referral slip contains patient name (82%), reason for referral (82%) and residence of patients (64%). Nearly two-thirds of the respondents (64%) indicated that the available referral slip was a standardized form used everywhere in the zone/region. This response substantially varied among regions, ranging from 92% in Tigray to 30% in Amhara (data not shown).

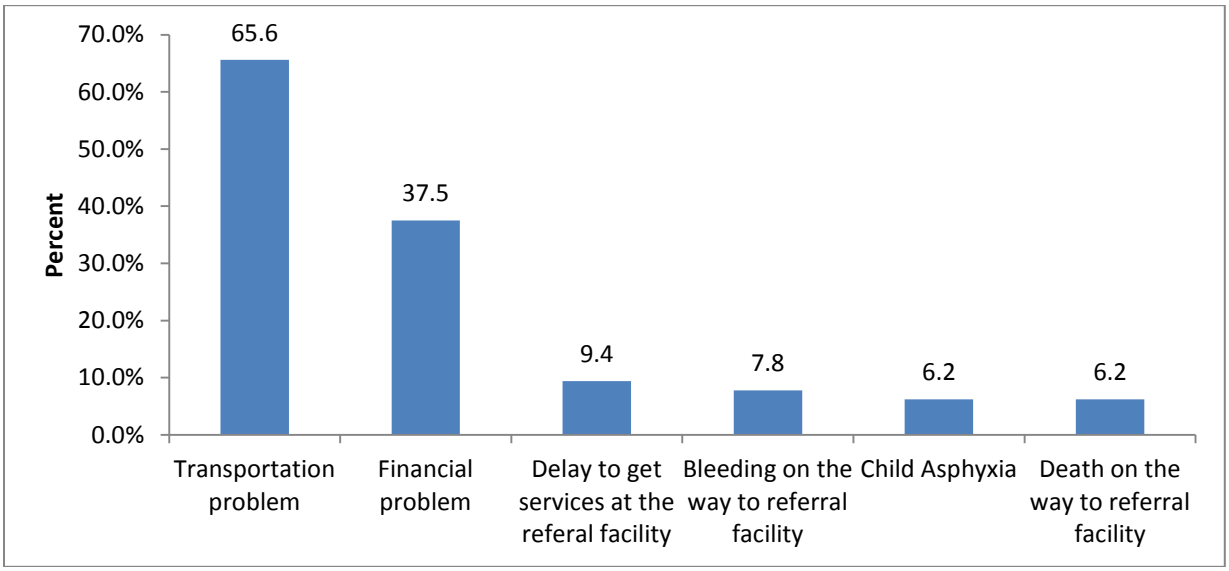
The health workers in the surveyed facilities were asked about the most common obstetric and newborn complications they had encountered. As shown in Table 3.9, bleeding (ante-partum, postpartum), prolonged labor and abnormal presentation were the three most commonly reported obstetric complications while asphyxia, pneumonia and premature birth were the three most commonly reported newborn complications.

Table 3.9: Most common obstetric and newborn complications, March 2012

Most common obstetric complications	Frequency	Percent
Bleeding	21	38
Prolonged labor	17	30
Abnormal presentation	7	13
Retained placenta	5	9
Hypertensive disease of pregnancy	3	5
Severe Anemia	2	4
Abortion	1	2
Total	**56**	**100**
Most common newborn complications		
Asphyxia	16	38
Pneumonia	10	24
Premature birth	6	14
Neonatal tetanus	3	7
Unable to suck breast milk	3	7
Skin problem	2	5
Umbilical cord infection	2	5
Total	**42**	**100**

Difficulties women face with referral: Health workers were asked about some of the difficulties faced by women when referred to a higher level of care. Difficulty getting transportation appeared to be the single most frequently mentioned problem (reported by 65% of respondents) followed by financial problem (37%). A little over one fourth reported either a delay to get service at a referral facility or poor maternal or newborn outcomes while on the way to the referral facilities (Figure 3.5).

Figure 3.5: Percentage of respondents mentioning common difficulties women face with referral, March 2012

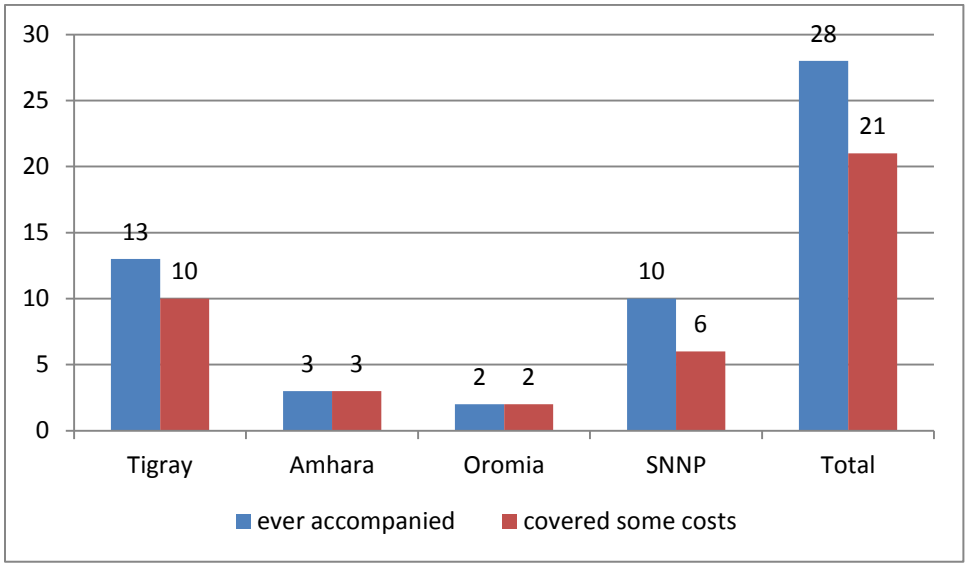


Family resistance to take women to a referral site; difficulty getting seals for stamping the referral slip if at night; lack of transport service to accompany the referred mothers to the referral health facility as well as to return; financial problems both for the family and health workers to take mothers to a higher level of care; and shortage of staff to accompany the mothers to a referral facility were some of the other difficulties reported by the health workers**.**

Difficulties health workers face with referral: Shortage of staff to accompany the mothers to a referral facility was one difficulty reported by the health workers when women or babies need to be referred to a higher level of care.

When asked if they had ever accompanied a woman when referred for an obstetric emergency, and if in so doing, were there costs that the health workers had to cover for the patient, less than half of the health workers (28/64) reported that they had accompanied a woman when referred for an obstetric emergency and three-quarters of those who accompanied the women had to cover some cost of the patient.

Figure 3.6: Number of staff who accompanied a woman when referred for an obstetric emergency and covered some patient costs, by region, March, 2012



Family support for referral and supervisory support:
Support at the time of emergency referrals is crucial both for the patient and for health workers engaged in the process. If a woman's family is supportive of a health worker's decision to refer a woman to another health facility, compliance with referral is enhanced while support from a supervisor and or colleague in the health sector helps with clinical care decisions.

In this study about 7 out 10 key informants reported that women's families generally supported the health workers' decisions to refer a woman to another health facility. Furthermore, about 8 out 10 health workers reported receiving support either from their colleagues or supervisors physically or by phone. Only a minority (7%) of health workers reported no one to support them.

Suggestions on how to improve emergency obstetric referrals: Suggestions from health workers on ways to improve emergency obstetric referrals are potentially insightful as they are the first to observe the daily challenges of the populations they serve. The health workers were asked about various issues related to improving community knowledge regarding obstetric and newborn emergencies; about training needs to improve the identification of obstetric emergencies; and to improve the care provided for maternal and newborn complications. The results are summarized in table 3.10.

Their suggestions regarding improving community knowledge on obstetric and newborn emergencies were generally related to the provision of different types of community education; continuity of community education, and targeting different segments of the population. The suggestions on training revealed the importance of practical trainings (demonstrations) based on skill gaps assessments while their suggestions on improving the care for maternal and newborn complications was related to increased supportive supervision and training, medical

supplies, equipment, and infrastructure, overtime payment for night duty, and increasing the number of health workers.

Table 3.10: Suggestions made by health workers to improve community knowledge, training needs, and the care provided for maternal and newborn complications, March 2012

Suggestions to improve community knowledge on obstetric and newborn emergencies
• Provide Continuous Community Education (on maternal and child health, labor, danger signs) • Educate parents, mothers-in-law, and pregnant women about problems that could be faced during labor and delivery • Educate the community on the type of services provided at health facilities • Provide adequate knowledge to community based agents or health development army so that they can train the community • Support the HEWs to implement all the packages • Create model communities who would educate the community • Give continuous education to leaders, women development armies, and religious groups on the subject
Suggestions about training needs to improve the identification of obstetric emergencies
• Practical trainings (with demonstrations) on labor management should be given • All health workers should be trained in EmONC and management • Training should be given on danger signs of pregnancy • Training HEWs and health development army on ANC, delivery, PNC and on danger signs • Trainings should be based on a skill gaps assessment
Suggestions to improve the care provided for maternal and newborn complications
• Strengthen supportive supervision • Continuous training of health workers at different levels • Improve the availability of medical supplies and equipment • Upgrade the service level of the health centers • Overtime payment for night duty and other financial support for health workers • Provide training and manuals or guidelines • Assign adequate health professionals to health centers specially midwives • Improve health center infrastructure such as electric power, solar energy and water supply • Improve quality of health services

Furthermore, the key informants stressed ways of improving communication (reduce transportation delays), and improve the system for sharing information. Availing telephone service at health facilities and assigning a responsible person to coordinate referral issues and transport services were suggested as solutions to improving communication.

Suggestions to reduce transportation delays included making use of different types of transportation according to road and facility infrastructure, increasing financial options for emergency situations for mothers and communities such as saving money for transportation, or arranging other means of financing mothers with complication. Different ways of sharing information between referring and referral facilities were suggested such as the use of standardized tools, telephones, establishing a referral network, communication, and regular and periodic review meetings between the referring and referred health facilities (Table 3.11).

Table 3.11: Suggestions to improve communication for obstetric and newborn emergencies, and systems for sharing information, March 2012

Suggestions to improve communication to arrange transport for obstetric and newborn emergencies
• Telephone services should be made available at the health centers • Provide all health professionals with the phone numbers of ambulance drivers and back up transportation • Assign someone to coordinate transport service • Assign a focal person who can contact, communicate, and arrange transport for obstetric and newborn emergencies • Health workers should be provided with mobile cards to call and arrange transport whenever needed
Suggestions to reduce transportation delays between initialization of referral and arrival at the health facility
• All the cars at the woreda health office should provide service for referred cases • Vehicles available at the health centers should be used for referral • Make an ambulance available for each health center • Ensure one ambulance for the woreda health office • Bajaj (tricycle ambulances) should be assigned to all health centers • Mobilize the community to repair the road • Mothers and communities should save money and be ready for emergency transportation, or arrange other means of financing mothers with complications • Continue road construction and that of health facilities to increase access • Do not delay referring mother who need referral
Suggestions to improve system for sharing information about patient referrals for obstetric emergencies
• A facility that refers has the obligation of sending a referral slip with the patient to the receiving facility, which, in turn, has the obligation of returning information (feedback) about the patient's treatment and follow up to the sending facility. • Whenever possible women who are referred should be accompanied by a health worker and this person should bring back feedback • Facilities must have an adequate communication system to call ahead to alert the receiving facility of the imminent arrival of a referred patient, sufficient standardized referral slips,

and a designated pre-determined facility to receive referrals.
- Increase awareness and build consensus on the importance of information exchange across different levels of facilities
- Establish a referral network and communication system between referring/sending and referred/receiving health facilities
- Establish regular and periodic review meetings between sending and receiving health facilities to strengthen personal and professional relationships and to problem solve

The health workers also suggested how to improve the system for documentation of referrals, including cases and outcomes. One way of doing this would be to develop a registration book to track referred cases and to establish greater accountability for reporting on treatment, procedures and outcomes of mothers and children.

Main factors associated with poor obstetric outcomes and most important factors to be improved: The three delays – the delay in deciding to seek health services, the delay in reaching a health facility, and the delay in receiving treatment after reaching the referral facility were identified by health workers as the main factors that lead to poor outcomes for patients who have obstetric emergencies (Table 3.12). The first delay is associated with a lack of awareness and generally low health service utilization patterns. The second delay is associated with transportation problems and distances to a higher facility; while the third delay is related to a lack of health professionals and supplies to provide appropriate services on arrival.

Health workers were asked what they would most like to see as the focus of improvements in the referral system; they reported increasing access to transportation, improving the quality of health services, increasing community awareness to use health services, and helping communities with money savings schemes (Table 3.12).

Table 3.12: Major factors for poor obstetric outcomes and most important areas for improving the emergency referral system, March 2012

Main factors for poor obstetric emergency outcomes
Delay in deciding to seek health services
assuming that she may deliver soon
seeking care from traditional healers to "massage the abdomen"
home delivery is a normative behavior
failure of HEWs to follow up mothers at home and delay to refer cases
home delivery with traditional birth attendants
no ANC follow up and lack of awareness on preparedness for labor & delivery
low community awareness of obstetric complications
Delay in reaching a health facility
transportation problems
distance to higher facility
time to look for money
Delay in getting services/treatment after reaching the referral facility
lack of health professionals at facilities close to the community
absence of heath professional to care for mothers on arrival
shortage of medical equipment and supplies
Most important areas for improving the emergency referral system
Improve means of transportation
Improve quality of service delivery at health facility
Community awareness to use health services
Improve community money savings scheme/culture
Improve number and qualification of health workers
Improve health facility infrastructure
Improve communication facility in facilities (telephone, feedback mechanism)

3.2.2 Evidence from FGD participants (community perspectives)

Health care seeking behavior among community members is affected by various factors. This is true particularly among women during pregnancy and childbirth. The situation is complicated in developing countries such as Ethiopia with high rates of maternal and child morbidity and mortality associated with low levels of health care utilization in general. Focus group discussions were conducted to explore the utilization of health services among women of childbearing ages in an emergency situation during pregnancy or childbirth. Specifically, the FGDs examined community perspectives on the factors facilitating and/or hindering the referral system in an emergency situation during pregnancy or childbirth.

Where do women go in an emergency situation during pregnancy or childbirth?

Most FGD participants did not understand that any pregnant woman in labor and delivery **could develop** complications though they were well aware of certain complications or obstetric emergencies. As such, a majority of participants embraced staying at home during normal labor and delivery. If complications developed, most agreed that they would go to either a hospital or health center. Reasons for going to a specific facility in an emergency were related to perceived quality of care.

> *"Hospitals and health centers give good care and have better equipment, medicine, and supplies. Health posts often lack competent staff, as well as the necessary equipment, supplies and medicine.*"

Some also indicated going to traditional healers (for massaging) and taking holy water.

> *"When I face nightmares, shivers, I will take holy water."*

Health posts were perceived as a place for preventive services (ANC, immunizations) and curative care for minor ailments such as headaches and fever.

Discussants from Tigray reported increased pressure to go to facilities to deliver even if the pregnancy and labor are normal.

> *"There is punishment for mothers who give birth at home and for her assistant. If a traditional birth attendant allows or assists a home delivery she will be fined 700 birr and the mother will be fined 400 birr."*
> *"Community health workers make home-to-home follow-up visits during pregnancy, and then they take us to the health post for childbirth, but never assist or allow us to deliver at home."*

First contact in case of medical emergency during pregnancy or child birth

The first contact in an emergency condition can affect the individual's decision to seek health care, where to go, and when. The majority of FGD participants reported husbands, parents or

other family members, community volunteers, and HEWs as their first contact in case of a medical emergency during pregnancy or childbirth. Few reported contacting health workers who work in health centers.

Bypassing (going straight to the hospital)

The referral system is most likely to be effective when there is a clearly articulated process between the referring/sending and referral/receiving facilities and the communities that they serve. Bypassing a midlevel facility can result in higher costs and inefficiencies of the health system if it leads to overcrowding at the higher facilities and subsequent underutilization of lower level health care facilities. However, bypassing is often recognized as an intelligent and life-saving decision when midlevel facilities are known to be unable to handle emergencies.

The FGD participants were asked if they would consider going straight to the hospital instead of going to the closest PHCU. Mixed responses were given by discussants: some said they would go to hospitals if they were referred by health professionals at health posts and health centers while others mentioned going directly to a hospital in case of obstetric complications. Most would go to a hospital accompanied by their husbands or parents, relatives and neighbours. Those who responded that they would bypass the PHCU mentioned that PHCUs often lack competent staff, as well as the necessary equipment, supplies and medicines.

A woman from Amhara stated: *"I will go to Hospital if the situation is severe like abnormal position of the fetus, severe pain of the heart, and conditions which needs surgery."*

A participant from Tigray noted: *"Previously many people used to go to Quiha hospital directly as there were limited services in this health center. Currently the services are improved, and in case the patients need to go to Quiha or Mekele, they go through referral from this health center."*

Another woman from Tigray reported: *"We are visited by HEWs every week and we have antenatal follow up here after six months. So we couldn't go anywhere without getting permission from the health extension workers."*

Transportation

The occurrence of a life-threatening complication will necessitate immediate transport to a facility where the complication can be adequately managed. The assessment vividly showed the lack of emergency transport in rural areas.

Most FGD participants reported an absence of ambulances and other modern transportation while a few women mentioned public transport that occurs once a day. Participants from Tigray, Amhara, and Oromia seem to have somewhat better access to public transport than participants from SNNPR. Those who reported the existence of public transport revealed that the mother or her family is asked to pay the entire travel cost of the bus if it transfers her to a

hospital. A majority of discussants across all regions reported the use of a locally made stretchers or "Kareza" or even of carrying a bed itself to transport the sick to a health facility. Horseback is used in SNNPR but horse carts are not acceptable for pregnant women in Tigray.

A 27-year old woman from Felege-selam kebele in Tigray said: *"Transportation to reach a health facility is not the only problem, but returning home is also an issue. We are forced to return home on foot after getting medical services."*

A second woman from the same area said: *"After I gave birth at Merebmeiti in the morning, I came back home carried by people during the evening. If a mother travels on foot or is carried by stretcher just after birth, she would be exposed to cold or bleeding, and she can suffer from "Michi" (which means fever, chills and other acute manifestations of illness)."*

Maternity waiting homes

In areas with a shortage of emergency transport for life-threatening complications, maternity waiting homes (MWHs) are an option. These are sometimes established on the grounds of an existing health facility and provide women shelter and care for the last weeks of a pregnancy. MWHs often target women who live far from facilities and/or are women with known individual risk factors such as a previous caesarean section or stillbirth. At a MWH women can wait for the onset of labour close to a health care facility that is prepared to handle obstetric problems, without occupying the limited number of hospital beds. FGD participants were asked if women in their communities had access to a maternity waiting home, but virtually all of them had no knowledge of such waiting homes.

Barriers to health care-seeking

The FGDs participants revealed financial problems, lack of transport, lack of awareness of the services themselves and the importance of the services, distance and geographic barriers (mountains), cultural barriers (beliefs, rumors), and male dominance in decision making as barriers to seeking health care from health facilities.

Financial problems were affirmed by almost all FGDs participants in all regions. They described facing a shortage of money for transportation and service payments at the health facilities. They added that searching for borrowed money is often a cause for delay.

A 35-year old mother from Birbo kebele of Haro-Limu woreda in Oromia said: *"Finance is the first issue. When mothers come to health centers, they are asked to buy gloves and a syringe. But there are mothers who cannot afford this cost. And those mothers may prefer to stay at home."*

The discussants also revealed borrowing money as a coping mechanism for financial issues.

Lack of knowledge of the available services and the importance of those services was identified as additional barriers to not seeking health care. They added that women tend to ignore health problems until they can no longer keep going.

"We wait hoping it will be better tomorrow without treatment."

A 20-year old mother from Denbun kebele of Burie Zuria woreda of Amhara stated: *"The main reason for not seeking health care from a health institution is lack of knowledge. Other reasons like financial problems are not acceptable to me because women can apply to the kebele for a letter to get free services or they can borrow money from their relatives."*

A 26-year old mother from Terie kebele of Kewote woreda of Amhara stated: *"People are unaware of the services and costs at health centers. They think going to a health facility will require a large amount of money. I know delivery and vaccination are given with a small amount of money or free of charge. If they knew this, they could have gone simply by borrowing money. In addition, most people expect that they will get relief without going to health center. But then the problems become more severe and they are forced to spend more money."*

Cultural beliefs are another barrier to seeking health care. Some societies attach a stigma to new practices that deviate from their traditional practices, with implications that "early adopters" are not able to cope as well as others. The following statements from participants might highlight this:

A priest's wife from Tigray told her story: *"Our culture is a big barrier. Even at this time giving birth at a health institution is a big surprise to the community. For example, when I gave birth at the health facility, people were talking about me like: 'this is a priest's wife, why did she go to the health facility? Why didn't she deliver at her home?'"*

A 26-year old mother from Merebmiety kebele of Enderta woreda of Tigray said**: "***Even though there is an improvement, still, there is a big cultural barrier associated with a lack of knowledge. Some people say 'you should deliver at your home like your grandmothers'; 'why do you go to the health facility?'"*

A 42-year old mother from Birbo kebele of HaroLimu woreda in Oromia said: *"My husband and his parents prefer me to give birth at home because this is what our parents practiced though I prefer to deliver at a health facility because the pain is mine."*

There is also a misperception of what causes illnesses that hinders the visiting of health care facilities. A 35-year old mother from Felegeselam kebele of Enderta woreda of Tigray reported: *"A mother who gave birth shouldn't leave home or move around barefoot before seven days, because these actions cause a disease called "Meda-haras," a malaria-like illness (a disease mainly due to coldness manifested by chills and rigor)."*

Other reasons that women gave for not visiting a health facility related to the quality of health care and previous experience. Women reported having had home deliveries with positive outcomes but also experiences at health institutions with adverse outcomes, thus, negatively affecting seeking health care from health facilities. Some participants also reported poor hospitality at facility and embarrassment by actions of some health workers (such as laughing at the actions of the clients, dishonoring them to come after getting complication).

A 23-year old parity 4 mother from Ebantu kelo kebele of Ebantu woreda of Oromia said: *"If a mother has visited a health institution many times before and she was not cured, she prefers to stay at home and give herself to God"*

A 28-year old mother from Tiya kebele of Burie Zuria woreda described the experience of her last birth: *"When the amniotic fluid flowed I visited a health center. The health workers did not know what to do but told me the fetus was normal and sent me home. I returned again to the health center to get relief but they laughed at me. Then finally, I went to Burie private hospital with my aunt and my husband, to access better qualified personnel that could help me. At Burie private hospital the doctors told me to go to Bihar Dar hospital and have the birth by surgery. While my aunt was discussing the issue with my husband, St Mary was merciful and I gave a birth at that hospital before I travelled any further."*

Decision making

Decision making to visit a health facility is one of the factors known to affect health service utilization. Asked how decisions to seek health care were made in the family, a majority of women responded husbands, parents, elderly family members, mothers-in-law or fathers-in-law decided whether to seek health care.

There was some variation across regions in decision making. Participants from Tigray region reported the decision to visit a health care facility was predominantly made by mothers themselves. In the remaining regions, husbands were commonly reported to decide and only a few women responded that they made the decisions themselves. In Amhara, elderly people, fathers and mothers were also reported in addition to husbands.

A 30-year old mother from Terie kebele of Kewote woreda of Amhara said**:** "*If our husband refuses, we won't go to health institutions. Most of our husbands are illiterate. They prefer home than visiting a health institution."*

"I know a woman from our community who died due to delay. This is the case. The husband was always busy and running to his work. Whenever she asked his permission to go to a health facility, he responded angrily to stay at home and do her work. She was pregnant and the labor started, nobody was around. When we went to her home she was almost dead. We tried to take her to health center but she died before we arrived there. This story is bad and is a lesson to others to visit a health center without delay."

A 20-year old mother from TiyaTiya kebele of Burie Zuria woreda of Amhara region stated: "*There are older people who lead us where we have to go. They tell us either we stay at home or go to health centers or get holy water. These people are well recognized and accepted by our community. When those accepted and older fathers advise us to go to health center, then we visit the health center."*

Complying with referral advice

Community structures involved in referral system

The FGD participants discussed who in the community might tell a mother that she needs to go to the PHCU or the hospital and who would help them make the trip. Participants from all regions commonly reported CHWs and HEWs followed by husbands and other family members. Participants from Tigray and SNNPR reported the health development army (and members of the 1:5 relationships) would facilitate the process of getting to facilities. CHWs and family members would also be involved in referring mothers. In Amhara, the role of elderly people was stressed.

Participants also indicated that mothers were sometimes accompanied by different community groups or structures. Husbands, parents, other family members, and neighbors were commonly reported in all regions. Mothers from Tigray and SNNPR reported that HEWs accompanied them as well as the health development army. Edir members were mentioned frequently in SNNPR. In addition to referring the mothers to seek health care, the community structures were reported giving support in complying with referral. The Edirs were reported to refer mothers to health institutions for health care as well as providing a source of finance to the ill during an emergency referral.

A 34-year old mother from Gwati kebele, Bita woreda of SNNPR said: *"If the case is severe my neighbors advise my husband to take me to a health facility. There is a social institution 'Edir'. This social institution loans money without interest for medication."*

A 31-year old mother from Tuga kebele, Bita woreda of SNNPR: *"The Edir coordinator may call up members by blowing a 'Tirumba' (horn) and villagers come together and take the mother to the health institution."*

Asked about the existence of any difference in referral for pregnant women or newborns versus a non-pregnant adult or child, a majority of Tigray and Amhara participants and some Oromia participants stressed that pregnant mothers and newborns/infants were more likely to need special care and quick referral than non-pregnant adults or older children. Almost all participants from SNNPR and some Oromia participants responded there was no difference. The following statements highlight this:

"If the illness is among babies, we take them to a health institution immediately but if the case is among elders, we wait for one to two days and see the progress of the disease."

A 35-year old mother from Wandi Dale kebele of Kiltu Kara woreda (Oromia) observed: *"Disease is disease for every age and sex so there is no difference in referral system."* (Everyone agreed through visible nodding of heads.)

Section IV Conclusions and Recommendations

4.1 Conclusions

This rapid community and health system assessment provided important information regarding how the community handles and perceives emergency referral and the capacity of health centers to respond to life threatening obstetric and newborn complications. These outputs will contribute to L10K's efforts to partner with the government and to develop innovative referral solutions that will enhance the continuum of care and ultimately improve access to, and the demand for high quality and organized services at all levels.

Results of the abbreviated assessment of 71 health facilities revealed that only one health center in Amhara (Hamusit health center) provided basic EmONC (i.e., routinely performed all seven basic signal functions) while nearly four in 10 health facilities performed at least 4 signal functions. Several signal functions were missing in most of the health centers surveyed – namely parenteral anticonvulsants, assisted/instrumental delivery, and removal of retained products, a finding similar to that of the 2008 national assessment of EmONC (11). Many of these facilities lacked the necessary equipment, drugs or qualified trained staff.

Staffing patterns for childbirth services were less than ideal. On average, the health centers had less than one midwife per health center but more than 5 nurses. Only 13.7% of the surveyed health centers had the recommended staffing of 2 midwives and one health officer. This pattern is comparable with the results of the 2008 assessment where 17% of the health centers had the recommended staff (11).

The availability of facility-owned functioning communication and transportation were also found to be limited in the surveyed health facilities. Particularly, the lack of land line telephones means that health workers must depend on their cell phones to facilitate referral, which is not an ideal solution. However, 70% of the facilities reported cell phone signals.

Institutional delivery at these health facilities was low suggesting that health center delivery is still far from being the norm. On average the health centers delivered 64 babies per year or about 5 deliveries per month per facility.

The implications for women who might be referred to these health centers are numerous. First, the small number of deliveries attended at these facilities, suggests that staff may not get enough practice to keep up their skills, even for normal delivery. Second, given that the primary reason for non-performance of a signal function was that the facility had not seen a patient with the appropriate indication suggests that the health centers are underutilized, and are probably bypassed in favor of a hospital. Third, among the health centers that failed to provide a specific signal function, half or more were missing antibiotics, anticonvulsants, manual vacuum aspiration kits, vacuum extractors and ambu bags and masks for neonatal resuscitation. Women who participated in the FGDs clearly recognized that health posts were

not well equipped to provide a wide array of services; they were less articulate regarding their appraisal of health centers, but some criticism was targeted at health centers' ability to resolve serious obstetric complications.

Although women described a number of barriers that hinder more frequent use of health facilities, most are well recognized such as difficulties accessing motorized transportation, the high cost of paying for transport, familial pressure to give birth at home, and little autonomy when making decisions. But when health extension workers or others ***do*** refer them to a health center or hospital, women seemed to respect that advice and were ready to comply. Furthermore, most communities appeared to have had experience evacuating women with complications of labor.

4.2 Recommendations

A number of recommendations emerged from the findings of this assessment that L10K should consider in designing the detailed project implementation plan and other relevant strategies. The following is a list of the recommendations:

- Stakeholders at all levels should work together to improve the capacity of health centers to deliver quality EmONC services so that health centers are more efficiently utilized by women with normal deliveries, and hospitals can focus on complications that require higher level of care.
- A first step in this improvement process is to staff health centers with human resources with the right skill mix, for example, midwives and nurses who are trained to perform critical signal functions such as manual removal of retained placenta.
- Health facilities should be staffed with the recommended number of staffing (1 health officer and 2 midwives per health center) to improve the delivery of maternal and newborn health services.
- Parenteral anticonvulsant, i.e., magnesium sulphate is the most frequently absent signal function in all regions. The national guidelines and policy on the distribution of magnesium sulphate does not include health centers. This policy should be revisited, at least for providing a loading dose of the drug, prior to referral.
- Neonatal resuscitation with bag and mask is a key signal function that health centers should perform. Thus, facilities should be equipped with bag and mask and service providers trained to resuscitate newborns.
- For a more functional referral system, adequate inputs are needed and include: staff training on referral, referral guidelines, standardized referral slips, and the establishment of a feedback mechanism.
- The PHCU or the hospital to which it refers should organize periodic meetings to discuss issues related to referral such as:
    - guidelines and protocols about when and whom to refer;
    - why bypassing occurs and when bypassing is warranted;

    - how to improve communication systems with standardized referral slips, feedback mechanisms and calling ahead to alert that a patient is being referred; and
    - Challenges that health providers face at each level of the system and solutions.
- The community should be mobilized to not delay seeking care at health institutions, if there is any question about danger signs or individual risk factors.
    - Use community champions (e.g. those who use health facilities) as a model in community education to increase early care seeking and compliance with referral. These education efforts must be targeted at critical decision makers in the community and family structures.
    - Design IEC strategies and materials to create awareness among pregnant women, their husbands and the community at large regarding danger signs during pregnancy, childbirth, and the postpartum period and for the newborn.
    - Promote a bigger role for health extension workers and health development army (1:5 relationships) in encouraging women to have birth plans, and to deliver in facilities.
    - Encourage female members of the health development army and health extension workers to accompany women in labor to the nearest health facility to function as her advocate and provide support.

- Transportation challenges will require longer term solutions as roads improve and vehicles become more readily available. When possible motorized vehicles should make rapid pick-ups, but transport home, currently the lack of which is a deterrent to seeking institutional care, should be arranged through a system other than the emergency system.
- Health posts should have portable stretchers that weigh less and are easy to handle; this might help shorten the time needed to make stretchers locally and ease the burden of carrying a heavy stretcher. This could be tested in a small number of health posts to determine if such a strategy is cost effective.
- Advocacy/promotion of 'Edirs' as community groups that are willing to provide a health insurance scheme (or organizing other mechanisms for loaning money) might lessen the financial problems during emergency situations.
- Suggestions forwarded by key informants (health workers) need to be critically reviewed and considered as appropriate:
    - better communication for emergency obstetrics, and
    - a system for sharing information across levels of care.

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Section VI: Annexes

Annex 1: Signal Functions performed, March 2012

Tigray

Zone	Woreda	Facility Name (Health center)	EmONC status	In the three months prior to the survey, the facility provided:									Number of basic EmNOC signal functions performed
				Parenteral Antibiotics	Parenteral Oxytocics	Parenteral Anticonvulsants	Manual Removal of Placenta	Removal of Retained Products	Assisted Vaginal Delivery	Neonatal Resuscitation	Blood Transfusion	Cesarean Delivery	
South East	Enderta	Merebmiti	Partial		✓		✓		✓				3
		Chelekot	Partial		✓		✓			✓			3
		Romanat	Partial		✓					✓			2
		Aragura	Partial		✓		✓						2
		Semehal	Partial		✓								1
		Miamekden	Partial		✓								1

Amhara

Zone	Woreda	Facility Name (Health center)	EmONC status	In the three months prior to the survey, the facility provided:									Number of basic EmNOC signal functions performed
				Parenteral Antibiotics	Parenteral Oxytocics	Parenteral Anticonvulsants	Manual Removal of Placenta	Removal of Retained Products	Assisted Vaginal Delivery	Neonatal Resuscitation	Blood Transfusion	Cesarean Delivery	
North	East Belesa	Taymen	Partial	✓	✓		✓						3

Gondar		Guhala	Partial	✓	✓	✓	✓			✓			**5**
		Hamusit	Basic	✓	✓	✓	✓	✓	✓	✓			**7**
		Kalay	Partial	✓	✓		✓		✓	✓			**5**
		Mukatera	Partial	✓	✓		✓						**3**
	West Belesa	Robit	Partial	✓	✓		✓						**3**
		Jandeb	Partial	✓	✓		✓			✓			**4**
		Ayseg	Partial	✓	✓		✓			✓			**4**
		Arbaya	Partial		✓		✓	✓		✓			**4**
		Worhana	Partial	✓	✓		✓						**3**
		Warebe	Partial				✓						**1**
		Ashker Terara	Partial	✓	✓		✓			✓			**4**
North Shewa	Kewot	Terie	Partial	✓	✓		✓			✓			**4**
		Ayaber	Partial				✓						**1**
		Abeyative	Partial	✓	✓		✓	✓		✓			**5**
West Gojjam	Bure Zuria	Quche	Partial	✓	✓		✓			✓			**4**
		Alefa	Partial		✓		✓			✓			**3**
		Derqwa	Partial	✓	✓		✓						**3**
		Tiyata	Partial	✓	✓		✓			✓			**4**

Oromia

Zone	**Woreda**	**Facility Name**	**EmONC status**	**In the three months prior to the survey, the facility provided:**									**Number of basic EmNOC signal functions performed**
				Parenteral Antibiotics	**Parenteral Oxytocics**	**Parenteral Anticonvulsants**	**Manual Removal of Placenta**	**Removal of Retained Products**	**Assisted Vaginal Delivery**	**Neonatal Resuscitation**	**Blood Transfusion**	**Cesarean Delivery**	

Illubabor	Bilo Nopa	Nopha	Partial	✓	✓								**2**
	Bure	Bilo Karo	Partial		✓		✓	✓	✓	✓			**5**
Jimma	Chora Botor	Bege	Partial	✓	✓					✓			**3**
		Kata Buso	Partial		✓		✓	✓					**3**
		Golu	Partial		✓								**1**
	Goma	Bashasha	Partial		✓		✓			✓			**3**
		Gembe	Partial				✓			✓			**2**
		Limu Shaye	Partial	✓	✓	✓	✓	✓		✓			**6**
		Chego	Partial	✓	✓		✓						**3**
		Yache	Partial	✓	✓		✓			✓			**4**
		Choche	Partial					✓					**1**
		Agaro Zuria	Partial	✓	✓		✓	✓	✓	✓			**6**
West Wollega	Kandala	Gaba Dafino	Partial	✓	✓		✓		✓	✓			**5**
		Hopha	Partial		✓								**1**
		Likixi	Partial		✓		✓			✓			**3**
		Bamso	Partial				✓	✓					**2**
	Haro Limu	Haro	Partial	✓	✓		✓		✓	✓			**5**
		Kalala	Partial	✓	✓		✓	✓					**4**
	Ebantu	Hinde	Partial	✓	✓		✓	✓					**4**
		Kelo	Partial		✓		✓			✓			**3**
	Kiltu Kara	Agamsa Bala	Partial	✓	✓		✓			✓			**4**
		Kiltu Kara	Partial		✓		✓	✓		✓			**4**
	Nono	Nono	Partial		✓		✓	✓		✓			**4**

	Benja	Benja	Partial		✓		✓	✓		✓			4

SNNPR

Zone	Woreda	Facility Name (Health Center)	EmONC status	In the three months prior to the survey, the facility provided:									Number of basic EmNOC signal functions performed
				Parenteral Antibiotics	Parenteral Oxytocics	Parenteral Anticonvulsants	Manual Removal of Placenta	Removal of Retained Products	Assisted Vaginal Delivery	Neonatal Resuscitation	Blood Transfusion	Cesarean Delivery	
Keffa	Bitta	Bitta	Partial	✓	✓		✓	✓	✓	✓			**6**
		Odda	Partial		✓		✓	✓		✓			**4**
		Andracha	Partial		✓		✓	✓					**3**
		Kewa Gerba	Partial		✓		✓			✓			**3**
Bench Maji	Guraferda	Bibita	Partial										**0**
		Gabika	Partial	✓			✓						**2**
		Biftu	Partial	✓	✓		✓	✓		✓			**5**
		Arogebrhan	Partial										**0**
	North Bench	Dizu	Partial				✓						**1**
		Biri	Partial		✓		✓	✓		✓			**4**
		Genja	Partial		✓		✓	✓		✓			**4**
		Gacheb	Partial		✓			✓					**2**
		Mizan	Partial		✓		✓		✓				**3**
	Amaro	Keale	Partial	✓	✓	✓	✓	✓	✓				**6**
		Kereda	Partial				✓		✓	✓			**3**
		Abullo	Partial	✓	✓		✓						**3**
		Jejolla	Partial	✓	✓		✓		✓				**4**
	Burji	Sayomo	Partial	✓	✓		✓	✓		✓			**5**

		EKH developmental clinic	Partial										**0**
		Meleka Jewe	Partial				✓			✓			**2**
		Gamebo	Partial				✓						**1**
		Bereke	Partial	✓	✓		✓						**3**

Annex 2: Health Facility Assessment Tool

Interviewer Name _____

Date of interview (dd/mm/yy): ___ / ___ / ___

SECTION 1. IDENTIFICATION OF FACILITY

Instructions to Data Collector: You should complete this section as soon as you arrive at the facility and before interviewing the facility officer in charge. Copy the Unique Facility Identifier (UFI) onto each page of this questionnaire.

Data collector Number	Facility Number	Unique Facility Identifier (UFI)
|___|___|	|___|___| Sequential number beginning with 01	|___|___|___|___| 2-digit data collector Number + 2-digit Facility Number
Facility Name		
Region	Zone	Woreda/Sub-city
Region Code	Zone Code	Woreda Code
|___|___|	|___|___|___|	|___|___|___|

Instructions to Data Collector: Take the GPS reading at the front gate of the facility. Enter the coordinates below.

Geographic Coordinates		
Latitude (decimal degrees)	Longitude (decimal degrees)	
N |_0_|___|.|___|___|___|___|___|	E |___|___|.|___|___|___|___|___|	
Elevation	Accuracy reading	Waypoint number
|___|___|___|___| meters	± |___|___| meters	|___|___|

Instructions to Data Collector: Direct these questions to the officer in charge.

No.	Item	Response
1	Type of facility (*Circle one)*	Specialized Referral Hospital 1 Regional Hospital 2 District/Rural Hospital 3 Health Center 4 Specialized Maternity Clinic 5 Other (specify):_____ ……..6
2	Type of operating agency *(Circle one)*	Government 1 Private (for profit) 2 NGO 3 Religious Mission 4 Other (specify):_____ ……..5
3	Have any deliveries been attended in this facility in the last 12 months?	Yes 1 No …… ..0
4	How many deliveries have been attended in the last 12 months?	|___|___|___|___|
5	How many of the following types of health workers are currently on staff at this facility?	a) Doctors |___|___| b) Health officers |___|___| c) BSc midwives |___|___| d) Diploma midwives |___|___| e) Junior midwives |___|___| f) BSc nurses |___|___| g) Diploma nurses |___|___|

SECTION 2. TRANSPORTATION AND COMMUNICATION

READ: The next few questions I'd like to ask relate to communication and transportation to facilitate referral.

Instructions to data collector: If the answer to the question in column a (is at least one available and functional?) is no, do not ask the question from column b (whether people on duty use for referral). Instead, skip to the next item.

Communications to facilitate referral

No.	Item	a) Is at least one available & functional?		b) If YES, do the people on duty use for referral 24/7?	
		Yes	No	Yes	No
6	Land telephone in the maternity area	1	0	1	0
7	Land telephone elsewhere in facility	1	0	1	0
8	Cell phone (owned by facility)	1	0	1	0
9	Cell phone (owned by individual staff)	1	0	1	0
10	Public telephone in the vicinity	1	0	1	0
11	Radio	1	0	1	0

No.	Item	Response
12	Do you get a cell phone signal at this facility?	Yes 1 No 0

READ: Now I'm going to ask you about the modes of transportation available for emergency referral that are owned and managed at this facility.

Transport		Is at least 1 available and functional?	
No.	Item	Yes	No
13	Motor vehicle ambulance	1	0
14	Motor vehicle (e.g. pick up truck, jeep, 4X4 or sedan)	1	0
15	Motorcycle	1	0
16	Animal drawn cart	1	0
17	Other (please specify): _____	1	0

SECTION 3. SIGNAL FUNCTIONS FOR EmONC

Instructions to Data Collector: Answer the following questions regarding the EmOC Signal Functions by interviewing health workers in the maternity ward and other departments, reviewing facility registers, and through observation. Record whether the function has been performed in the past 3 months, if not,

why it has not been performed,[*] and whether it was performed in the last 12 months. Remember that "parenteral" means by injection, either intramuscular or intravenous.

Signal Function 1: Parenteral Antibiotics

No.	Item	Responses		Skip to
18	Have antibiotics been administered parenterally in the last 3 months?	Yes 1 No 0		If "Yes", skip to 21
19	If parenteral antibiotics were NOT administered in the last 3 months, why? *(circle 1 for all spontaneous answers; otherwise circle 0)* a. availability of human resources b. training issues c. supplies/equipment/drugs d. management issues e. policy issues f. no indication g. other *(specify)* _____	Spontaneously mentioned 1 1 1 1 1 1 1	Not mentioned 0 0 0 0 0 0 0	
20	If parenteral antibiotics were NOT administered in the last 3 months, were they administered in the last 12 months?	Yes 1 No 0		

Signal Function 2: Administer Uterotonic Drugs

No.	Item	Responses	Skip to

[*] We have found that the following categories are very useful and cover most of the likely answers.

a. Availability of necessary human resources (health workers)
    1. Required health workers are not posted to this facility in adequate numbers (or at all)
b. Training issues
    1. Authorized cadre is available, but not trained
    2. Providers lack confidence in their skills
c. Issues with supplies/equipment/drugs
    1. Supplies/equipment are not available, not functional, or broken
    2. Needed drugs are unavailable
d. Management Issues
    1. Providers desire compensation to perform this function
    2. Providers are encouraged to perform alternative procedures
    3. Providers uncomfortable or unwilling to perform procedure for reasons unrelated to training
    4. Lack of supervision
e. Policy issues
    1. National or facility policies do not allow function to be performed
f. No Indication - no client needing this procedure came to the facility during this time period

No.	Item	Responses		Skip to
21	Have oxytocics been administered parenterally in the last 3 months?	Yes 1 No 0		If "No", skip to 23
22	If parenteral oxytocics were administered in the last 3 months, which type of oxytocic was used? *(circle one)*	Oxytocin (cyntocin) 1 Ergometrine 2 Both 3 Other *(specify)* 4 _____		All responses to this item skip to 26
23	If parenteral oxtyocics were NOT administered in the last 3 months, why? *(circle 1 for all spontaneous answer, otherwise circle 0)* a. availability of human resources b. training issues c. supplies/equipment/drugs d. management issues e. policy issues f. no indication g. other *(specify)* _____	Spontaneously mentioned 1 1 1 1 1 1 1	Not mentioned 0 0 0 0 0 0 0	
24	If parenteral oxytocics were NOT administered in the last 3 months, were they administered in the last 12 months?	Yes 1 No 0		If "No", skip to 26
25	If parenteral oxytocics were administered in last 12 months, which type of oxytocic was used? *(circle one)*	Oxytocin (cyntocin) 1 Ergometrine 2 Both 3 Other *(specify)* 4 _____		
26	Is misoprostol used in this facility for obstetric indications?	Yes 1 No 0		

Signal Function 3: Parenteral Anticonvulsants

No.	Item	Responses	Skip to
27	Have anticonvulsants been administered parenterally in the last 3 months?	Yes 1 No 0	If "No", skip to 29
28	If parenteral anticonvulsants were administered in the last 3 months, which type of anticonvulsant was used? *(circle one)*	Magnesium sulfate 1 Diazepam 2 Both 3 Other *(specify)* 4 _____	All responses to this item skip to 32

No.	Item	Responses		Skip to
29	If parenteral anticonvulsants were NOT administered in the last 3 months, why? *(circle 1 for all spontaneous answers; otherwise circle 0)*	Spontaneously mentioned	Not mentioned	
	a. availability of human resources	1	0	
	b. training issues			
	c. supplies/equipment/drugs	1	0	
	d. management issues	1	0	
	e. policy issues	1	0	
	f. no indication	1	0	
	g. other *(specify)* _____	1	0	
		1	0	
30	If parenteral anticonvulsants were NOT administered in the last 3 months, were they administered in the last 12 months?	Yes 1 No 0		If "No", skip to 32
31	If parenteral anticonvulsants were administered in last 12 months, which type of medication was used? *(circle one)*	Magnesium sulphate 1 Diazepam 2 Both 3 Other *(specify)* 4 _____		

Signal Function 4: Manual Removal of Placenta

No.	Item	Responses		Skip to
32	Has manual removal of placenta been performed in the last 3 months?	Yes 1 No 0		If "Yes", skip to 35
33	If manual removal of placenta was NOT performed in the last 3 months, why? *(circle 1 for all spontaneous answers; otherwise circle 0)*	Spontaneously mentioned	Not mentioned	
	a. availability of human resources	1	0	
	b. training issues			
	c. supplies/equipment/drugs	1	0	
	d. management issues	1	0	
	e. policy issues	1	0	
	f. no indication	1	0	
	g. other *(specify)* _____	1	0	
		1	0	

No.	Item	Responses	Skip to
34	If manual removal of placenta was NOT performed in the last 3 months, has it been performed in the last 12 months?	Yes 1 No 0	

Signal Function 5: Removal of Retained Products

No.	Item	Responses		Skip to
35	Has removal of retained products been performed in the last 3 months?	Yes 1 No 0		If "No", skip to 37
36	If removal of retained products was performed in last 3 months, which method was used? *(read options)* a) Manual vacuum aspiration b) Dilatation and curettage (D&C) c) Evacuation and curettage (E&C) d) Misoprostol	Yes 1 1 1 1	No 0 0 0 0	All responses to this item skip to 40
37	If removal of retained products was NOT performed in the last 3 months, why? *(circle 1 for all spontaneous answers; otherwise circle 0)* a. availability of human resources b. training issues c. supplies/equipment/drugs d. management issues e. policy issues f. no indication g. other *(specify)* _____	Spontaneously mentioned 1 1 1 1 1 1 1	Not mentioned 0 0 0 0 0 0 0 0	
38	If removal of retained products was NOT performed in the last 3 months, has it been performed in the last 12 months?	Yes 1 No 0		If "No", skip to 40

No.	Item	Responses		Skip to
39	If removal of retained products was performed in last 12 months, which method was used? *(read options)* a) Manual vacuum aspiration b) Dilatation and curettage (D&C) c) Evacuation and curettage (E&C) d) Misoprostol	Yes 1 1 1 1	No 0 0 0 0	

Signal Function 6: Assisted Vaginal Delivery

No.	Item	Responses		Skip to
40	Has assisted vaginal delivery (vacuum or forceps) been performed in the last 3 months?	Yes 1 No 0		If "No", skip to 42
41	If assisted vaginal delivery was performed in last 3 months, what instrument was used? *(circle one)*	Vacuum extractor 1 Forceps 2 Both 3		All responses to this item skip to 45
42	If assisted vaginal delivery (vacuum or forceps) was NOT performed in the last 3 months, why? *(circle 1 for all spontaneous answers; otherwise circle 0)* a. availability of human resources b. training issues c. supplies/equipment/drugs d. management issues e. policy issues f. no indication g. other *(specify)* _____	Spontaneously mentioned 1 1 1 1 1 1 1	Not mentioned 0 0 0 0 0 0 0	
43	If assisted vaginal delivery (vacuum or forceps) was NOT performed in the last 3 months, has it been performed in the last 12 months?	Yes 1 No 0		If "No", skip to 45

No.	Item	Responses	Skip to
44	If assisted vaginal delivery was performed in last 12 months, what instrument was used? *(circle one)*	Vacuum extractor 1 Forceps 2 Both 3	

Signal Function 7: Newborn Resuscitation

No.	Item	Responses		Skip to
45	Has newborn resuscitation with bag and mask been performed in the last 3 months?	Yes 1 No 0		If "Yes", skip to 48
46	If newborn resuscitation with bag and mask was NOT performed in the last 3 months, why? *(circle 1 for all spontaneous answers; otherwise circle 0)* a. availability of human resources b. training issues c. supplies/equipment/drugs d. management issues e. policy issues f. no indication g. *other (specify)* _____	Spontaneously mentioned 1 1 1 1 1 1 1	Not mentioned 0 0 0 0 0 0 0	
47	If newborn resuscitation with bag and mask was not performed in the last 3 months, has it been performed in the last 12 months?	Yes 1 No 0		

Signal Function 8: Blood Transfusion

No.	Item	Responses	Skip to
48	Has blood transfusion been performed in the last 3 months?	Yes 1 No 0	If "No", skip to 50

No.	Item	Responses		Skip to
49	If blood transfusion was performed in the last 3 months, describe the **primary** supply of blood: *(circle one)*	Blood comes from central blood bank (Red Cross) 1 Blood comes from a facility blood bank 2 Blood is collected from family or friends as needed (i.e., direct transfusion) 3 Blood is collected from regular blood donors when needed 4 Other *(specify)* 5 _____		All responses to this item skip to 53
50	If blood transfusion was NOT performed in the last 3 months, why? *(circle 1 for all spontaneous answers; otherwise circle 0)* a. availability of human resources b. training issues c. supplies/equipment/drugs d. management issues e. policy issues f. no indication g. other *(specify)* _____	Spontaneously mentioned 1 1 1 1 1 1 1	Not mentioned 0 0 0 0 0 0 0 0	
51	If blood transfusion was NOT performed in the last 3 months, has it been performed in the last 12 months?	Yes 1 No 0		If "No", skip to 53
52	If blood transfusion was performed in the last 12 months, describe the **primary** supply of blood: *(circle one)*	Blood comes from central blood bank (Red Cross) 1 Blood comes from a facility blood bank 2 Blood is collected from family or friends as needed (i.e., direct transfusion) 3 Blood is collected from regular blood donors when needed 4 Other *(specify)* 5 _____		

Signal Function 9: Perform Obstetric Surgery (Cesarean Delivery)

No.	Item	Responses		Skip to
53	Has a cesarean been performed in the last 3 months?	Yes 1 No 0		If "Yes", skip to 56
54	If a cesarean was NOT performed in the last 3 months, why? *(circle 1 for all spontaneous answers; otherwise circle 0)* a. availability of human resources b. training issues c. supplies/equipment/drugs d. management issues e. policy issues f. no indication g. other *(specify)* _____	Spontaneously mentioned 1 1 1 1 1 1 1	Not mentioned 0 0 0 0 0 0 0	
55	If a cesarean was NOT performed in the last 3 months, has it been performed in the last 12 months?	Yes 1 No 0		If "No", skip to end interview.
56	What type(s) of anesthesia is/are currently used when performing a cesarean delivery? *(read options out loud)* a. General intubation b. Spinal/Epidural c. Ketamine d. Other *(specify)* _____	Yes 1 1 1 1	No 0 0 0 0	

END OF INTERVIEW

Thank you very much for helping us to gather this information.

Annex 3: Key Informant (Health Worker) Interview Tool

Instructions: *At each PHCU, this interview should be conducted with staff on duty at the health centre as well as health post and community health workers in the PHCU catchment area as follows:*

- *PHCU: up to 6 interviews – 1 facility-in-charge, 1 physician, 1 health officer, 1 midwife, 1 nurse*
- *Community health workers: 1 health extension worker, 1 community health worker, and one person who works with the Health Development Army*

If a question is not applicable to a particular respondent, enter NA (not applicable) in the response cell.

Region: _____

Zone: _____

Woreda: _____

Date: _____/_____/_____

Name of Interviewer: _____

Respondent Identifier: ***(Use the first 2 letters of the respondent's name plus two letters of woreda name)***	**Age**	**Sex**	**Duration worked at current post**	**Duration worked as a health worker in the system**
		1. Male 2. Female	Months __ __ Years __ __	Months __ __ Years __ __

Section A

No.	Question	Response
1.	What is your job position or medical qualification?	1. Facility in-charge 2. Physician 3. Health officer 4. Midwife 5. Nurse 6. Health extension worker 7. Community health worker 8. Health Development Army 9. Other (specify)_____
2.	Have you ever received any training about when to refer women or babies who have complications during pregnancy or delivery?	Yes..... 1 No 0
3.	Do you work with written guidelines that describe who needs to be referred and when?	Yes..... 1 No 0

No.	Question	Response	
4.	Is there a pre-determined facility to which you refer a woman or a newborn that is experiencing a complication?	Yes.....1 No .....0 *If NO, skip to question 7*	
5.	Is that health facility open 24 hours 7 days a week?	Yes.....1 No .....0 Doesn't know.....9	
6.	Is it always staffed?	Yes.....1 No .....0 Doesn't know.....9	
7.	Have you ever referred a woman experiencing a complication during pregnancy, labour or delivery?	Yes.....1 No 0	
8.	Have you ever referred a newborn baby who was ill or experiencing a problem during the first month of life?	Yes.....1 No 0	
9.	Is there a referral slip that accompanies the woman or baby when you refer, or if you were to refer?	Yes.....1 No .....0 *If NO, skip to 12*	
10.	What sort of information does this referral slip contain? *Do not read.*	Mentioned	Did not mention
	a. Name of patient	1	0
	b. Residence/address of patient	1	0
	c. Reason for referral	1	0
	d. Time of referral	1	0
	e. Destination of referral (receiving facility)	1	0
	f. Any treatment given or stabilization efforts	1	0
	g. Name of person making referral	1	0
	h. Other (specify) _____	1	0
11.	Is this a standardized referral slip that is used everywhere in the zone/region?	Yes.....1 No .....0 Doesn't know.....9	

No.	Question	Response
12.	Do you usually receive feedback or information about the referred patient from the facility that you refer to?	Yes.....1 No .....0 Never refers.....9 *If never refers, skip to 16*
13.	Do you keep track of the number of women or newborns that you refer?	Yes.....1 No .....0 *If NO, skip to 16*
14.	Do you report that number to someone on a regular basis?	Yes.....1 No .....0 *If NO, skip to 16*
15.	To whom do you report this information?	
16.	What difficulties do you think women face when they are referred to a higher level of care?	
17.	What do you see as solutions to the difficulties women and their babies have in complying with referral?	
18.	In your opinion, do you think women who have a problem during pregnancy or childbirth prefer to go straight to a hospital or to go to the closest PHCU?	Hospital .....1 PHCU .....0 Doesn't know 9
19.	Is there a disincentive imposed by the health system for women who go straight to the hospital (and by-pass the PHCU)?	Yes .....1 No .....0 Doesn't know 9
20.	Has the Health Development Army (HDA) been activated?	Yes .....1 No .....0 Doesn't know 9

No.	Question	Response
21.	In your opinion, how is the PHCU transition progressing?	
22.	In this PHCU catchment area, have any health extension workers been trained in clean and safe delivery?	Yes .....1 No .....0 Doesn't know .....9 *If NO or DK, skip to next section or end interview.*
23.	How many health extension workers have been trained?	__ __ 99 = doesn't know

SECTION B

Now I will ask you some questions about health emergencies, emergency obstetric and newborn care and emergency referrals. If the respondent is never involved in making referrals, skip to Section C.

No.	Question	Response
24.	About how often do you see a woman experience a complication during labour or delivery?	_____ # Per month _____ # Per year
25.	What are the two obstetric complications that you see the most?	1. _____ 2. _____
26.	What are the two newborn complications that you see the most?	1. _____ 2. _____
27.	Have you ever assisted with a delivery for a woman who had to be referred out for an obstetric emergency?	Yes.....1 No.....0 *If NO, skip to 30*
28.	In the last case you assisted, why was the woman referred and what specifically did you do in terms of preparing the woman for referral (pre-referral)?	

No.	Question	Response
29.	Can you tell me the story of what happened in this case and the other things you did? *(Be sure to elicit the situation, the timing and details for referral, communication and transport arrangements and the outcomes for mother and baby)*	
30.	Do women's families usually support the decision to refer a woman to another health facility?	Yes.....1 No.....0
31.	What do you say or do to convince them?	
32.	Have you ever accompanied a woman when referred for an obstetric emergency?	Yes.....1 No.....0 *If NO, skip to 37*
33.	Are there any costs that you must cover when you accompany a patient who is referred for an obstetric emergency?	Yes.....1 No.....0 *If NO, skip to 35*
34.	What costs have you had to cover? Can you estimate the costs those costs?	Mentioned / Did not mention / How much? Travel: 1 0 ___ Food: 1 0 ___ Accommodation: 1 0 ___ Other (specify): 1 0 ___
35.	What is the process of making a referral to a higher facility for an obstetric emergency? *(Be sure to elicit information on documentation, permission seeking from family, communication – calling ahead to receiving facility, accompanying the patient, patient hand-over, request feedback, and documentation of outcomes)*	
36.	What difficulties do you face when women or babies need to be referred to a higher level of care?	

No.	Question	Response
37.	What type of support for clinical care is available in the case of emergencies? *Please read all and ask respondent to choose <u>one</u> that is most accurate:* 1. My supervisor is available if I need support in an emergency. 2. My supervisor is available by phone if I need support in an emergency. 3. Colleagues in this facility are available if I need support in an emergency. 4. Colleagues in another facility are available by phone if I need support in an emergency 5. There is usually no one who can support me in an emergency. 8. Other (specify): _____	

SECTION C

Now I will ask you about your suggestions for how to improve emergency obstetric referrals. We appreciate your thoughts and ideas and they will help to inform and influence the improvement of the current system.

No.	Question	Response
38.	What suggestions do you have to improve <u>community knowledge</u> regarding obstetric and newborn emergencies?	
39.	What suggestions do you have about <u>training</u> needs to improve the identification of obstetric emergencies?	
40.	What types of support would help you to <u>improve the care</u> you provide for maternal and newborn complications?	
41.	What suggestions do you have to improve <u>communication</u> to arrange transport for obstetric and newborn emergencies?	

No.	Question	Response
42.	What suggestions do you have to reduce transportation delays and shorten the time between when a referral is initiated and arrival at the health facility?	
43.	What suggestions do you have to improve the system for sharing information about patient referrals for obstetric emergencies?	
44.	How do you think the system for documentation of referrals, including cases and outcomes, could be improved?	
45.	What do you think are the main factors that lead to bad outcomes for patients who have obstetric emergencies?	
46.	What would you most like to see improved in the system for emergency obstetric referrals?	
47.	Is there anything else you would like to talk to me about?	

Thank you for your time, we appreciate your collaboration

Annex 4: Focus Group Discussion (FGD) Guide

I. IDENTIFICATION

Region: _____
Woreda: _____
Facilitator's Name _____
Note taker's Name _____
Date of discussion _____
Time taken for discussion: _____
Type and number of group discussants: _____
Facilitator's Signature _____

2. GUIDE TO FOCUS GROUP DISCUSSION FACILITATOR

1. This instrument is developed to collect data from women who gave birth in the last year.
2. Before you present any of the discussion topics to the participants, remember to explain the objective of the focus group discussion in conjunction with the objective of the study.
3. Indicate to the participants that the focus group discussion will take from 60 to 90 minutes.
4. Ask individual participants if s/he is willing to participate in the focus group discussion.
5. Ask participants whether they are willing if their discussions are tape recorded
6. If each respondent is willing to participate in the FGD then continue.

3. GUIDE TO FOCUS GROUP DISCUSSION NOTE TAKER

1. Handle all the seating arrangement of participants
2. Prepare your note books before the session starts
3. Record all important ideas that were generated from the discussion.
4. ***Write down any observations made during the session.*** For example, where did the session occur and when, what was the nature of participation in the group? Were there any surprises during the session?
5. Make short summary of the discussion in collaboration with the facilitator immediately after the session

Introduction

Good morning/afternoon/evening. My name is _____. We are here to collect information for L10K to assess community perspective on referral during pregnancy, childbirth or postnatal.

As part of our work, we have asked you here to share your experiences and opinions. Our discussion should last for about one hour and thirty minutes.

I will be helping to guide the discussion and make sure everybody has a chance to speak. ____ will be making notes during the discussion, but will not write down any names, so no one will know what you say. Is this okay?

Please remember, we are here to learn from you and there are no right and wrong answers. Please tell us your views, whatever they may be.

Before we go further, please introduce yourselves by stating your name, position and how long you have lived in this area.

[Note taker: writes the basic demographics listed on the table]

Code	Age	Ed. level	Religion	Mar. St	Occupation

Now that we have introduced ourselves, let me explain the rules. They are very simple and there are only two. Please don't interrupt anyone and try to give everyone a chance to speak. Also, do not share anything that is discussed today with anyone. Are there any other rules we would like to add? Do you have any questions?

[Acknowledge other rules and address questions.] Let's begin.

4. GUIDING QUESTIONS

Topic 1: Mapping community resources for referral (self-referral or otherwise)

1. In a medical emergency situation during pregnancy or childbirth, where would you go?
    a. Why would you go there?
    b. Is that the closest facility?

2. Who would you contact first if you had a medical emergency during pregnancy or childbirth?

3. Instead of going to the closest PHCU, would you consider going straight to the hospital?
    a. Why?
    b. Who might go with you?

4. How would you get there (hospital or PHCU)?
    a. (probe) Is there an ambulance in the woreda that you can call? Private transport options? Public transport options?

5. Do women in this community have access to a maternity waiting home?
    a. If so, what do women think about staying at such a waiting home?

Topic 2: Barriers to care-seeking

6. Although a woman or baby might have a serious problem during pregnancy or delivery, there are many reasons why seeking help from the PHCU or a hospital could be difficult. For what reasons would a woman not be able to or not want to seek care from these health care facilities?
7. How are decisions to seek care made in your family?

Topic 3: Complying with referral advice

8. Who in your community might tell you that you need to go to the PHCU or the hospital?
9. Would this person help you to make the trip? Would s/he accompany you?
10. We have talked all along about referral for pregnant women or newborns. What would you do differently if a non-pregnant adult or child needed to be referred?

Thank participants for their contribution and time.