

World Vision
Ethiopia



**CAUSES OF LOW
SKILLED-BIRTH
ATTENDANCE COVERAGE**
*In Selected Woredas of Amhara, Oromia and
SNNP Regions*

FORMATIVE ASSESSMENT
WORLD VISION ETHIOPIA

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ADDIS ABABA, ETHIOPIA

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
AMTSL	Active Management of Third Stage Labor
ANC	Antenatal Care
ART	Antiretroviral Therapy
BEmONC	Basic Emergency Obstetric and New born Care
BEmOC	Basic Emergency Obstetric Care
CBO	Community-based Organisation
CEmOC	Comprehensive Emergency Obstetric Care
CEmONC	Comprehensive Emergency Obstetric and Newborn Care
CHN	Child Health Now
CPR	Contraceptive Prevalence Rate
EDHS	Ethiopia Demographic and Health Survey
EFY	Ethiopian Fiscal Year
EmOC	Emergency Obstetric Care
EWEC	Every Woman Every Child
FBO	Faith Based Organization
FGD	Focus Group Discussion
FIGO	International Federation of Gynecology and Obstetrics
FMoH	Federal Ministry of Health
FP	Family Planning
GTP	Growth and Transformation Plan
HC	Health Centre
HDA	Health Development Army
HEP	Health Extension Programme
HEW	Health Extension Worker
HF	Health Facility
HH	Household
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HP	Health Post
HSDP	Health Sector Development Programme
IESO	Integrated Emergency Surgery Officer
ICM	Integrated Case Management
IMF	International Monetary Fund
IMR	Infant Mortality Rate
KII	Key Informant Interview
MCH	Maternal Child Health
MNCH	Maternal, Newborn and Child Health
MDG	Millennium Development Goals
MDSR	Maternal Death Surveillance and Response
MMR	Maternal Mortality Ratio
MOFED	Ministry of Finance and Economic Development
NMR	Neonatal Mortality Rate
NGO	Non-governmental Organization
OPD	Out Patient Department
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PHC	Primary Health Care



PHCU	Primary Health-care Unit
PMTCT	Prevention of Mother-to-Child Transmission
PNC	Postnatal Care
PPS	Probability Proportion to Size
RHB	Regional Health Bureau
SARA	Service Availability and Readiness Assessment
SBA	Skilled Birth Attendance
SNNPR	Southern Nations, Nationalities and Peoples' Region
SPSS	Statistical Package for the Social Sciences
TB	Tuberculosis
TBA	Traditional Birth Attendant
U5MR	Under-five Mortality Rate
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Fund
WB	World Bank
WBHSP	Woreda-based Health Sector Planning
WHO	World Health Organization
WVE	World Vision Ethiopia

EXECUTIVE SUMMARY

This study was a benchmark for the three-year campaign dedicated to the Millennium Development Goal (MDG) 5's 2015 target for improved maternal health, launched by World Vision Ethiopia (WVE). The Ethiopian government's Growth and Transformation Plan (GTP) and the Global Child Health Now (CHN) campaign targeting health needs with a focus on the reduction of maternal and child mortality rates. This assessment presents the results of WVE's research and informs policymakers and implementers of the GTP and CHN of the contributing factors impeding skilled birth attendance (SBA) in the Amhara, Oromia, and Southern Nations, Nationalities and Peoples' (SNNP) regions. The study measured the existing benchmarks for SBA and related practises; reviewed the level of implementation and influence of existing national and regional health policies linked to skilled birth delivery; examined health facilities (HF) service availability and evaluated the causes of low skilled delivery coverage using policy gap, knowledge attitude and practise, and readiness assessments.

Methodology

The study was conducted using cross-sectional quantitative and qualitative methodologies to collect primary data such as household (HH) surveys; focus group discussions (FGD) per *woreda* (i.e. district); key informant interviews (KII) with regional health bureaus (RHB), *woreda* health offices and facilities, and communities; exit interviews with women who gave birth in the HFs; and service availability and readiness assessments (SARA). Secondary data and policies were studied as part of a desk review process.

Results

The Health Sector Development Programme (HSDP) IV was charged with the support of the GTP's major sector development schemes, including the improvement in maternal and child health, combatting Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS), malaria, tuberculosis (TB) and other communicable diseases, as well as the support of governmental policies, strategies and targets over the course of the project period (2011 to 2015).

As part of this movement, RHBs and regional governments were obligated to decrease the maternal mortality ratio (MMR) through the improvement of SBA. Towards this end, they assigned ambulance services in almost all *woredas*, provided maternity services free of charge, and made maternal and child health a public agenda through the use of health development armies (HDA) and health extension workers (HEW). As a result, antenatal care (ANC), delivery care and postnatal care (PNC) improved greatly throughout the region. Performance reports of the FMOH for 2013 to 2014 (EFY 2006) indicate that the ANC, SBA and PNC coverage, respectively, are 100, 32 and 65 percent in Amhara; 104, 48 and 74 percent in Oromia; and 94, 34 and 73 percent in SNNPR.

HH surveys and qualitative assessments showed improvements in SBA, but also revealed a low knowledge, at the community level, of how to recognise the danger signs of pregnancy; indicated that the transport of pregnant women from the community to HFs still presents challenges; and exposed the poor quality of services at the HFs. FGDs and KIs exposed misunderstandings within the community about delivery care as well as cultural practises that impeded women from seeking institutional deliveries. Other hindrances to SBA were found to be the influence of men, elderly, mother- and father-in-laws, in some regions, as well as a fear of medical fees and scepticism of the condition of the HFs.

Conclusions

There has been a marked improvement towards increasing SBA coverage; however, the service quality provided by Health Facilities?? is not up to expectations. Poor infrastructure, inadequate and inconsistent drug supplies, a lack of basic equipment and inadequate human resources prevent health facilities from providing quality delivery services.

Recommendations

In order to improve SBA, RHBs and woredas administrations have to work together to support the community-level HFs by providing training on basic emergency obstetric and newborn care (BEmOC), availing drugs and supplies, and offering enhanced support supervision, particularly to health centres (HC).

I. BACKGROUND

The global overview of maternal health indicates that every day pregnancy and childbirth related complications account for approximately 1,000 maternal deaths around the world. In 2008, the World Health Organization (WHO) estimated that 358,000 women of reproductive age die during and following pregnancy and childbirth. Nearly all of these deaths occur in developing regions as a result of inadequate access to modern health-care services and low usage of existing services.¹

The most common causes of maternal deaths are haemorrhaging, bleeding, sepsis, and prolonged or obstructed labour. However, current knowledge and technology can prevent these grave realities. Thus, the global community considers improvement of maternal health a top priority and named it one of the MDGs, setting a target to reduce MMR by 75 percent between 1990 and 2015. The proportion of births attended by skilled birth attendants or skilled birth personnel is used as indicators to monitor the progress towards to the target rate.²

There are major technical interventions to improve the MMR. These include emergency obstetric care (EmOC), SBA, management of unsafe abortions, focussed ANC, and family planning. EmOC is a set of functions performed at HFs that can prevent the death of a woman experiencing an obstetric complication. According to the United Nations' (UN) recommendation, at least one comprehensive emergency obstetric care (CEmOC) and four basic EmOC facilities are required per 500,000 people. Increasing the provision of EmOC services does not necessarily require the construction of new HFs; many of the services can be delivered by upgrading the available HFs, improving staff skills and following pre-existing guidelines.

Ethiopia has a high MMR and constitutes 58 percent of global maternal deaths,³ making it a priority for the Ethiopian government to drop this rate. In order to do so, in 2011, the government prepared a five-year plan, known as the GTP, with ambitious targets towards reducing HIV infection rates and maternal and child mortality rates while improving existing health systems.⁴ The GTP is intended to work alongside the CHN whose aims also include dropping child and maternal mortality rates by focussing on family and community health in the poorest and most marginalised communities. CHN supports the efforts of the government and multi-national institutions, whilst integrating programmatic interventions to improve child health at the ADP level.

WHO recommends that a woman have their first ANC visit within the first three months of pregnancy and make a minimum of four visits. Ethiopia has one of the lowest rates of access to and utilisation of maternal health services in Africa with only 34 percent of Ethiopian mothers completing one ANC visit during their pregnancy and an even lower percentage (19 percent) of women attending four or more ANC appointments.⁵

¹ S. M. Abul Bashar, 2012.

² Nanda, 2005; WHO, 2004

³ WHO, 2013.

⁴ MOFED, GTP 2010.

⁵ EDHS, 2011.

Deliveries assisted by skilled birth attendants, “an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and new-borns”⁶ was only 10 percent, with an overwhelming 90 percent taking place at home.⁷ As a result of the lack of medical service usage by pregnant women, the MMR, under-five mortality rate (U5MR), and infant mortality rate (IMR) are appallingly high. The MMR is an estimated 676 deaths per 100,000 live births, but drops to 38 percent for mothers who receive follow up PNC within a month of delivery. IMR and U5MR are estimated at 59 and 88 per 1,000 live births, respectively, with neonatal and postnatal mortality rates at 37 and 22 per 1,000 live births.⁸

⁶ WHO, 2004.

⁷ EDHS, 2011.

⁸ EDHS, 2011.

I.1 CONCEPTUAL FRAMEWORK OF THE ASSESSMENT

High maternal mortality is associated with lack of effective measures to prevent the “three delays” as defined by WHO.⁹ Maternal mortality is never caused by one isolated factor, or by one section of the health system alone. Rather, the interaction of many different factors contributes to the illness and eventual death of a woman anticipating or experiencing childbirth. The unavailability of a skilled birth attendant at the first referral level, socio-economic concerns, lack of understanding of the benefits and necessity of SBA, inaccessibility of HFs, and inadequate transport are just a few examples of a long list of those factors.¹⁰

In order to gain the most insight from the findings of this study, it is important to bear in mind that the main elements of the study focus on policies and strategies; knowledge, belief systems and cultural practises about pregnancy and delivery; staffing levels, availability of essential drugs, equipment and supplies; transport and communication. These elements are embedded in a continuum of factors contributing to MMR and neonatal mortality rate (NMR), and can be seen as some of the links in a chain of unfortunate events that may lead to disability or death.

When programming for maternal health, EmOC services are generally assessed using the “three delays model”, which provides a practical framework through which MMR factors that affect institutional delivery and SBA can be analysed in the home environment and medical referral sites and the delays involved between the onset of an obstetric complication and its outcome addressed.

First delay: Recognising the need for medical care and deciding to seek treatment

Lack of knowledge about complications of pregnancy and childbirth or recognising the seriousness of one’s symptoms contribute to the delay in recognising the need for medical care, whereas a lack of confidence in the medical system, concern about the distance to be travelled, cost of services, traditional beliefs, and poverty contribute to the delay in deciding when to seek treatment.

Second delay: Reaching a medical facility that provides care

The unavailability and the inaccessibility of facilities and lack of transport and communication leads to a delay in reaching needed care. Furthermore, even if transportation is available, financial constraints may prohibit women from utilising these services.

Third delay: Receiving adequate and appropriate treatment or care

Staff shortage, insufficiently trained staff, and lack of proper drugs, supplies and equipment lead to a lower quality of care as well as delays in receiving treatment. These conditions are further exacerbated by an exodus of skilled health workers to other countries and budget constraints.

⁹ WHO, 1998.

¹⁰ McCarthy and Maine, 1992; Thaibes and Maine, 199.

2. OBJECTIVES OF THE ASSESSMENT

The overall goal of this study is to benchmark SBA, review its implementation status regionally, examine the effect of existing SBA policies, and identifies the causes of low SBA in Amhara, Oromia and SNNP regions; and any major bottlenecks towards reaching universal coverage of institutional delivery. Questions posed during the research process included:

- What is Ethiopia's progress, to date, in meeting key SBA indicators?
- What are the roots causes of low SBA coverage at the community and facility levels?
- Which factors are inhibiting the achievement of MDG 5 in Ethiopia?
- How has Ethiopia progressed in implementing national health policies that influence SBA and what is the impact of these policies so far?
- What are the main policy gaps that impede SBA in the country and how can this be addressed?
- Has Ethiopia made progress in meeting other international commitments that correlate with SBA (e.g. the Every Woman Every Child (EWEC) global health movement)?

3. METHODOLOGY

This study used quantitative and qualitative methods to collect primary data from the sample groups and combined the results with the findings from the secondary documents. Assessments were executed in seven woredas within the three largest regions constituting nearly three-quarters of Ethiopia's population: Amhara (Banja in Awi zone and Ephrata Gidim in North Shewa zone), Oromia (Abaya in Borena zone and Boset in East Shewa zone) and SNNPR (Humbo in Wolaita zone, Enemor in Gurage zone, and Kedida Gamela in Kembata Tembaro zone).

3.1 DATA COLLECTION TECHNIQUES

Secondary data gathering and desk review

Staff reviewed WVE documents; Federal Ministry of Health (FMoH), regional, woreda, and partner organisation health offices existing policies and plans in the topic areas of: health, nutrition, financing and human resources; and monthly, quarterly and annual Health Management Information System (HMIS) reports and MMR audit reports in order to explore the disease burden and leading causes of women's mortality in the study locations.

Primary data collection and analysis

Data was collected using the following methods:

- HH surveys of reproductive age women aged 15 to 49 selected from multi-stage cluster sampling
- KIs with health offices and relevant partners

- FGDs (six to eight per *woreda*) with male and female community members, women's associations, community-based organisations (CBO), and FBOs
- HF assessments using WHO SARA tools
- Exit interviews with mothers who utilised the health offices for their deliveries
- Evaluation of presentations made by acting midwives demonstrating their skill levels.

Table I. Summary of methodologies

Level	KIIs	FGDs, HH surveys	Secondary data
<i>Woreda</i>	<ul style="list-style-type: none"> • Health office and maternal child health (MCH) heads • Women, youth and children offices • Health centre heads • Midwives 	<ul style="list-style-type: none"> • Men • Women (pregnant and lactating) 	<ul style="list-style-type: none"> • Annual reports/plans from FMoH
Region	<ul style="list-style-type: none"> • RHBs • Women, children and youth bureaus • Non-governmental organizations (NGO) working on maternal, newborn and child health (MNCH) 		<ul style="list-style-type: none"> • Reports/MNCH service plans from FMoH
National			<ul style="list-style-type: none"> • HSDP IV/MCH strategy from FMoH • UNICEF child health report

3.2 SAMPLE SIZE AND SAMPLING PROCEDURE

Women who gave birth within the last 12 months, regardless of their birth outcome, were included in the sample. The required sample size of eligible mothers for the study was determined using a formula to estimate a single population's proportion, $n = z^2 p (1-p)/d^2$. While calculating the sample size, the assumption was made that there was a 95 percent probability of obtaining the population proportion of mothers who gave birth at the HFs (z value) with 4 percent margin of error (d² value) and population of mothers who gave birth at institutions was assumed to be 15 percent (p value). Using the statistical package Epi Info, and considering a design effect of three, owing to the use of multi-stage cluster sampling plus 10 percent non-response rate, the required sample size was determined to be 1,155 women.

The sample was allocated according to probability proportional to size (PPS) for each target *woreda* in Amhara, Oromia and SNNPR. The villages were selected using a simple random sampling lottery method technique until the required number of sample participants was obtained.

3.3 DATA COLLECTION PROCEDURES

Selection and training of interviewers for the HH survey was done in collaboration with the staff from the local health offices and WVE area development programme. Seven supervisors and 23 data collectors were involved in data collection. They were trained for two days by the investigators and research assistants on their role, the overall purpose of the assessment, study methodology and data quality.

The quantitative data was collected using pre-structured closed- and open-ended questionnaires adapted from various nationally-conducted published studies. In addition, the WHO SARA tools were adapted to hh assess HFs. All of the tools were translated into Amharic and Afan Oromo to ensure consistency of responses and pre-tested before data collection began.

The HH survey interviews were conducted by assistant researchers with a Master's in Public Health and consultants through in-person interviews with participant mothers. FGDs and KII were conducted at the community level with a moderator overseeing member groups numbering between eight and 10 influential men and women using prepared interview or discussion guides. Discussions were recorded with the consent of the participants and notes were taken. Participants and informants were chosen in consultation with WVE and the woreda health office counterparts. A review of the availability and functionality of essential drugs, medical supplies and related equipment was inventoried using comprehensive checklists for each HF level.

3.4 DATA MANAGEMENT AND QUALITY CONTROL

The quality of the data was ensured by familiarisation of the enumerators and supervisors with the tools during training and pre-testing. Supervisors also checked questionnaires for completeness and consistency and rectified any detected errors during subsequent fieldwork. Prior to the collection of completed questionnaires by the enumerators, consultants supervised the data entry process and verified the electronic data for completeness and correctness.

3.5 DATA PROCESSING AND ANALYSIS

The HH survey questionnaire was coded and entered into the Epi Info programme during initial data entry and later imported into Statistical Packages for the Social Sciences (SPSS) version 20 and cleaned up for final analysis. The KII and FGD interviews were transcribed and translated into English by the investigators. The information was then arranged into themes for transcript comparison to determine differences and similarities in the assessment participants' perspectives on child health and the factors that influence whether or not they seek SBA during childbirth. A descriptive analysis, including demographic characteristics and other relevant variables, was produced to identify factors influencing study participants. These factors were cross tabulated to better understand the relationship between the variables that undermine SBA.

3.6 ETHICAL CONSIDERATION

Ethical clearance was obtained from all three RHBs. Letters of cooperation were shared with all concerned persons and the participant individuals and institutions all gave informed consent. Confidentiality of the participants' data was ensured by excluding identifiers from the original data.

4. RESULTS

This section provides detailed findings identified by the study and includes policy analysis of the secondary documents and assessment findings from each level. Additionally, FGDs, KII and HH survey findings combined information to identify the causes of low SBA or institutional deliveries using McCarthy and Maine's analysis framework's three delays approach.

4.1 HEALTH POLICY AND STRATEGIC PLAN ANALYSIS

The Ethiopian government developed its health policy in 1996 while it was a transitional government. Subsequently, it designed a phase by phase programme known as HSDP I-IV. The HSDPs are regularly evaluated and new initiatives introduced and scaled up.¹¹ One such initiative included the preparation of the GTP, in collaboration with teams from the International Monetary Fund (IMF) and World Bank (WB), as a poverty reduction approach built on previous strategies¹² with the achievement of MDG 5 by 2015 as one of its primary goals. To this end, the GTP, supported by HSDP IV, focussed on empowering youth and women, investing in infrastructure and enhancing social development as all of these have implications for maternal health, in general, and SBA, in particular.

Development of HSDP IV and other health and health-related policies and strategies was a necessary first step, but when the HSDP IV was jointly assessed by all of its stakeholders, it was determined that while there is significant government funding, it is insufficient to achieve the GTP's goals independently, specifically the following health targets:¹³

- a decrease in the MMR per 100,000 mothers
- a decrease in the U5MR per 100,000 children
- a decrease in the IMR per 1,000 live births.

As a result, a number of policies and strategies were developed that could directly or indirectly affect maternal health-care services, including a gender mainstreaming manual by FMoH in 2013 that prioritised the causes of maternal mortality, as well as a secondary government initiative, known as the health extension programme (HEP), that was put in place in 2002 to improve the health of the community at grass-roots level through intensified prevention of communicable diseases and health behaviour change.

¹¹ WB, HSDP.

¹² Sustainable Development and Poverty Reduction Programme for 2002-2005 and Plan for Accelerated and Sustainable Development to End Poverty in Ethiopia.

¹³ GTP, 2010.

The ministry also began woreda-based health sector planning (WBHSP) in 2010 in order to better implement HSDP IV's objectives. WBHSP gave opportunities for synchronisation and alignment of priority health concerns in order to reach a consensus amongst stakeholders at all levels. The major strategic focus areas of WBHSP include strengthening the HEP, improving quality of health care, scaling up civil service reform, strengthening SBA, prevention of mother-to-child transmission (PMTCT), human resource development, strengthening health infrastructure and improving pharmaceutical supplies to HFs.

Recently, the FMoH introduced organised replicable participatory learning exercises at the community level known as the health development army (HDA). These development groups work to promote, encourage and facilitate antenatal care and SBA. Improving institutional deliveries is one of the main tasks of HDAs and encouraging outcomes have been found with as a result of their efforts.¹⁴

Other initiatives include the establishment of basic emergency obstetrics and new-born care (BEmONC) at the HC level and comprehensive emergency obstetrics and new-born care (CEmONC) at district and regional hospitals in addition to the development and implementation of the MNCH scorecard. This scorecard provides a high-level overview of regional and national performance and acts as a mechanism for heads of state and government to track progress and increase transparency and accountability.¹⁵ It highlights both high- and low-performing areas and indicates the restrictions and blockages of the system.

WHO recommends one physician per 10,000 people. In September 2014 the ratio was 20,270:1 in Ethiopia. Efforts are being made by the government to increase the human capital and leadership by expanding medical schools student capacity and annual intake. The New Medical Education Initiative works on planning medical doctor training, supporting medical schools country-wide, focussing on new medical schools, and developing standards for medical doctor training¹⁶ and was introduced by FMoH in 13 medical schools in Ethiopia. Initiatives include the improvement of EmOC and surgical services at a fundamental level, training anaesthesia professionals, and initiating Integrated Emergency Surgery Officers (IESO) training as a three-year master's programme for health officers in five universities. To date, 163 health officers have completed the training and been deployed and 504 more are in progress. The FMoH also started an accelerated midwifery programme, the Midwifery Education Standard, in collaboration with other stakeholders, to reduce maternal and neonatal mortality by training people to provide a better quality of services and increasing the reach of trained midwives. The ministry set a goal to graduate 8,635 midwives by 2015 with plans to assign two midwives to each HC; over the past three years, a total of 4,409 graduates have been deployed to posts throughout the country.

¹⁴ FMoH, 2014.

¹⁵ African Leaders Malaria Alliance, "Country-Owned RMNCH Scorecards for Accountability and Action", accessed 17 March 2015,

http://www.alma2015.org/sites/default/files/head_of_state_meeting/mnch_two-pager.pdf.

¹⁶ Government of Ethiopia, "NMEI", accessed 17 March 2015, <http://www.moh.gov.et/nmei>.

4.2 PROGRESS TOWARDS MDG 5

As a result of these efforts, Ethiopia has made progress in improving maternal and newborn health services, encouraging the government to set higher targets. The new goals include a SBA rate of 62 percent and a contraceptive prevalence rate (CPR) of 66 percent. Some of the initiatives to increase SBA include:

- scaling up BEmONC and CEmONC services in all HCs and hospitals
- creating model HFs that provide quality maternal health services
- increasing the number of maternal waiting rooms in HCs
- strengthening the HFs' catchment referral network, with a particular focus on Afar, Gambela and Benishangul-Gumuz regions
- encouraging "home delivery free" kebeles (i.e. village).¹⁷

United Nations Population Fund (UNFPA) conducted an in-depth look into the progress and challenges of accomplishing MDG 5 using the last three Ethiopian Demographic and Health Surveys (EDHS) conducted. The analysis predominantly focussed on several intermediate factors that have direct or indirect influence on the MMR and explored key maternal health indicators.

Maternal mortality ratio

The EDHS provides a single MMR estimate for the entire country based on 11 determinants under the categories of reproductive status, health status and the use of maternal health services including caesarean section delivery. The MMR is higher than the national average of 676 deaths for every 100,000 live births in five of the 11 regions; the highest being in Somali and Afar at 747 and 717, respectively. SNNP, Amhar, and Oromia also had marginally higher MMRs than the national average, but Benishangul-Gumuz, Tigray and Gambela were slightly lower than average and Harari and Dire Dawa were significantly lower. Although Addis Ababa had the lowest MMR of any region and much below the national average, 234 deaths per 100,000 live births is unacceptably high by any standard.

Antenatal care

WHO recommends that a woman complete their first ANC visit within the first three months of pregnancy and make at least four visits throughout the course of pregnancy. On average, the proportion of women who attended at least one ANC visit increased by 3.4 percent annually. At this pace, the proportion of pregnant women who will attend at least one ANC visit during their pregnancy is predicted to reach 47 percent of the pregnant population in 2015. The trend of four or more ANC visit progressed at lower pace of 2.6 percent annually (5.4 percent rural, 1.3 percent urban). At this pace, the coverage of four or more ANC visits by 2015 is predicted to reach 26.8 percent for the entire country (18.3 percent rural, 49.6 percent urban). But, in 2014, the EDHS showed that country-wide ANC coverage already reached 40 percent for one visit and 34 percent for four or more visits. Amhara ANC visits increased from 4.6 to 12.4 percent, Oromia jumped from 10.8 to 18.5 percent, and SNNP improved from 10.9 to 17.6 percent.

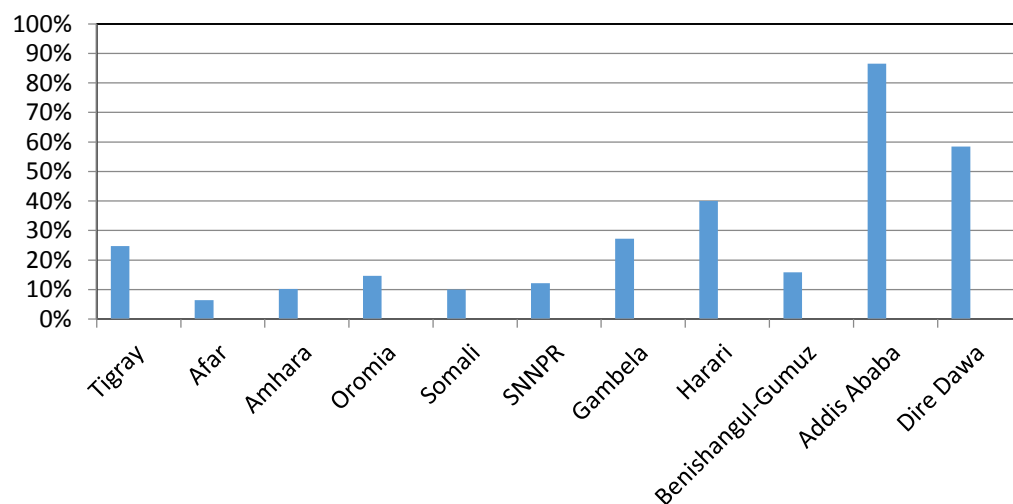
¹⁷ FMOH, 2014.

ANC creates opportunities to not only examine women’s health and provide essential services, but also serves as an occasion to educate and counsel pregnant women on a variety of pregnancy complications and medical care. Informing mothers about the danger signs of pregnancy was exposed as the most missed opportunity in the 2014 EDHS. Relatively fewer pregnant mothers were informed about the danger signs of pregnancy, in comparison to other ANC services, and from 2000 to 2014 there was even a decline in information sharing (26.9 percent in 2000, 31.3 percent in 2005, 20.3 percent in 2011, and 23.3 percent in 2014). Amhara, Oromia and SNNPR regions had percentages even lower than the national figure at 17.1, 20.9 and 22.9 percents, respectively.¹⁸

Delivery care

Births assisted by traditional birth attendants (TBAs) declined from 30.4 percent in 2000 to just 7.8 percent in 2011. However, during this time the proportion of births assisted by families, friends or neighbours increased from 63.4 to 79 percent. Delivery in a HF is more common for highly educated urban women below age 35 in the higher income brackets who attended at least four ANC visits. Amhara and Oromia regions, which are more populous than other regions, have delivery coverage at around 11 percent and as few as six percent of women in Afar give birth at a HF as compared to 87 percent in Addis Ababa. Despite the low coverage of institutional delivery in the rural area, women who attended four or more ANC appointments were the most likely to deliver in the health institutions. Only 2.4 percent of women who never received any ANC delivered in health institutions, but this number increased to 13 percent for women who attended four or more ANC visits.¹⁹

Figure 1: HF deliveries in 2014²⁰



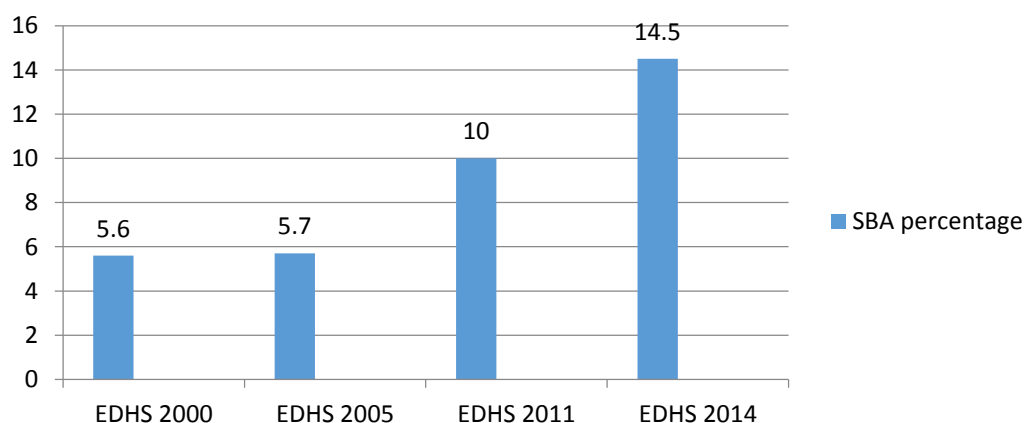
¹⁸ Mini EDHS, 2014.

¹⁹ EDHS, 2011.

²⁰ EDHS, 2014.

SBA coverage countrywide is predicted, using a simple linear regression equation, to increase by 5.6 percent annually, with the trend for the rural area raising slightly quicker at 6.6 percent annually and urban areas estimated growth to be around 3.6 percent annually. In 2014, SBA was 14.5 percent for the nation and 10, 14.4 and 9.4 percent for Amhara, Oromia and SNNPR regions, respectively.²¹ At the current pace, the proportion of women who will be assisted by skilled workers with their deliveries should reach 20.9 percent nationally by 2015.

Figure 2: SBA trends from 2000 to 2014



Postnatal care

The postpartum period begins immediately after the birth of the child and extends for about six weeks. PNC focusses on the special needs of the mother and baby during this time and should include the prevention, early detection and treatment of complications and disease as well as the provision of advice and services. Postnatal visits within the first two days after delivery was 11.8 percent nationally, but, in general, PNC for women who delivered at home is virtually non-existent. Mothers in rural areas also rarely receive care although it increased slightly from 3.4 percent in 2000 to 5.6 percent in 2011, mainly due to the increase in institutional deliveries. As expected, the PNC rate was much higher in urban locations and increased significantly from 41 percent in 2000 to 53.7 percent in 2011. From 2011 to 2014 the PNC rate increased from 10 to 14.5 percent.

4.3 REGIONAL FINDINGS

Since the decentralisation of health service delivery systems in Ethiopia in 1997, RHBs implemented a number of policy instruments and strategies formulated by the FMOH, including the GTP. The health policy adopted by the states recognises the need for equitable access to health care for all sectors of the population with great attention to the needs of the less privileged rural populations and vulnerable social groups. In response to this need, a fee waiver system for those who cannot afford to pay for health services was put in place in the three regions involved in this study and MCH services fees are waived by primary health-care units (PHCU) nationally in order to promote

²¹ Mini EDHS, 2014.

institutional delivery at HFs and delivery care. A community-based health insurance system was also piloted in 13 *woredas* in Amhara, Oromia, SNNPR, and Tigray to help with out of pocket medical costs. Premium payments collected are managed by members in a collective fund and cover basic health care costs at local HCs and hospitals when a member is sick.²²

RHBs and local and regional governments committed to reducing MMR by monitoring and improving SBA factors such as providing ambulances to most *woredas*; offering maternity services free of charge; establishing a maternal death surveillance and response (MDSR) system in collaboration with FMoH and WHO; and making MCH a community agenda through the creation of HDAs, deployment of HEWs back to their home communities²³ and networking of HCs to health posts (HP). Regionally 118,625, 195,864 and 84,129 HDAs were established in Amhara, Oromia and SNNPR, respectively. The corresponding “1 to 5” networks are 572,802 in Amhara, 880,975 in Oromia and 626,953 in SNNPR. In Amhara, 802 HCs were connected to 3,302 HPs; in Oromia, 1,180 HCs to 6,130 HPs and in SNNPR, 723 HCs to 3,838 HPs.²⁴ The one-to-five structure, formed by the government of Ethiopia, helps to address the development messages and the health messages to the communities at village level. Each HH has to be part of the structure and gets information of the health programs and service utilization. Networking of HCs to HPs recognised notable achievements in the areas of maternal health and hygiene and sanitation. With the networking of the HC with HPs the SBA service utilization is strengthened, every HC has to have five satellite HPs which primarily focuses at primary health care and health promotion. The women get ANC visits at HP and are referred to the HC at least once before she gives birth. The women will also get the PNC services and other neonatal care when she comes back to home.

4.3.1 Amhara Region

Amhara is located in northwest Ethiopia and has a population of approximately 20 million people living in 167 *woredas* in 11 zones with 3,317 HPs, 804 HCs and 19 hospitals. As reflected in Table 2, maternal health indicator performances in Amhara included:

- 100 percent of women attended one ANC visit during their pregnancy
- 95 percent of women attended four or more ANC visits during their pregnancies
- 51 percent of HCs and hospitals provided BEmOC and CEmOC services
- 32 percent of births were attended by skilled birth attendants.

MDSR was implemented in five zones, ambulances were provided to every *woreda* to transport women to HFs for delivery and maternal waiting rooms were created for pregnant women arriving from remote locations. However, transportation difficulties

²² Health Finance & Government, “Ethiopia Scales Up Community-based Health Insurance,” accessed on 19 March 2015, <https://www.hfgproject.org/ethiopia-scales-community-based-health-insurance/>.

²³ Belatchew, Mesrak. “Retaining Community Health Workers in Ethiopia,” Capacity Plus, accessed on 19 March 2015, <http://www.capacityplus.org/community-health-workers-ethiopia>.

²⁴ FMoH, 2014.

characterized by seasonal changes and difficult terrains are still a few of the barriers for a lower SBA rate in the region.

4.3.1.1 Banja woreda

Banja woreda is located in Awi zone of Amhara and has a population of 101,300 living in 25 rural *kebeles* and one urban *kebele* with access to four HCs and four HPs.

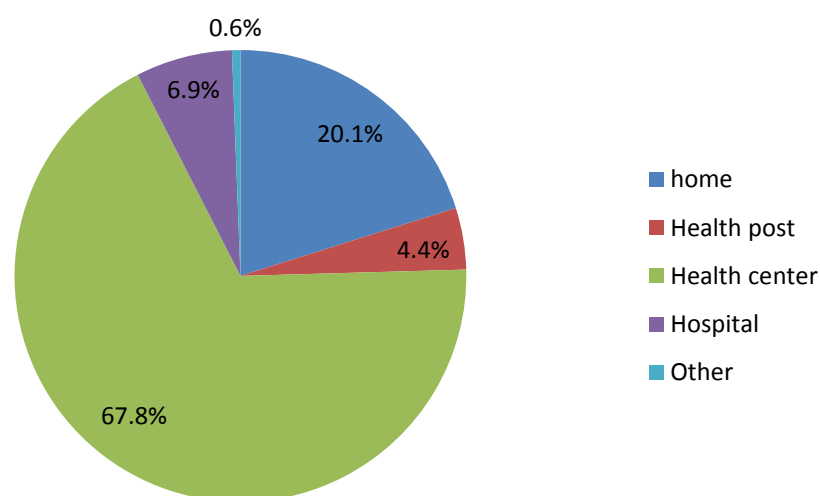
Antenatal care

HH surveys revealed a nearly 96 percent rate of women attending at least one or more ANC appointments during their pregnancy. Eight percent of women attended only one ANC appointment but 22 percent said they had four or more visits. Sixty one percent of women said they completed their first visit within the first four to six months of pregnancy and 20 percent stated they started ANC during the first trimester with only 11.9 percent waiting until the final three months of pregnancy.

Delivery care

Seventy-four percent of women reported SBA at their deliveries with more than two-thirds of the participants stating that, in the 12 months preceding the survey, they gave birth in HCs and were assisted by a nurse or midwife. Six percent of births were attended by a doctor and four percent by HEWs. Of these deliveries, only two and a half percent were caesarean sections. The remaining twenty percent were at Home assisted by the families and their relatives.

Figure 3: Location of recent deliveries in Banja



Eighty-three percent of study participants who reported giving birth in a HF affirmed that their health was checked immediately after giving birth. Subsequently, the health of 50.8 percent of those who delivered at the facility were checked by HEWs. Nearly two-thirds of women received follow up visits in their home one month after delivery; with approximately 60 percent of those visits executed by HEWs.

Analysis of findings

First delay: Recognising the need for medical care and deciding to seek treatment

Recognising the signs of pregnancy is the first step in recognising the need for ANC. During FGDs men stated that they knew when a woman became pregnant when the woman informs them, rumours in the community, morning sickness begins, when they see a visible increase in the size of a women's abdomen, or menstruation stops. One of the male participants explained that traditionally husbands and wives did not talk about pregnancy issues, but now they can discuss it candidly. However, interviews at HCs indicated that women still do not speak openly on this topic and husbands usually learn of the pregnancy when morning sickness began.

HC staff reported women scheduled ANC visits at HFs to verify their pregnancy, learn their estimated date of delivery, check their health status, or when they feel unhealthy. However, even after receiving counselling from health-care professionals, many do not return for regular ANC follow-up sessions because they do not understand the need to visit the HC if they are not unwell. They believe it is only necessary to visit the HFs for the initial diagnosis or to seek treatment for complications.

"I attended ANC appointments three times, this is my fourth visit. I am in my ninth month and before I came here I felt sick and lost weight. When I came to the HC I received treatment and now things are much better than before. I received a vaccine as well as tablets for anaemia. My husband supports my ANC; he even came with me to get tested for HIV and we were told we are virus free. The service I get from the HC is very good and I have been able to prepare food and clothing for my delivery and child." –23-year-old mother

Of the women who attended follow-up ANC appointments, 88 percent received delivery information and 59 percent were advised about birth preparedness. Of the women who received preparedness advice, 70.4 percent got ready by saving money, buying or preparing clothes for the baby, etc. About 68 percent of women were confident in their knowledge of pregnancy danger indicators, 79 percent of whom said they were informed of possible symptoms during an ANC visit, and were able to identify the warning signs. More than 50 percent recognised severe headaches and vaginal bleeding as a potential crisis, 31 percent identified severe abdominal pain as being a possible issue, 25 percent knew that anaemia could indicate a problem, 20 percent realised that high blood pressure was a concern, and 15 percent or fewer understood that swelling or convulsion could be hazardous. Other risks they were informed of during routine ANC visits included blurred vision and membrane ruptures.

Approximately one in five women reported experiencing a health problem during a recent pregnancy and almost all sought care from HFs to address the issue. Around three percent complained of bleeding, 14 percent felt abdominal pain, five percent suffered from severe headaches and less than two percent mentioned difficulties with ruptured membranes or blurred vision.

FGDs revealed that when it came time to decide where to deliver the child, health professionals also relied on religious leaders to educate women on the advantages of attending ANC appointments and giving birth in HFs. Conversely, entrenched religious

beliefs also played a role in discouraging community members from seeking delivery care from HFs because they did not want a male health-care professional to participate in the delivery. Other deep-seated superstitious beliefs such as coffee ceremonies, sheep slaughter and new clothing ceremonies support home births because they are thought to bless the woman and inspire an immediate and normal spontaneous delivery. Some females also claimed that “when a woman leaves her house (to deliver at a HF) Mary stays behind at home”.

Nearly 60 percent of women reported that the decision of where to give birth was made jointly by themselves and their husbands, with only 9 percent making the decision on their own. Yet, women expressed that they were aware of their rights and most did not seek permission from their husbands to deliver at the HFs as they knew that men who prevent their wives from seeking SBA at a HC could be fined. Very few of the decisions were made solely by the husband or parents. However, KIs conducted in HCs suggested that SBA may remain low because of the influence from parents and in-laws who encourage their children to give birth at home as they did.

The majority of delivery location choices were made during the course of the pregnancy with only four percent waiting until they were in labour to make a decision. Three-quarters of women travelled to HFs as soon as labour began with approximately 16 percent waiting until labour was prolonged before going. Female FGD participants explained that husbands usually do not immediately take their wives to HCs when delivery begins; *woreda* health office staff corroborated this inaction and explicated that men generally do not want their wives to deliver in HFs because of the higher cost and avoid having to pay for referrals, transportation, or other related costs.

Amongst the women who did not deliver at a HF (21 percent), three percent did not do so because their husbands did not allow them, another three percent did not because of the long distance to the HF and about thirteen percent did not do so for other reasons.

Second delay: Reaching a medical facility that provides care

Woreda health office interviews, FGDs and KIs all indicated an increase in the number of institutional deliveries at HCs, partly as a result of a fine instituted on husbands who do not take their wives to HCs for delivery; collaborative activities held by the Banja health office with mothers groups, HDAs and model HH groups; and encouragement from local religious leaders, *idirs* (i.e. traditional burial societies), and community elders. However, many women continue to give birth at home due to the remoteness of the HFs; lack of transportation as a result of only one ambulance for the entire *woreda*; inconvenient landscape, rain, or flooded river passes with no bridges making their location inaccessible to ambulances; poor mobile network coverage delaying requests for transport; and slow ambulance response times.

According to the HH survey, approximately one-third of the participants' homes were either over an hour away, between 30 minutes to one hour away, or less than 30 minutes away from a HF. More than half of the women received community support in the form of transportation assistance either to the HF or to a site where an ambulance could reach them. Of those who were able to reach the HF, 43.4 percent were transported by people, 22 percent were brought by ambulance and 20.8 percent walked.

Those who were able to travel to a HF valued the support they received and appreciated the traditional coffee ceremony served post-delivery.

Third delay: Receiving adequate and appropriate treatment or care

Banja has four HCs, with two locations in Kessa and Dinkara that can provide BEmOC during deliveries. There are four midwives trained in BEmOC and both HCs have national guidelines on management of pregnancies and childbirth available in the facilities as well as job aids and/or checklists around the delivery room. Non-emergency maternity services (ANC, delivery care and PNC) are available 24 hours a day, seven days a week, including weekends and public holidays in both HCs, to encourage institutional deliveries and improve SBA. In 2014, there were 149 and 280 deliveries in Kessa and Dinkara, respectively.

Kessa HC has seven nurses, two health officers and two midwives and Dinkara HC has eight nurses, one health officer and two midwives. Although this does not meet the required number of staff, they are relatively well staffed. Kessa HC staff received training on integrated management of pregnancy and childbirth, within the year prior to the assessment, and both HCs' health workers received newborn resuscitation training.

Both HCs had a relatively good supply of medicines and most essential drugs including antibiotics, oxytocin, anti-hypertensive and anti-convulsant. However, Dinkara did not have access to magnesium sulphate to treat convulsions. Kessa HC had almost all of the necessary basic equipment, but Dinkara was missing an examination light, delivery pack and incubators during the assessment.

Kessa HC has two beds reserved for maternity, access to public tap water and direct electricity, but it does not have telephone landline. Dinkara HC's maternity ward has four reserved beds; however, it only has access to an unprotected in-ground water source and does not have electricity or telephone services. Neither of the other two HCs have telephone access nor is the mobile network strong enough to depend entirely on its service. Only one of the other two HCs has electricity and access to water is an issue. Furthermore, most of the roads to the HCs are not easily accessible to vehicles.

Table 2. Treatment of mothers during delivery at HCs in Banja

Condition of treatment	Yes (%)	No (%)
Were health workers happy to see you and provide care?	94.4	5.6
Did they introduce themselves?	59.5	40.5
Were they respectful and caring?	95.2	4.8
Did they explain the procedure?	65.1	34.9
Were you accompanied by relatives in the delivery room?	81.7	18.3
Did the workers in the delivery room treat you unfairly?	7.1	92.9

Study participants provided feedback about their treatment at the facilities during their delivery, with the questions and their responses reflected in Table 3, above. In most cases they reported good experiences. The majority said that the health workers were pleasant, introduced themselves, allowed family members to accompany them into the delivery room and took precautions with their health.

Kills with HCs and health office staff and FGDs with recent mothers revealed that the scarcity and/or absence of an admission area or waiting room in HFs plus the lack of food to give patients were both hindrances to institutional deliveries and demonstrated a lack in adequate patient care. With nowhere to stay and no food, it is a challenge for women to decide when to travel to a HF since births do not happen on the exact estimated delivery date calculated by health workers at ANC appointments.

“This is my seventh child and I gave birth without any problem; medical professionals helped me to have a safe delivery.” –Exit interview with woman who delivered at a HC in Banja

4.3.1.2 Ephrata Gidim woreda

Ephrata Gidim woreda is located in North Shewa zone of Amhara and has a population of 126,266 living in four urban *kebeles* and 19 rural *kebeles* with access to one district hospital, six HCs, and 44 HPs. In 2014, ANC, delivery care and PNC coverages were 63, 35 and 69 percent respectively.²⁵

Antenatal care

Amongst the 159 participants, 94.3 percent reported having at least one ANC visit during their most recent pregnancy within the 12 months preceding the survey. Nearly 50 percent attended four or more appointments and approximately 6 percent completed only one visit. Nineteen percent of women reported starting ANC visits during their first trimester, almost 60 percent stated they began attending appointments during their second trimester and the remaining 12.5 percent attended visits only during the final three months of their pregnancy.

Delivery care

HF deliveries were nearly 75 percent with 60 percent of deliveries taking place in HCs and another 14 percent giving birth in the hospital, only five percent delivered at a HP. Nurses or midwives attended 65 percent of the deliveries, doctors oversaw 10 percent, and HEWs assisted at 5 percent. Three percent delivered by caesarean section.

Postnatal care

Amongst the women who delivered at the HFs, 91.3 percent recalled having their health status checked immediately after giving birth with approximately 65 percent receiving health checks after leaving the facility. A large majority, 83.5 percent, of these check-ups were performed by HEWs. Only 45.3 percent received a home visit by a HEW within one month following their delivery. PNC is also conducted at home on the third and seventh date by HEWs in collaboration with HDAs.

Analysis of findings

First delay: Recognizing the need for medical care and deciding to seek treatment

Kills with the woreda health office described how staff organised women into 692 HDAs and 3,460 one to five structures in an effort to identify pregnant women for whom they

²⁵ Ephrata Gidim woreda health office annual report, 2014.

could provide antenatal counselling and initiate ANC. They organised monthly conferences led by midwives for mothers and pregnant women, enabling them to improve SBA, encourage HF deliveries, and improve maternal health.

Of the women who attended ANC appointments, the majority, 87.4 percent, recalled receiving delivery information. More than 75 percent were advised on how to prepare for delivery such as bringing personal items, sheets, soap, etc.

Fifty-five percent of the study participants in Ephrata Gidim reported that they were unaware of any kind of danger signs with only 43.3 percent recognising the types of complications that could be experienced during pregnancy. Those who had some knowledge about pregnancy risk indicators named bleeding, headache, convulsion, anaemia, high blood pressure and severe abdominal pain as potential problems. However, of those women who attended an ANC follow-up visit, close to three-quarters said they were informed about signs that indicate pregnancy complications.

Table 3. Level of pregnancy complication awareness, Ephrata Gidim

Potential pregnancy complications	% of women with knowledge
Vaginal bleeding	79.7
Severe headache	48.4
Blurred vision	40.7
Abdominal pain	24.6
Membrane rupture	8.5
Other	4.7

The vast majority of women, 86.2 percent, reported no health problems during their pregnancy with only 13.5 percent describing symptoms of severe headaches, abdominal pain, vaginal bleeding and blurred vision. Ninety percent of the women experiencing these warning signs sought medical attention from their local HFs.

When it came time to decide where to deliver, nearly 60 percent of women reported making the decision together with their husband; the woman only made the decision on her own in 27.6 percent of the cases. Eighty percent of the time, the choice was made during pregnancy with the decision being left until labour began in only 20 percent of situations.

Second delay: Reaching a medical facility that provides care

In the HH survey, 10 percent of respondents were further than two hours away from a HF, 30 percent said the distance from home to HF took 30 minutes to one hour, 25 percent were 30 minutes away from the location, and 23.9 percent were less than 30 minutes away. In order to reach the HF, more than one-third of patients walked, 23.3 percent used

“We still have many home deliveries, despite our efforts, because numerous people live in remote areas which are inaccessible to transport, some dislike to deliver on delivery coach which they feel is disrespectful, and families pressure women with the belief that pregnancy is natural and can be done at home.” –HF interviewee

public transport, and 20 percent travelled by ambulance or were carried by people. Half of the women reported receiving transport assistance from community members to give birth at the HF.

Two-thirds of the women waited to travel to HFs until labour began and 25 percent travelled after prolonged labour or waiting for a delayed placenta. There are four ambulances stationed throughout the *woreda*, but only two are functional because of budgetary constraints preventing the hiring of enough drivers. There is one assigned to the hospital, but the HC does not have full use of one and must call the *woreda* when a need arises. While the ambulances are on standby 24 hours a day, reachable through HEWs or *kebele* managers, they are not directly accessible to community members. At times, when there are multiple simultaneous calls, it is also difficult for ambulances to reach everyone in a timely manner. Additionally, the distance to and topography of remote areas made it difficult for the ambulance to reach some people. Another limitation of the ambulance service is that it only provides transport to the facility, making it difficult for many women to return home, as it is difficult to find other means of transportation.

In order to address some of these challenges, Ephrata Gidim *woreda* established “traditional ambulances” in every *kebele*. Traditional ambulances are made up of groups of people who were selected by a development group to track pregnant women’s estimated date of deliveries and assist them, once labour has begun, to a HF or location where an ambulance can reach them.

“We don’t want to take our wives for delivery services because we are afraid of being asked for a referral, hospital expenses, and transportation fees.” –FGD respondent

HC KIIs and *woreda* health offices interviews revealed that, despite a suitable system in place to send referrals from HPs to HCs and the hospital, many limitations remain. Hindrances that keep women from giving birth in a HF include fears of HF expectations on the families upon arrival, a lower understanding about the advantages of an institutional delivery and a belief that HF deliveries are unnecessary and faraway.

Third delay: Receiving adequate and appropriate treatment or care

Of the six HCs and one hospital, ANC, delivery care and PNC services were available 24 hours a day, seven days a week, including public holidays in two of the HCs in Alala and Karakore as well as the Ataye hospital (excluding ANC during public holidays). The HCs provide non-emergency maternity services on weekends and holidays in order to encourage institutional deliveries and improve SBA coverage. However, there was a month during the evaluation period when the hospital was not performing operations because the anaesthesia machine was out of order pending repair. In 2014, there were 132, 164 and 522 childbirths at the Karakore HC, Alala HC and Ataye hospital, respectively.

The hospital provides BEmOC and CEmOC, including blood transfusions, during deliveries; however, only two of the HCs have a midwife trained in BEmOC, but both HCs perform assisted vaginal deliveries to manage complications. Neither the HCs nor the hospital had any national guidelines on pregnancy management or childbirth available at the facilities. Nor did they have job aids and/or checklists around the delivery rooms.

In the year prior to the assessment, none of the facilities received training on integrated management of pregnancy, BEmOC, or CEmOC, but the hospital and Karakore HC staff were trained on newborn resuscitation.

Karakore HC has seven nurses, one health officer and one midwife and Alala HC has six nurses, one health officer and two midwives. Ataye hospital is sufficiently staffed with 18 nurses, five midwives, four general practitioners, emergency surgeons and anaesthetists.

The hospital has most basic drugs in stock and both maternal care HCs had a relatively decent supply of drugs with many essential drugs such as hydralazine anti-hypertensive drug available, although other important ones like metronidazole and magnesium sulphate were only available in Alala and neither HC provided parenteral antibiotics. The hospital has most basic drugs in stock and there are shortages and an inconsistent supply. In general there are shortages and the supply is not consistent, especially in the HCs.

Both Karakore and Alala HCs had nearly all basic tools, but were missing incubators, examination light and manual vacuum extractors. Ataye hospital was fully equipped with all basic medical equipment during the assessment.

Out of Ephrata Gidim's six HCs, all lack a landline with only four able to access a mobile network, one has no electricity, three have no water, and only four are accessible by transport. Karakore HC has four beds reserved for maternity, access to piped water and direct electricity and Alala HC has three beds in its maternity ward, gets water from a protected well and is solar powered. Ataye hospital has six beds reserved for maternity care with piped water, electricity from a central source, and a landline telephone.

Table 4. Treatment of mothers during delivery at HCs in Ephrata Gidim

Condition of treatment	Yes (%)	No (%)
Were health workers happy to see you and provide care?	96.1	3.9
Did they introduce themselves?	75.6	24.4
Were they respectful and caring?	88.2	4.8
Did they explain the procedure?	79.5	20.5
Were you accompanied by relatives in the delivery room?	48	18.3
Did the workers in the delivery room treat you unfairly?	12.6	87.4

In the HH survey the majority of the women reported good treatment at the HFs with only 12.6 percent receiving unfair handling.

According to FGDs with men, pregnant women, and mothers, HC workers do not refer mothers to the hospital in a timely manner because they lack the knowledge to quickly identify the complication and proceed accordingly. Per health office interviews and facility experts, other major factors hindering mothers from seeking skilled delivery services at HFs are the lack of and/or poor quality of waiting areas, delivery coaches, and delivery kits; trainings on BEmOC for newly assigned staff and other health-care workers and drug supply shortage of medicines like oxytocin.

Delays from HC to hospitals have resulted in critical conditions or bad outcomes for both the mother and the baby.

“One day, we brought one of my relatives to the HC. They told us repeatedly that she would give birth soon, but after some time, they referred us to the nearby district hospital and then to a referral hospital where the baby was born dead.” – Study participant

“A woman delivered at a HC; but there appeared to be something else in her abdomen. They (the midwives) did not suspect the presence of a twin and were surprised when a second baby was born. Then, we went to the (Ataye) hospital since they told us that one of the infants required warmth. There was no incubator (at the hospital) and the child died. The second baby also died after four days.” – Study participant

Unfortunately these tragic incidences could be avoided with better training and quicker response times. KIs with the *woreda* health office indicated that delays were also experienced upon arrival at HCs due to the inability of the health workers to properly examine the mothers, and/or because the maternity ward was already occupied or misinformation. Interviewees mentioned that when the mothers are told during ANC visits that the pregnancy and foetus are in good health, they mistakenly assume they will not face any difficulties during labour and therefore may delay travelling to HFs for delivery. If this were the case, which is not uncommon, compounded by delays at the HC, it could lead to disastrous consequences for both the mother and the baby.

During 2014, 44 labours ended in stillbirths and there were 12 maternal deaths registered at Ataye hospital in addition to many others at the HCs. The hospital attributed these figures to the late arrival of the woman to the hospital because of delays in deciding to seek treatment and in referrals by the HC. FGDs with community participants also emphasised the lack of adequate knowledge or skills by the HC staff when it comes to dealing with labour management and delivery. They felt if they were referred to the hospitals earlier they would receive better health care, but by the time they refer the women, typically, it has already become a critical situation, exposing them to unnecessary expenses and bad outcomes. Hospital staff agreed with the community’s assertion that HC staff do not refer mothers early enough and ascribed the delay to the possibility that the HC kept women at their location in order to reach their target delivery numbers allotted by the *woreda* health office.

Despite these challenges, KIs with HCs revealed that in the past Ephrata Gidim had a lower SBA rate (e.g. only 45 deliveries in one HC). However, in 2014 the HFs revised their strategies, prepared an action plan based on feedback received from the community and strengthened their capacity, raising the number of deliveries to 168 and 13 in HC and HPs, respectively with one “home delivery free” village. The *woreda* health office also facilitated the provision of free of charge health services related to pregnancy, delivery and PNC.

In addition, post-delivery, HFs provided tea, coffee and porridge services to make the new mother and accompanying families feel at home and give them the opportunity to participate in traditional cultural activities.

4.3.2 Oromia Region

With a population of about 30 million, Oromia has 306 *woredas*, 952 HPs, 1,300 HCs and 42 hospitals. As reflected in the annual report of the RHB, maternal health indicator performances in Oromia included:

- 104 percent of women attended one ANC visit during their pregnancy
- 48 percent of births were attended by skilled birth attendants
- 74 percent of women received PNC.²⁶

The “three delays model” situational assessment conducted by Oromia’s RHB evaluating the causes of low skilled deliveries, took into account best practises from other well-performing sites within the region and in Tigray. A guideline towards SBA improvement was prepared and an orientation and training were presented to zone administrators, other key decision makers and the regional government’s president in order to mobilise communities at the *woreda* and grass-root level. All of these processes enabled the RGH to get political commitments and raise awareness on the programme.

In hopes of meeting MDG 5 goals in the region, the Oromia RHB monitored facility performances through monthly reports, identifying barriers and filling gaps of those with lower results and rewarding those with better performances and sharing the positive experiences. They also supported pregnant women by holding regular meetings on the advantages of ANC and HF deliveries. HEWs estimated the women’s delivery dates and followed up with them with regular visits and appointment reminders.

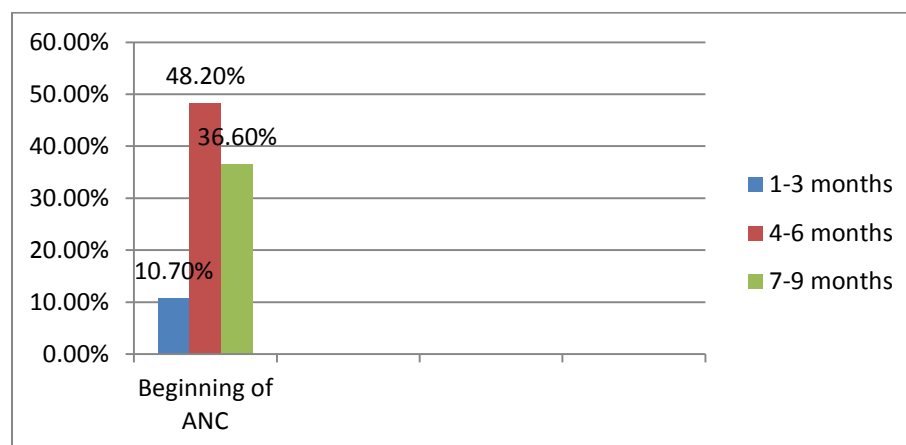
4.3.2.1 Abaya woreda

Abaya *woreda* is located in Borena zone of Oromia and has a population of 126,794 with access to six HCs and 26 HPs. According to the 2014 annual performance report, ANC coverage was 102 percent, SBA reached 32.3 percent and PNC coverage was at 62.3 percent.

Antenatal care

Kills reported that many women receive ANC compared to the past, but many women still do not seek care because they are not aware of the benefits and their husbands disapprove. Amongst the participants, 84.5 percent received ANC during a pregnancy within the 12 months prior to the survey. Seven percent of expectant mothers attended only one ANC appointment with nearly 23 percent attending four or more. Amongst those received ANC, only 10 percent started during their first trimester. Forty-eight percent began attending appointments during their second trimester and 36.6 percent received no care until their final three months of pregnancy.

²⁶ Oromia RHB, 2013/14, Annual performance report.

Figure 4: Month of ANC beginning at Abaya Woreda, August 2014

Delivery care

KIIs stated that less women are dying from labour complications than it was five years back, because of community education efforts and ambulance transport. About 43 percent of women gave birth at home, 11.3 percent delivered in a HP, 39.8 percent in a HC, and 5.3 percent in a hospital. In total, skilled HF deliveries made up 45.1 percent of all childbirths in the *woreda*. Less than five percent of all deliveries were conducted by caesarean section.

Postnatal care

Immediately after birth, 94.7 percent of the mothers who delivered at HFs had their health status checked and 86.7 percent were checked after leaving the HFs, two-thirds of the time this follow up was performed by nurses or midwives. Within the first month after delivery, more than 50 percent of women were visited at home by health-care professionals and 33.8 percent of mothers travelled to HFs for their postnatal appointment.

Analysis of findings

First delay: Recognising the need for medical care and deciding to seek treatment

Realising that one is pregnant is the first step in recognising the need to seek medical care. FGDs with men indicated that, previously, they had no awareness about the importance of discussing pregnancy with their wives. After they received some education on the matter, they began to talk about pregnancy issues with their wives. Previously, men learned of a woman's pregnancy because she informed them, from rumours amongst neighbours, the start of morning sickness around the third or fourth month pregnancy, when the woman's abdomen grew or when her monthly menstrual period stops.

Thirty percent of women said they learned about pregnancy complications during their ANC visits with 38 percent of participants, in total, aware of various warning signs. To varying degrees participants mentioned fever, headaches, bleeding, severe abdominal pain, anaemia, convulsion, and swelling as potential problems. Eighty-five percent of women were told about vaginal bleeding during their ANC visit, 55 percent learned

about the potential for severe headaches, about 40 percent were warned about abdominal pain and blurred vision, and 35 percent had the dangers of membrane rupture discussed with them.

About 16 percent of the women experienced issues during their most recent pregnancy including acute abdominal pain, severe headaches, vaginal bleeding, blurred vision and membrane ruptures. Ninety-five percent of the women suffering from complications sought medical attention with 76 percent visiting a HF.

Two-thirds of women were advised by nurses during their ANC visit on how to prepare for delivery but 28.6 percent received no guidance. However, only 28 percent of women made preparations prior to the delivery including buying baby clothes and preparing flour for porridge. The women who said they gave birth without preparing ahead of time explained it was because they were not sure exactly when they were to deliver or due to the lack of money.

When it came time to decide on where to deliver, health professionals relied on religious leaders to guide women towards giving birth in HFs. However, according to KIs with the local health office, traditional beliefs influence the communities and discourage women from seeking institutional deliveries. Elders discourage women from traveling to the HFs as soon as labour begins and urge women to observe the situation and wait to seek delivery assistance. Children born outside the home are thought to be born unnaturally and are called “*dida*” in Amharic meaning “deaf”. The Borena philosophies, known as “*amenchisa*” believe a pregnant woman should not give birth at a HF without a blessing from the local wizard and that a normal delivery in a HC is impossible without the wizard’s permission.

The availability and inexpensiveness of TBAs also discourages women from seeking institutional deliveries. TBAs claim women prefer to delivery with her because she has experience with obstructed and prolonged labours that medical professionals do not have and only charges 10 birr. However, they reported that when they are initially contacted to assist with deliveries they advise women to seek delivery care from HFs and go only when pregnant women insist on home deliveries.

Many women did not discuss their pregnancies with their in-laws because they knew they would not allow them to go to the HF for delivery. Reports indicated that 45 percent of the time the decision was made jointly with the pregnant woman and her husband. However, FGDs with men revealed that it is tradition for husbands to make the decision because cost and transportation coordination are his responsibilities. It was reported that many times men say there is no need for their wives to go to the HCs and question why they need to go there to give birth since either they or other women delivered their older children without any support from a health institution and they do not want “the women’s blood to flow away out of their houses”. A female attending a FGD corroborated this and told the interviewer, “Our husbands are responsible for our deliveries; every husband in the community is very curious about the advantages of institutional delivery and husbands care for their children and wives.”

While the standard reasons prevented women from seeking SBA such as the inability to travel to faraway HFs, the inability of transport services to reach their location, wishing to deliver at home as their families had done for generations, sudden and short labour durations and fear of expensive health-care fees and transportation costs. Significant to this *woreda*, nearly 60 percent of women stated that they did not seek delivery care from a HF because they did not have their husband's permission. FGDs also revealed that some women do not want to deliver at HFs because they do not want health-care workers to see their genitalia or touch their body and feared that other people might see their body through windows, doors and holes in the delivery room.

About 40 percent of delivery decisions were made during pregnancy. Of the women who decided to deliver in a HF, 43.6 percent said they preferred to leave for the facility as soon as labour starts, with only 27.1 percent waiting until labour is prolonged. In addition, 84.2 percent of the participants claimed to have got community support to take them to HFs for the last pregnancy.

Second delay: Reaching a medical facility that provides care

When participants were asked about the time it takes to reach HFs from their homes, 23 percent were within 30 minutes of a health location, about 30 percent were within 30 to 60 minutes away, and a quarter of respondents were one to two hours away. KIs with health offices indicated that getting immediate transport to HCs was one of the main challenges for women seeking health care. Although there are two ambulances in the *woreda*, poor mobile network coverage to request transport, the difficult landscape of the land, streams without bridges, and the long distances delayed support and contributed to women not reaching the HFs before giving birth. Additionally, some women living in remote areas did not want to travel by ambulance to the HF only to be left without return transport to their difficult to reach home locations. With these considerations, only 23.4 percent took advantage of ambulance services with about 45 percent of participants walking to the HF.

Third delay: Receiving adequate and appropriate treatment or care

Out of Abaya's six HCs, two had maternity services (ANC, delivery and PNC) available 24 hours a day, seven days a week, including public holidays, in Debeka and Guangua. Both HCs provided BEmOC services during delivery; however, neither perform assisted vaginal deliveries. Neither Debeka nor Guangua HCs had the national guidelines on pregnancy management and childbirth available at their facilities, but they did have job aids and/or checklists throughout the delivery rooms. Institutional deliveries at HCs in Abaya in 2014 was 468 and 153 in Guangua and Debeka, respectively.

Both facilities were fully staffed; Debeka HC has five nurses, two health officers and two midwives and Guangua HC has three nurses, one health officer and two midwives. Staff from both HFs received BEmOC and new-born resuscitation training in the past year. According to feedback from mothers who delivered at the HCs, over 95 percent of the health-care providers they encountered in the delivery room introduced themselves; were happy, respectful and caring; allowed relatives to accompany women into the delivery room and explained about the procedures. However, 15 percent responded they felt that they were treated unfairly at the delivery room.

Both HCs claimed to routinely administer oxytocin injections immediately after birth to women to prevent postpartum haemorrhage, but when assessments were conducted only Guangua had a supply of oxytocin on location and neither had access to any other delivery room drugs. They reported that when a need arose they requested medicines from the pharmacy shop, but emergency drugs were not available for purchase.

Both HCs had almost all basic equipment on site but Debeka was missing an examination light and needle holder and Guangua did not have a vacuum extractor. Debeka HC has three beds reserved for maternity needs, access to piped water, and direct electricity powered by a generator. Guangua HC had three beds in their maternity ward, access to a piped water source, and centrally supplied electricity. Of Abaya's six HC's, three (including Debeka and Guangua) do not have landline telephone systems, but do have intermittent mobile service. There is no electricity at any of the other four HCs, a shortage of water availability, and one does not have functional roads.

Kills with the *woreda* health office said that the level of care that women received at the HCs was lacking and cause for bad outcomes. They reported that health-care workers inability to assess women's stage of labour based on the cervix's dilation size, full beds, poor treatment, a lack of knowledgeable counselling, absence of food for women in delivery were just some of the reasons deterring women from travelling long distances to deliver at the facilities. Abaya *woreda* offers coffee to mothers and families post-delivery as a cultural gesture recognising the significance of traditional coffee ceremonies after births.

4.3.2.2 Boset woreda

Boset has a population of 179,518. There are seven HCs and 33 HPs distributed across the rural communities. Maternal service was provided free of charge in the area HFs, leading to 99 percent ANC coverage, 47 percent SBA and 62.3 percent PNC.

Antenatal care

Nearly 90 percent of women had ANC visits at a HF. Almost half attended four or more appointments, 43.8 percent went two or three times and the remaining few went to only one visit. Approximately half started ANC in the second trimester, more than a quarter scheduled their first appointment during their first three months of pregnancy and the remaining 15.8 percent waited until their last trimester.

Delivery care

According to *woreda* officials, only a few years ago skilled institutional delivery was less than 1 percent, but now SBA has risen to 47 percent due to intensive intervention by the government and partners. Just over half of the deliveries took place in a HF with 45 percent occurring at home with nurses or midwives attending 47 percent and health-care providers at HCs attending 54.6 percent. Only two deliveries were made by caesarean section.

Postnatal care

Women are expected to attend at least three post-delivery PNC visits, but, despite education efforts to teach women that PNC is not only for a sick woman or baby, most believe the service is unnecessary and only a few mothers who delivered at a HF

returned for PNC. The majority of women who gave birth at a HF reported having their health status checked immediately after delivery. Only 14.9 percent had a follow up health check after leaving the facility, less than eight percent had a health-care professional visit them at home within a month post-delivery and seven percent of women visited HFs within one month after delivery.

Analysis of findings

First delay: Recognising the need for medical care and deciding to seek treatment

Women at FGDs said HEWs usually visited them at home to educate them on vaccination schedules, infant feeding, personal hygiene and what to expect during delivery. HEWs gave pregnant women living faraway from a HF traditional herbs “feto” and “koso” to drink so their bowels will be clean and ready for delivery.

More than two-thirds of participants responded that the mother and family planned and prepared ahead of time for delivery and 28.9 percent received community support. Some challenges anticipated and planned for by FGD participants included the limited capacity to prepare food to bring with them for labour or other important delivery needs, such as clothing. Some participate in savings and loans groups in case an emergency situation arises.

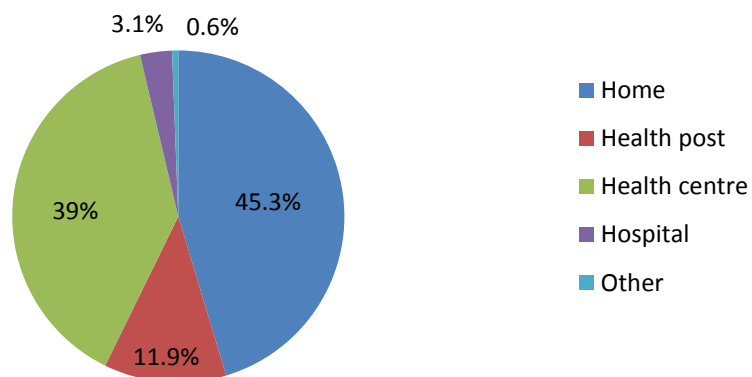
“I am preparing for the birth of my child so I made clothes and got cleaning materials and food. I am also saving money in case there is need for it.” –FGD participant

Table 5. Level of pregnancy complication awareness, Boset

Potential pregnancy complications	% of women with knowledge
Anaemia	55
Vaginal bleeding	75.7
Severe headache	36.9
Membrane rupture	35.9
Blurred vision	34
Abdominal pain	6.8
Other (swelling, increased blood pressure, convulsions)	10.7

Women stated that community members recognise pregnancy danger signs and seek health care from HFs in these instances. Seventy percent of women did not recognise the danger signs of pregnancy even though 65 percent of woman indicated that they were informed of signs of pregnancy complications at an ANC appointment. Despite going for follow up ANC, 22 percent were not informed of potential warning signs at all. Approximately 15 percent of mothers experienced health problems during their last pregnancy including severe headache, malaria, anaemia, bleeding and abdominal pain and 77.3 percent of those with health problems sought medical care, mostly from HFs.

Figure 5: Location of recent deliveries in Boset



The decision of where to deliver was typically made during pregnancy collaboratively with women and their husbands with neighbours and family members sometime involved in the decision-making. Men in FGDs said that the husband cannot forbid his wife from going to the HC and some encouraged their wives to go. They claimed that traditional medicine is not used in villages where there has been health education and it was uncommon to give it to pregnant women or sick babies. However, a few women reported needing their husband's blessing to seek delivery services.

“One woman in labour refused to go to a HF and they called me to assist her delivery at home, but I refused as I was educated about the complication. Finally her husband managed to convince her to go to the HC.” – Former TBA

Some TBAs still assist with births and there are elderly women who also assist with home deliveries, but many refuse and encourage the pregnant women to go to the HFs even when women beg them to assist at home.

Amongst the women who did not deliver at HFs, some of the reasons given included:

- a low awareness about institutional deliveries
- accidental labour
- traditional beliefs that say only women who are hated by God deliver in HFs
- uncommonness of institutional deliveries in the community
- a preference for TBA assistance and giving birth in a home environment
- thought it was unnecessary because childbirth is a natural process
- tradition (e.g. women have given birth at home for generations)
- God is above everyone and everything
- there are no iron items, such as knives, that, traditionally, protect against evils,
- relatives are unable to accompany them into the delivery room
- non-home births are cursed by God
- low quality of service
- closed or distant facilities
- inaccessibility of their homes to transport
- delay by ambulance in reaching location

Pregnant women preferred to leave for the HF as soon as labour began with only 31 percent waiting until they faced prolonged labour. Very few did not go to the HF unless they had a case of a retained placenta.

Second delay: Reaching a medical facility that provides care

Less than one-third of respondents were 30 minutes from a HF with only 19 percent less than 30 minutes away. Thirty-seven percent of women reached the HF by public transport, 20 percent walked and, despite having two ambulances, only 24 percent used an ambulance transport.

KIs and FGDs with the *woreda* health offices and community members indicated that some areas (e.g. Qawa Gebeya, Qarsicha, Hara, Holota and Mirqasa villages) were inaccessible for ambulances to fetch labouring mothers and revealed that the villages are widely dispersed and HCs are very far, making it difficult for pregnant women to get ANC and SBA. Only a few mothers that live around the HFs are able to go for medical check-ups. In one case, a woman called for an ambulance and, before they could reach her, gave birth at home.

Third delay: Receiving adequate and appropriate treatment or care

Interviews with *woreda* health office and HC staff indicated that the level of SBA achievement is not adequate as a result of some health professionals attitudes providing unfriendly health-care service and not being respectful of the traditional beliefs of the patients (e.g. providing a knife or metal to protect them from ghosts), a lack of food for the expectant mother, limited waiting areas, a lack of services for women with pregnancy complications and intermittent or no electricity in some HFs.

Of the seven HCs, BEmOC delivery maternity services were available at two in Wolenchity and Bole 24 hours a day, seven days a week, including public holidays. ANC and PNC services were only offered Monday to Friday. In 2014, there were 577 and 578 deliveries in Wolenchity and Bole, respectively. While both HCs were certified for BEmOC deliveries, only Wolechity managed pregnancy complications and delivery with BEmOC; Bole did not provide parenteral antibiotics or magnesium sulphate nor did they perform vacuum extractions. Wolechity HC also had national guidelines on pregnancy and childbirth management as well as job aids and/or delivery room checklists available in the facilities, while Bole did not.

Both locations were almost fully staffed. Wolenchity HC has five nurses, four health officers and four midwives and Bole has six nurses, three health officers and two midwives. Staff from both facilities received BEmOC training and new-born resuscitation in the past one year. According to the *woreda*, there is strong referral system in place, as well as, two ambulances on standby, landline telephone service and community education on HC locations and contact information.

Drug supplies and basic equipment were both in good supply with essential drugs available in the delivery room. However, Wolenchity lacked some of the anti-hypertensive drugs, an incubator and manual vacuum extractor and Bole had no magnesium sulphate or vacuum extractor. Wolenchity HC has six maternity beds, access to public tap water, direct electricity and a landline telephone. Bole HC three beds reserved for maternity cases; however, the delivery room was narrow and unappealing with the beds very close to one another. They did have tap water access,

electricity and a telephone. Of Boset’s eight HCs, four do not have telephone service, but the mobile network is available throughout, electricity is available in only three of the HCs (including Wolenchity and Bole) and water is a commodity in some of the more remote facilities.

Table 6. Treatment of mothers during delivery at HCs in Boset

Condition of treatment	Yes (%)	No (%)
Were health workers happy to see you and provide care?	94.3	5.7
Did they introduce themselves?	80.5	19.5
Were they respectful and caring?	94.3	5.7
Did they explain the procedure?	88.5	11.5
Were you accompanied by relatives in the delivery room?	70.1	29.9
Did the workers in the delivery room treat you unfairly?	6.9	93.1

The vast majority of respondents were pleased with the reception and treatment they received at the facilities. Only six participants reported to have got unfair treatment at facilities. Pregnant women appreciated that the maternal health care was provided free of charge. However, participants said that the services provided at government HFs were not comprehensive. Reports expressed the community’s frustration with the drug shortage at the HCs. In addition to the unavailability of basic medicines, respondents also felt as though service in the HCs was lacking for the following reasons:

- patients had to go to private clinics to purchase expensive medicines that may be expired or stored improperly
- it took a long amount of time to process identification cards
- waiting times were long
- a lack of professional health-care workers who were supportive, patient and caring (e.g. some staff were disrespectful and insulting to patients and families)
- there was a negligence of service in the outpatient department
- the environment was not conducive for conducting religious ceremonies or rituals (e.g. coffee ceremonies and “etan”)
- dressing at the HFs was uncomfortable and left the pregnant woman feeling exposed.

4.3.3 Southern Nations, Nationalities and Peoples’ Region

SNNPR has a population of more than 19 million living in 154 *woredas* with 22 hospitals, 703 HCs (570 with BEmOC services) and 3,835 HPs. As reflected in Table 2, maternal health indicator performances in SNNPR included:

- 94 percent of women attended one ANC visit during their pregnancy
- 64.1 percent of women attended four or more ANC visits during their pregnancy
- 34.2 percent of births were attended by skilled birth attendants
- 72.5 percent of women received PNC.²⁷

²⁷ SNNPR Annual performance report, 2014.

To reduce MMR and U5MR, SNNPR tracked FMOH policy and strategy performances in addition to conducting the “three delays model” situational assessment evaluating regional causes of low institutional deliveries. They identified the lack of knowledge about pregnancy issues and need for medical care as well as a lack of awareness and information on the advantages of institutional delivery as the first delay. The second delay was in women aware of the benefits of SBA reaching a HF and was due to an inaccessibility of transportation and proximity of health institutions. Receiving adequate or appropriate treatment was the third delay and SNNPR found a lack of appropriate and quality services in the HFs regionally, including ethical and behavioural issues.

The RHBs utilised female HDAs to enhance maternal health seeking behaviour and follow its progress. The HDAs, in their “1 to 5” groups, gathered once every two weeks to talk about their health and other problems. Women received information on the importance of ANC, institutional delivery and the value of PNC to maintain the mothers’ and newborns’ health and discuss health issues. The group meetings have become a place where health providers can identify pregnant women in order to educate and encourage them to seek ANC. The group members were very informative in explaining the array of circumstances pregnant women from going to HPs or HCs for ANC and delivery preparation. When these groups are well organised and functional, like the one operating in Saylem *woreda* at Kefa zone, the strategy brought paramount success.

KIIs with RHBs also identified accessibility and transportation as barriers to institutional deliveries. SNNPR now has 703 HCs, improving its health-care coverage and assigned ambulances to each *woreda* to transport community members to and from HCs or hospitals. While this is a start, the RHBs implied the need for more ambulances and broached the concerns of cultural and religious barriers preventing women from delivering outside the home. The RHB plans for additional health programmes and monitoring, better maternity rooms, a higher quality of service provision and the expansion of BEmOC to 100 percent of the HCs to boost SBA and decrease unnecessary referrals; however, staff turnover is high and has been a deterrent in achieving these goals.

4.3.3.1 Humbo *woreda*

Humbo has a population of 153,286 and is divided into 41 *kebeles* with six HCs and 39 HPs. The *woreda* has two ambulances on standby. ANC coverage was 67.2 percent, SBA was 25.5 percent and PNC was 57 percent.²⁸

Antenatal care

Ninety-four percent of the women went for ANC visits. More than 60 percent visited the facilities 2-3 times with 30.9 percent attending 4 or more visits and only 6.7 percent went to just one appointment. Only quarter of the mothers started the ANC in their first three months of pregnancy. Over 60 percent of women began ANC during their second trimester, and about 10 percent not seeking care until their final few months of pregnancy.

²⁸ SNNPR Annual performance report, 2014.

Table 7: Place and assistance of delivery, Humbo

Place of delivery	(%)	Delivery assisted by	(%)
Home	46.5	TBA	20.9
Health centre	48.3	Nurse/midwife	50.6
Hospital	4.1	Doctor	2.3
Other	1.2	Health officer	0.6
		HEW	1.2
		Non-health workers	8.7

Delivery care

More than half of deliveries took place at HFs, followed by 47% home deliveries. More than half were attended by health-care providers (nurses/midwives, doctors, or health officers). Of the study participants, only nine, about five percent, reported having a caesarean section.

Postnatal care

Almost all women, 97.8 percent, who gave birth at a HF reported having their health status checked immediately after delivery. Nearly 90 percent were checked after leaving the HF. In about 80 percent of the cases, examinations were performed by health-care professionals. Nearly three-quarters of women had someone visit them at home with a month of giving birth; 55 percent of those visits were conducted by health-care providers with the remaining 45 percent visited by other people, typically HEWs. Seventy-one percent of the mothers travelled to a HF for PNC sometime during the month post-delivery.

Analysis of findings

First delay: Recognising the need for medical care and deciding to seek treatment

FGDs with community members indicated that most women speak with their husbands openly about their pregnancies and it is only outsiders who discover the pregnancy when a woman's abdomen grows or when women visit HCs for ANC. A large percentage, 98.1 percent, of the women recalled receiving information about delivery during an ANC visit and 87.7 percent said they were advised on delivery preparations, such as sheets, soap, etc. Of those informed, 86.6 percent responded that they heeded the advice and prepared for the delivery and about 81 percent received support from the community. FGDs revealed that some women also saved money in preparation for the birth.

Of the women who had ANC, three-quarters of them were told about pregnancy warning signs. Approximately 55 percent of women were confident in their knowledge of pregnancy danger signs. The most recognised complications were anaemia (47.1 percent) and severe headache (44.2 percent); swelling, bleeding, blurred vision, increased blood pressure and convulsion were also mentioned.

Table 8. Pregnancy complications reported during ANC visits in Humbo

Pregnancy complications	% of women with symptom
Severe headache	63.1
Blurred vision	25.4
Membrane rupture	23.8
Anaemia	22.1
Vaginal bleeding	17.2
Abdominal pain	5.7

One-third of women experienced health problems during their last pregnancy including severe headaches, membrane ruptures, malaria, anaemia, bleeding and abdominal pain. Almost all with health problems sought medical care and 89.7 percent went to HFs for treatment.

In most cases, 52.9 percent of the time, the decision of where to give birth was made jointly with the women and their husbands with only the mother choosing delivery location seven percent of the time; about 40 percent did not make a decision before labour began. Husbands decide by themselves the place of birth for the women that accounts twenty percent of the study participants.

A significant number of mothers still deliver at home with TBAs for a variety of reasons; 12.5 percent thought it was unnecessary, 30.6 percent said it was uncommon for women in their community to utilise HFs for deliveries and 47.2 percent gave other reasons such as low service quality or closed or distant facilities. In some communities, men were allowed to have more than one wife and wives who deliver at home are more appreciated and considered stronger. One woman asked, “What happened to my mother when I was born? If God helps me, I will deliver my child at home, not at a HC.” Other women lack awareness of the benefits of institutional delivery or are afraid other people would see their genitalia if their feet were suspended over the delivery bed.

Second delay: Reaching a medical facility that provides care

Nearly 40 percent of women reported that there was a HF 30 minutes away from their home and approximately 20 percent living less than 30 minutes away from one. Every community FGD received a traditional stretcher to keep at a pregnant woman’s home in order to carry her to transport or a facility once labour commences. About 45 percent of women utilised the ambulance service to reach a HF before they delivered and 23.8 percent used public transport and 23.3 percent walked.

Pregnant mothers preferred travelling to a HF as soon as labour began, but 30.8 percent waited until they faced prolonged labour or, in a few cases, when they were dealing with a retained placenta. Despite the low numbers, KIs with HCs showed that SBA coverage improved due to the registration of pregnant women by HEWs who then provide women with an estimated date of delivery and deliver lists to the respective HCs. Women who delivered at home explained that “rain and labour appear unexpectedly” either because they were unaware of their estimated date of delivery or labour began in the middle of the night. Other times, when labour began unexpectedly, it went quickly and women were unable to get to a HC in time due to a lack of transportation or

inaccessible roads; however most of roads to the rural *kebeles* are accessible to some extent. In those cases, they called TBAs, friends, and relatives as there were no other options or support available nearby. Only when a severe risk or prolonged labour occurs are the mothers taken to HCs.

For women who were able to make it to a HC, they were unhappy that there was a lack of medical staff to accompany the pregnant women in the ambulances to referral facilities and, many times, the ambulance driver ends up assisting with births while on route to the hospital. Adding to the difficulties, even though ambulances provide round trip transportation for mothers and infants, family members do not have transport and have added costs to get them back home post childbirth.

Third delay: Receiving adequate and appropriate treatment or care

Humbo has six HCs with two in Tebela and Abaya Chekore with 24 hour, seven day a week (including public holidays) ANC, BEmOC delivery, and PNC services. In 2014 there were 472 and 162 deliveries in Tebela and Abaya Chekore HCs, respectively. However, during the assessment period, Abaya Chekore HC did not assist in vaginal deliveries and it was discovered that midwives in these locations did not have adequate training to execute all the components of BEmOC. While manual removal of placenta is typically done in Tebela, this was not a result of health training, but based on past experience. In Tebela HC staffs were not trained on AMTSL and it was difficult to tell if it was being properly performed; partographs were also not properly being recorded with no record at all, in some cases.

Tebela HC had national guidelines on pregnancy and childbirth management available, but it did not have job aids and/or checklists posted in the delivery room and Abaya Chekore had neither. Neither HC had staff trainings on BEmOC or newborn resuscitation in the previous year. Although the HCs are not fully staffed, they both have a fair number of professionals employed; Tebela HC has four nurses, four health officers and three midwives, and Abaya Chekore has five nurses, two health officers and two midwives.

Tebela HC had most basic equipment, except an incubator, but their drug supply was lacking; missing anticonvulsants and anti-hypertensive as well as magnesium sulphate with only oxytocin and adrenaline available amongst the emergency drugs. Abaya Chekore HC lacked an examination light, manual vacuum extractor, incubator and blood pressure cuff as well as anticonvulsants, adrenaline and aminophylline. None of the drugs were readily available in the delivery room, as they did not have their own drug compartments; however midwives usually requested emergency drugs from the pharmacy for each woman, but had to store oxytocin/ ergometrine in the vaccine refrigerator because there was not one in the vicinity of the delivery rooms.

Out of the *woreda's* six HCs, Tebela has three beds reserved for maternity, access to public tap water, direct electricity and a landline telephone and Abaya Chekore has one bed in their maternity ward with pipe water and inconsistent solar power. Three have water and phone service and all but one have mobile network coverage and electricity. All have functional roads in both rainy and dry seasons as well as ambulances stationed at the *woreda* administration as a pool for all of the HCs. Humbo HC refers mothers to Wolayta Sodo Otena hospital with the *woreda* ambulance transport and the mothers get free delivery services there.

Table 9. Treatment of mothers during delivery at HCs in Humbo

Condition of treatment	Yes (%)	No (%)
Were health workers happy to see you and provide care?	97.8	2.2
Did they introduce themselves?	67.4	36.6
Were they respectful and caring?	97.8	2.2
Did they explain the procedure?	97.8	2.2
Were you accompanied by relatives in the delivery room?	94.6	5.4
Did the workers in the delivery room treat you unfairly?	18.5	81.5

Nearly 100 percent of women polled about their delivery room experiences stated they were treated respectfully by happy, caring HC staff; yet, 18.5 percent of the participants felt they received unfair treatment at some point during their visit. This treatment discouraged women from delivering at HCs as well as the discontinuation of complimentary caps, towels, and pyjamas for women in delivery and newborns as they had to bring everything for themselves now.

4.3.3.2 Kedida Gamela woreda

With a population of 109,276 Kedida Gamela has four HCs and 16 HPs. According to the 2014 performance report, ANC coverage was 122 percent, SBA was 47.4 percent and PNC 11.2 percent.

Antenatal care

In the last pregnancy, 98.4 percent of expectant mothers attended ANC visits with about 60 percent of women having at least two to three follow-up ANC appointments and one-third going four or more times. Most women, 62.1 percent, began ANC during their second trimester and about one-fifth sought ANC services in their first term of pregnancy. Kils emphasised that most women do not seek out ANC in the first trimester and believe if they are told that their health and foetus are healthy then they do not need to return for more appointments.

Table 10. Place and assistance of delivery, Kedida Gamela

Place of delivery	No. (%)	Delivery assisted by	No. (%)
Home	6.3	Nurse/midwife	69
Health post	27.8	Doctor	5.6
Health centre	61.1	Health officer	5.6
Hospital	4.8	HEW	11.1
		TBA	8.7

Delivery care

Two-thirds of deliveries took place at HFs with 27.8 percent at HPs and 6.3 percent at home. More than 80 percent were deliveries were assisted by skilled health personnel. Of the total study participants, two women reported to have delivered by caesarean section.

Postnatal care

Nearly 100 percent of women who gave birth at a HF reported that their health status was checked immediately after delivery. Over 70 percent of women received a health check after leaving the facility. About half were examined by HEWs with nurses or midwives completing about 47.6 percent of the health checks. Nearly 60 percent of women reported being visited by a HEW or health-care provider for a health examination. More than one-third of women visited HFs within one month after delivery.

Analysis of findings

First delay: Recognising the need for medical care and deciding to seek treatment

Both men and women said they spoke openly about pregnancy when menstruation stops. Neighbours and community members learn about women's pregnancies when their abdomen grows or the women attend ANC visits at the HC.

Almost all participants recalled receiving delivery information and preparation advice, such as bring sheets and soap to the HC, during ANC visits. More than 80 percent of women said they made preparations for the birth prior to delivery and 60 percent received community support.

Table 11. Level of pregnancy complication awareness, Kedida Gamela

Potential pregnancy complications	% of women with knowledge
Anaemia	31.7
Vaginal bleeding	43.3
Severe headache	41.3
Swelling	28.8
High blood pressure	16.3
Severe abdominal pain	9.6

Over 80 percent of women recognised pregnancy danger such as vaginal bleeding, headache, anaemia, swelling, blurred vision, increased blood pressure and severe abdominal pain even though nearly 90 percent were informed of these signs during an ANC visit.

Table 12. Pregnancy complications reported during ANC visit in Kedida Gamela

Pregnancy complications	% of women with symptom
Severe headache	49.5
Blurred vision	37.8
Membrane rupture	2.7
Vaginal bleeding	53.2
Abdominal pain	7.2

One-third of women experienced health problems during their pregnancy, including severe headaches, blurred vision, abdominal pain and vaginal bleeding and membrane rupture. Almost all of those with health problems claimed to have sought medical care and the majority (83.3 percent) tried to get treatment from HFs.

Decisions on where to deliver were made jointly with women and their husbands nearly 75 percent of the time and solely by the woman 5.6 percent and husband in 13.5 percent of cases and women said they appreciated the husband playing a role in the delivery process and learning more about the benefits of institutional deliveries. Parental involvement was very limited. About 80 percent of the time families decided prior to childbirth where to deliver with few decisions made (15.9 percent) when labour was prolonged or the placenta was retained. Most women preferred to leave for the HF as soon as labour began.

The few women who did not deliver at a HF mentioned they thought it was unnecessary, uncommon, and faraway as reasons why they did not deliver at HFs. Participants proposed providing clothing such as caps, pyjamas and trousers at HCs to encourage women to deliver at a HC. Kils with *woreda* health office staff explained that community understanding of the advantages of institutional delivery was very low and women preferred home deliveries because they believe it is natural. To curb the problem the *woreda* began reaching out to pregnant women through HEWs and HDAs and educating them at monthly conferences and “1 to 5” group discussions. Community members also suggested upgrading the area HCs to hospitals to limit referrals to Durame hospital.

Those who delivered at home said that they requested TBA support, especially when they went into labour unexpectedly or in the night. In spite of the circumstances, pregnant women will go to HCs for delivery when labour pain becomes serious and those who deliver at home seek treatment from a HC as soon as possible after childbirth.

Second delay: Reaching a medical facility that provides care

Sixty percent of study participants reported that they lived 30 minutes away from a HF, 19 percent lived within 30 minutes and 12.7 percent lived 30 minutes to an hour away. Sixty-one percent walked to a HF, some used public transport or ambulances (contactable through HEWs when network coverage is available) and 20.6 percent were carried by traditional ambulances kept in *kebeles*. Some women gave birth at home because of concerns about the long distance; inaccessibility for vehicles or traditional ambulances due to difficult terrain, rain and flooding; fear of the referral process; travel expenses.

Exit interview with a woman who gave birth at home

Aberash Delamo came from her village to Adilo where her mother lives in order to deliver at the HC. She attended an ANC follow-up session at the HC where she was told to prepare for delivery. Following the counselling, she prepared food for herself and infant clothing.

One morning she felt abdominal discomfort and contractions. She informed her who went to the HC to collect a stretcher and called a health professional from the nearby private clinic. Despite assistance from the health professional, the child was stillborn.

Third delay: Receiving adequate and appropriate treatment or care

Of the four HCs, ANC, BEmOC delivery and PNC services were available 24 hours a daily, including public holidays in Adilo and Sheshera. The numbers of deliveries in 2014 were 477 and 249 in Adilo and Sheshera HCs, respectively. Considering Adilo HC had 13 nurses, four health officers and two midwives and Sheshera had 11 nurses, one health officer and three midwives actively working, they were relatively well staffed with professionals. However, turnover was high with health-care professionals because training opportunities were scarce and area residences and HFs lack water, electricity and transportation.

Adilo HC had access to oxytocin but no magnesium sulphate or emergency drugs in the delivery room and most antibiotics but no anticonvulsants or anti-hypertensives, working examination light, delivery pack, manual vacuum extractor or incubator. Sheshera HC had a non-functional blood pressure cuff, a partograph that was not in use, amoxicillin, ampicillin and penicillin antibiotics, hydralazine anti-hypertensive, and diazepam anticonvulsants drugs, but there was not an examination light, manual vacuum extractor, incubator or delivery pack and oxytocin was not routinely available to prevent postpartum haemorrhage so midwives used misoprostol instead. In general, most drugs were unavailable in the delivery room due to the absence of a refrigerator and drug compartment and were only kept in the pharmacy. Midwives requested emergency drugs from the pharmacy based on need.

Of the *woreda's* four HCs, all have electricity, phone service and mobile network access to some extent and three have water and functional roads in both rainy and dry seasons. Adilo HC has four maternity beds, access to public tap water, direct electricity and a landline. Sheshera HC has one dedicated bed for maternity; access to pipe water from a protected spring and a solar powered light source. Ambulances are pooled and stationed at the *woreda* administration.

Table 13. Treatment of mothers during delivery at HCs in Kedida Gamela

Condition of treatment	Yes (%)	No (%)
Were health workers happy to see you and provide care?	97.5	2.5
Did they introduce themselves?	94.9	5.1
Were they respectful and caring?	97.5	2.5
Did they explain the procedure?	91.5	8.5
Were you accompanied by relatives in the delivery room?	69.6	30.4
Did the workers in the delivery room treat you unfairly?	5.1	94.9

Most respondents received respectful and caring treatment from happy health workers at the HFs. However, 18.5 percent of women reported receiving unfair treatment at the HF. *Woredas* took initiatives to improve deliveries. Referrals, ANC, delivery and PNC services are free in all four HCs and hospital due to an agreement with *woreda* officials to provide free maternal health services and the health office budgeted to cover delivery expenses. In the past, WVE also provided additional financial incentive and support of 145 birr to promote the institutional delivery programme and encourage women to go to HCs for ANC and delivery. However, those who go directly to the hospital for delivery without a referral paper from HCs would be responsible for fees.

4.3.3.3 Enemore woreda

Enemore woreda has a population of 204,755 living in 69 *kebeles* with nine HCs and 67 HPs. The woreda has two standby ambulances and in 2014, ANC, SBA and PNC service coverages were 98, 75.7 and 95 percent, respectively.

Antenatal care

Ninety-nine percent of mothers had ANC at a HF. Of those women, 82 percent visited the facilities for four plus times and 6.5 percent came between two to three times. Eighty percent began ANC during their second trimester with only 10.5 percent beginning in the first three months of pregnancy.

Table 14. Place and Assistance of delivery, Enemore

Place of delivery	(%)	Delivery assisted by	(%)
Home	5.2	Nurse/midwife	61.7
Health post	11.7	Doctor	17.8
Health centre	78.3	Health officer	6.9
Hospital	4.8	HEW	13.6

Delivery care

Over 80 percent of deliveries took place at HFs with only five percent of women having a home delivery. TBAs no longer provide delivery assistance but neighbouring women aid mothers when labour starts suddenly in the night. Approximately 86 percent were attended by health-care professional (nurse/midwife, doctor, or health officer). Only five women reported having a caesarean section.

Postnatal care

Of the women who gave birth at a HF, 98.6 percent reported having a health status check immediately after delivery, 61.3 percent were evaluated after leaving the HF. Nearly half of the examinations were conducted by nurses, midwives, doctors or health officers and 19.1 percent were executed by HEWs. Over 70 percent received a home visit post-delivery by a health-care professional or HEWs. Many mothers (52.2 percent) visited HFs within the month after delivery.

Analysis of findings

First delay: Recognising the need for medical care and deciding to seek treatment

FGDs with community members indicated that mothers discussed their pregnancy with their husbands and received ANC. The majority (92 percent) of women remembered receiving delivery information and 76.3 percent were advised about delivery preparations, such as sheets, soap, etc., during ANC visits. Approximately 80 percent responded that families planned and prepared for delivery. Another 84.3 percent received community support.

Table 15. Level of pregnancy complication awareness, Enemore

Potential pregnancy complications	% of women with knowledge
Anaemia	28.1
Vaginal bleeding	84.8
Severe headache	34.8
Swelling	9
High blood pressure	15.2
Severe abdominal pain	9.6
Convulsion	21

Ninety-seven percent of women were informed of pregnancy complications indicators during ANC visits and more than 90 percent of women could name some signs when asked. The most recognised danger signs were vaginal bleeding, headache and anaemia with other symptoms such as swelling, increased blood pressure, membrane rupture, blurred vision and severe abdominal pain lesser known.

Table 16. Pregnancy complications reported during ANC visits in Enemore

Pregnancy complications	% of women with symptom
Severe headache	33.8
Blurred vision	46.4
Membrane rupture	41
Vaginal bleeding	93.7
Abdominal pain	33.8

Just 10.4 percent of the participants experienced health problems including severe headache, vaginal bleeding, blurred vision, abdominal pain and membrane rupture. Almost all of those sought medical care and most (54.2 percent) visited HFs or other health professionals from private health institutions.

“My wife gave birth at home and it was night, and the placenta was retained. In the morning, my colleagues and I carried her to the HC on a stretcher. Even if she the placenta was not retained, I would have taken her to HC.” – Male participant

When it comes to delivery, many people claim to be aware of the advantages of institutional delivery and many times (54.8 percent) men and women decide together or a woman decides on her own (37.4 percent). A decision made solely by the husband or the involvement of parents was very limited. One reason men do not interfere in the women’s decision to seek SBA is a newly instated 500 birr penalty for those who

prevent their wives from delivering at a HF. Eight-seven percent of families made delivery decisions during pregnancy rather than waiting until labour is delayed. Most women (93.5 percent) preferred to leave for a HF immediately upon beginning labour with fewer waiting until they faced prolonged labour or a retained placenta. Of those women who decided on a home delivery, they commented that they did not believe it was necessary, uncommon and the facilities were faraway.

Second delay: Reaching a medical facility that provides care

Woreda health office staff were very proud of the high percentage of institutional deliveries attended by health professionals in 2014. They attributed the success to the joint work with HEWs and HCs and the availability of ambulances. However, ambulances did not make roundtrips to return women home post-delivery which made it difficult for women who needed a vehicle for transport. About 45 percent of respondents lived 30 minutes to 1 hour away from a HF, 27.8 percent lived less than 30 minutes away and 17.4 percent were 30 minutes away. Twenty-seven percent of women walked to the HFs, but the majority (70.9 percent) were carried and fewer took public transport or called an ambulance. The women who did not deliver at a HF gave the following reasons: inaccessibility of roads, lack of transportation services, transportation issues during rainy season, and poor mobile network.

Third delay: Receiving adequate and appropriate treatment or care

Out of the woreda's nine HCs ANC, BEmOC delivery and PNC services were available 24 hours a day, daily, including in Woyra and Gospajay. However, Gospajay HC was unable to perform assisted vaginal deliveries through manual vacuum extraction. The numbers of deliveries in 2014 were 810 and 580 in Woyra and Gospajay HCs, respectively. Woyra HC had national guidelines dictating pregnancy and childbirth management and job aids available in the delivery room and some received BEmOC training and neonatal resuscitation, but Gospajay had neither documents displayed nor any staff training.

Klls said that Woyra and Jatu HCs are the most highly thought of in the woreda and can admit labouring mothers and keep them through delivery. They serve as models and their waiting room and labour practises should be implemented in other HCs to motivate mothers to immediately travel to a HF with a waiting area when labour begins.

Case:

Woyra HC is a model HF in the woreda constructed by Goal Ethiopia and operated by the FMOH. It is fully equipped with staff (including three midwife nurses, two of whom have BSCs and one has a diploma), 22 rooms for employees, a delivery room with emergency drug supply, large admission room furnished with four mattresses and a house furnished with kitchen cooking equipment for family members who accompany the expectant mothers. It provides ANC, MCH, FP, BEmOC delivery, PNC, OPD and other programme services, including TB and HIV testing. The HC also hosts a safe abortion care service centre constructed by IPAS Ethiopia.

Both Woyira and Gospajay have a relatively fair number of professionals; Woyira HC had five nurses, two health officers and three midwives, and Gospajay had seven nurses, two health officer and no midwives. They have relatively fair number of professionals.

All nine HCs had telephone service and access to mobile network to some extent and functional roads both in dry and wet seasons, most have electricity available; however water is not readily accessible. Woyra HC had four reserved maternity beds, access to piped water and direct electricity, but no landline telephone. Gospajay had one bed

dedicated to the maternity ward and electricity, but there was no telephone access or any water. Ambulances were available, but were stationed at *woreda* administration.

Woyra HC had no examination light or incubator, but was better organised, with drugs available in the delivery room, including basic antibiotics, anti-hypertensive, anticonvulsant and emergency drugs. Gospajay did not have a manual vacuum extractor, examination light, incubator, anti-hypertensives or most drugs other than cefazoline, gentamycin, magnesium sulphate, diazepam, oxytocin and prostaglandin. Amongst the emergency drugs, only adrenaline, amophyline and promethaine were found in the delivery room.

Table 17. Treatment of mothers during delivery at HCs in Enemore

Condition of treatment	Yes (%)	No (%)
Were health workers happy to see you and provide care?	98.2	1.8
Did they introduce themselves?	89.9	10.1
Were they respectful and caring?	99.5	0.5
Did they explain the procedure?	79.3	20.7
Were you accompanied by relatives in the delivery room?	66.8	33.2
Did the workers in the delivery room treat you unfairly?	4.1	95.9

Most respondents felt as though they had received a respectful reception and treatment at the facilities. Only four percent of participants reported unfair treatment.

5. CONCLUSIONS

Study limitations

This study was conducted in seven selected *woredas* in WVE operational areas. Therefore, it is not possible to generalise the study findings to the national as well as the regional levels.

Progress of policy frameworks and initiatives

There are many good policy frameworks and initiatives in place to help Ethiopia to realise MDG 5, in time, as a result of the prioritisation and attention given to the target by HSDP IV and GTP and efforts by the FMoH and RHBs. Due to these efforts, MMR has dropped from an estimated 676 deaths per 100,000 live births to an estimated 420. However, in spite of significant improvements seen in 2014, the progress in adding SBA coverage from previous years was not quick enough and did not progress enough to meet the targets defined by MDG 5. Policy gaps included poor implementation of the existing policies and target tracking.

Both the FMoH and regional governments implemented important initiatives to encourage SBA improvement at HFs including providing ambulances to all *woredas* and covering their expenses. Unfortunately, ambulance management was not efficient, thus far; many times they were late or did not reach their intended location. RHBs, *woredas* health offices and HCs also prioritised programmes to better MCH and increase SBA coverage to improve MMR; however, obstacles prevented the intended results from coming to fruition as it seems quick growth supersedes sustainable systems at this time.

Many strategies and policy documents were produced and communicated, but support for the HFs and HCs at the grass-root level did not follow. Little to no support, poor supervision, low education standards to fast-track progress, poor infrastructure led to low, unappealing service quality. Despite the government's emphasis on SBA, staff and service quality remain a concern.

Challenges

This assessment brought to light the significant proportion of women who are not properly informed or fully aware of the danger signs that may lead to pregnancy complications. Even those women who were able to recognise some of the warning indicators did not comprehend the level of seriousness that a complication of that magnitude could have on their pregnancy and/or health. This lack of understanding had a negative impact on early care seeking; continued ANC, timely delivery services as well as PNC follow up. Many times, pregnant women were not taken to HFs early in their labour because they did not appreciate the seriousness of situation or potential for complications.

Meagre knowledge of the advantages of ANC, institutional delivery and PNC are still common amongst the communities. Other barriers contributing to lower SBA included:

- the culture of male dominance in decision-making in some regions
- unfamiliarity with MCH free health-care schemes and fear of health-care costs
- distance of HFs from rural residences

- transportation-related concerns
- lack of confidence in HFs
- culturally insensitive services
- manner in which women seek health care
- uncomfortable and deficient facilities and infrastructure issues
- low service provider quality.

Male dominance in decision-making and the dearth of women's autonomy in the decision-making process of deciding where to deliver, plays an important role in pregnancy outcomes. The survey indicated that while the decision was made by both the expectant mother and her husband in most cases, in some instances other family members or people influence the decision and sometimes make the decision without the woman's consent. Despite the supposed collaborative process, FGDs and KIs revealed that men remain the primary decision makers in the home and determine if and when women will seek ANC, delivery, PNC and other health care.

Transportation and communications are amongst the most significant barriers to achieving 100 percent SBA. Regionally, traditional ambulances systems were put in place by local communities. These are handmade locally to serve as "kareza" (i.e. coaches) to transport expectant mothers and other sick people. A group from the community carries women in labour to a road where ambulances are able to reach. Despite the government's efforts to provide ambulances in every woreda, they still have their restrictions including:

- Providing only one-way service to HCs and hospitals which is a hindrance for families to travel with expectant mothers as they do not know how they will find transport or afford to return home
- Only providing transport from HCs to hospitals so mothers have to find their own transport to the referring HC before travelling to the hospital
- Merely hiring one driver per ambulance so the driver has 24/7 responsibility over its operations
- Frequent interruption of mobile networks making it difficult to contact the ambulance, resulting in delays.

Culturally insensitive services that do not take into account women's fear of exposing their genitalia during medical procedures to health workers, difficulties finding locations for placenta burials or familial and community pressures also prevent women from seeking institutional deliveries.

Although there were marked improvements of community members seeking delivery assistance from HCs, there were still many delayed presentations of women in labour at HFs, especially hospitals where women came as a last resort when labour had reached a desperate and dangerous point.

HC delivery rooms have inferior infrastructure and were poorly designed and planned. The waiting area and the postnatal room are very close to the delivery room which is inconvenient and embarrassing for mothers. The overall floor layouts and room arrangements are unattractive and uninviting to patients seeking care. The delivery rooms are narrow and do not accommodate the coaches that are required for daily admissions so they must be kept in

storage rooms and pulled out when the need arises. In some cases, there is shortage of coaches, which are old and rusted with uncomfortable stirrups. The shortage of coaches, lack of delivery kits, dearth of maternity beds, and absence of waiting areas for post-delivery PNC are just a few of the gaps.

HF's are seriously comprised by the:

- shortages in professional health-care workers and midwives
- inadequate numbers of midwives to full staff in a delivery room to be on call during any given week
- insufficient training for professional staff working in delivery rooms
- lack of BEmOC educational opportunities, in general
- scarcity of BEmOC educational opportunities, specifically for health-care providers that are not midwives to help with the staffing gaps and better prepare those working in the delivery room
- inconsistent and inadequate drug stocks, essential supplies and basic medical equipment at HCs
- Nature of the delivery rooms making it difficult, if not impossible, to be partitioned from one another using during women's labour.

Haemorrhage is amongst the leading causes of maternal deaths. Therefore, drugs to manage these complications should always be available; when supplies are inconsistent it leads to weakened services and poor outcomes for mothers. Facility assessments showed shortages, as well as the absence of, oxytocin/ergometrine in several HC locations to manage postpartum or abortion care. Infections, commonly known as sepsis during or following delivery are one of the common reasons for maternal complications and deaths. Parenteral antibiotics, including intravenous amoxicillin and metronidazole, were also regularly out of stock and unavailable in the delivery room. IV solutions, such as ringers lactate and dextrose, should also be readily available in delivery room stock for the stabilisation and resuscitation of patients with acute or post-partum haemorrhage and those with severe sepsis. Malaria is a common deadly illness, but there were no drugs in the delivery room to counteract the effects of this disease on the patient or foetus. Likewise, pregnancy-induced hypertensive disorders are amongst the common cause of maternal deaths in Ethiopia. The shortage of drugs for the treatment of the complication leads to ineffective EmOC and compromise SBA quality.

Some facilities had most basic equipment necessary to perform normal or assisted deliveries. However, the assessment found that:

- Ten of the evaluated HCs had no examination lights
- seven lacked a manual vacuum extractor
- six did not have partographs to monitor labour while two did not have blank partographs to record progress
- there was an absence of delivery packs in three
- 10 HCs did not have vacuum extractors
- four did not have incubators
- Few had sterilisers, bringing into question the provision of clean and safe delivery.

The lack of basic equipment forces many HCs unnecessarily refer patients to other HFs. The lack of such instruments impedes health-care workers from adequately managing women's labour and predisposes mothers and infants to dangerous and life-threatening conditions and preventable obstetric delays and consequences. Normal delivery care cannot be managed, HCs cannot provide expected services and the initial stages of even mild complication development cannot be prevented without this equipment. The lack of these instruments should be recognised as a crucial impediment preventing quality management of serious pregnancy complications and a high standard of care.

Accomplishments

The *woredas* improved ANC, delivery and PNC coverages with encouraging performances. Significant proportions of women delivered at HFs with SBA rates reaching:

- 74.2 percent in Banja *woreda* in Amhara region
- 74.9 percent in Ephrata Gidim *woreda* in Amhara region
- 45.1 percent in Abaya *woreda* in Oromia region
- 54.6 percent in Boset *woreda* in Oromia region
- 53.5 percent in Humbo *woreda* in SNNP region
- 80.2 percent in Kedida Gamela *woreda* in SNNP region
- 86.4 percent in Enemore *woreda* in SNNP region.

The difference in SBA rates between Amhara, Oromia and SNNP regions is not vast. As the three most populous areas, home to approximately three-quarters of the country's population, improving SBA in these regions will improve institutional delivery rate by many times and accelerate fulfilment of MDG 5.

Observational assessments completed showed that the skills of midwives and other health-care professionals delivering expectant mothers were monitored with checklists that assessed the conditions of labour and delivery, use of partograph and active management of the third stage of labour. In most inspections, staff provided warm and respectful acceptance of women, were polite to their families, and tried to maintain the woman's privacy in the crowded spaces.

6. RECOMMENDATIONS

At the national level:

- Federal and regional governments need to work together to offer more BEmOC training to all HC staff, not only midwives, but also health officers, nurses and other delivery room staff.
- The federal and regional governments must assign more budgets for training, equipment and staffing of the HFs.
- BEmOC trainings should be incorporated into pre-service trainings for all students studying health care, such as nurses, health officers and physicians.
- Efforts should be made at the policy level for skilled birth attendants to be given postings at HPs without compromising the quality.

At the regional level:

- Design community-level educational materials to increase public knowledge of pregnancy complications
- Educate reproductive age mothers, the families and communities on the advantages of SBA
- Equip and support HFs for improved and quality delivery services
- Provide continuous professional training to all health workers
- Conduct further detailed studies at the hospitals to determine the causes of why mothers are referred late from lower HFs
- Perform more detailed studies and analysis on the causes of low SBA
- Offer a consistent supply of drugs and supplies to HCs from the regional government
- Avail necessary basic medical equipment to all HCs
- Educate men, through men's health development groups, on how to provide better support for their wives and take more responsibility for ANC, delivery and PNC
- Supply telephone services for ambulances so they can be contacted whenever the mobile network is not working.

At the *woreda* level:

- Educate communities on the danger signs associated with pregnancy complications
- Ensure HFs are providing adequate information and advice to mothers during ANC, particularly on danger signs of pregnancy complications and advantages of institutional delivery
- Monitor the delivery services at the HFs
- Work with RHBs to avail drugs, basic supplies and medical equipment and conduct regular inventory of delivery rooms for to replenish necessary items
- Engage TBAs to play a role in birth preparedness and strengthening community-based referral practises
- Establish clear systems and monitor the utilisation of ambulances efficiently and effectively

- Assign more than one driver to each ambulance so they can work in shifts
- Launch systems to improve the utilisation of institutional delivery and improve MMR
- Offer training opportunities to men's and women's HDAs
- Ensure all mothers receive respectful treatment services that are culturally sensitive
- Initiate a scheme to be able to provide some and coffee for cultural ceremonies to replace those done during and post birth at home
- Collect or purchase flour, piper, oil and other food items in order to provide meal service for mothers during their stay
- Improve appearance and sanitation of the delivery rooms
- Enhance stock and supply management system for drugs and equipment
- Offer improved traditional ambulance systems with supply of modern stretchers
- Instruct midwives and other staff in BEmOC service provision protocols
- Provide guidance for female HDAs or for "1 to 5" group members to encourage delivery at facilities
- Advocate with religious organisations, CBOs and other relevant bodies to address cultural and societal beliefs norms that negatively affect the health seeking behaviour of mothers.

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