ADDIS ABABA UNIVERSITY
SCHOOL OF PUBLIC HEALTH

Facility Based Maternal Death Review in selected hospitals of SNNPR from 2007/2008-2009/2010

By

Yemisrach Shiferaw (BSC IN PH)

Advisor

PROFESSOR MESGANAW FANTAHUN (MD, MPH, PHD)

A THESIS SUBMITTED TO THE SCHOOL OF PUBLIC HEALTH, ADDIS ABABA UNIVERSITY AS PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF PUBLIC HEALTH IN REPRODUCTIVE HEALTH

MAY 2011
Addis Ababa, Ethiopia

Acknowledgement

First of all I would like to give my heartfelt thanks to my advisor Professor Mesganaw Fantahun who helped me from the beginning to date for his kind fullness in giving constructive ideas and comments as well in facilitating fund for this thesis.

RH project is also acknowledged for their financial support.

Great thanks go to my friends W/t Alemitu Worku and A/to Debebe Shewano for their comments. I also acknowledge the administrative and technical staffs of Yirgalem, Soddo and Arbaminch Hospitals for their cooperation during data collection.

My special thanks go to Ato Zilo from Arbaminch hospital, S.r Samrawit from Soddo hospital and S.r Mahilet Yirgalem hospital who helped me throughout my data collection period in the hospital.

I am very grateful to woreda health office staffs of Leku, Humbo and konso and their respective community for their kind full collaboration while I am doing the focus group discussion.

I would like also to acknowledge all data collectors and supervisors for their effort during data collection.

Last but not the least thanks go to my dear husband Yitbarek Kelemework for his encouragement and support throughout the thesis work.

Table of Contents Page

List of abbreviation

AAU	- Addis Ababa University
ANC	- Antenatal Care
APH	-Ante Partum Hemorrhage
CSA	- Central Statistics Agency
C/S	-Cesarean Section
C-EmOC	- Comprehensive management of Obstetric Complication
EDHS	- Ethiopian Demographic Health Survey
EmOC	-Emergency Management of Obstetric Complication
EMoNc	- Emergency Management of obstetric and Neonatal care
FGD	- Focus Group Discussion
FHB	-Fetal Heart Beat
FMOH	- Federal Ministry of Health
HEW	- Health Extension Worker
IRB	- Institutional Review Board
MDG	- Millennium Development Goal
MMR	-Maternal Mortality Ratio
PPH	- Post Partum Hemorrhage
SNNRP	-Southern Nation Nationality People Region
SVD	-Spontaneous Vaginal Delivery
TBA	-Traditional Birth Attendants
VA	- Verbal Autopsy
WHO	- World Health Organization

List of tables page

List of Figures page

Abstract

Introduction: Maternal mortality has high public health importance because of its magnitude in Ethiopia. Reduction of this high magnitude is possible. However, evidence on magnitude and factors affecting maternal mortality at different administrative level in Ethiopia are not sufficient.

Objective: This study aims at identifying cause, magnitude and contributing factors for maternal death in selected health facilities in SNNPR between 2007/2008 and 2009/20010.

Method: A retrospective register based study using quantitative and qualitative method was conducted in SNNPR in purposively selected three hospitals. All maternal deaths that occurred in the selected hospitals and recorded during the study period were included. Data were collected by reviewing records using check list in the selected hospitals. Additionally FGD using four groups was conducted using semi structured questionnaire. Midwives data collectors from nearby health center were selected for record review; whereas for FGD principal investigator and one note taker participated. Data quality was assured by training data collectors and supervisor, by conducting pre test. Data was entered and cleaned using EPI version 3.5.2.The cleaned data was exported to SPSS version 16, for descriptive statistical analysis. For qualitative method after transcription of data, content analysis was employed.

Result: In the three years of study period in the three selected hospitals 127 maternal deaths were recorded & maternal mortality ratio on average was 1360/100,000 live births. Direct obstetric causes of death accounted for 88%, out of which 31%, 23 % and15% obstructed labour, hemorrhage and eclampsia were the leading causes of death, respectively. Concerning patient factors low level of ANC follow up 3.1%, delay in health seeking behavior by mothers who were in labour for 2-3 days at home 70% and 48.4% the deceased mothers died on the day of admission. About care provision in the facility also delay was seen in patients who were in need of resuscitation, 90%, 84% and 79% of APH, PPH and ruptured uterus cases respectively, died without receiving blood transfusion.

Conclusion: obstructed labour was the leading cause of death. Delay in health seeking behavior as patient factor and delay at health facility as provider factor have contributed to maternal death. High maternal mortality ratio was observed. Based on this finding regional health office was recommended to make the comprehensive emergency obstetric care service accessible to the rural society in which the majority lives.

1. Introduction

1.1 Background

Pregnancy and Child birth are celebrated event, a time for flowers or gifts. However, for many thousands of women each day, child bearing is experienced not as the joyful event as it should be, rather end in death(1). Worldwide, annually 536 000 maternal deaths occur, of this 99% (533000) accounted for developing country and more than half (270 000) occurred in the sub-Saharan Africa(2). Ethiopia is one of the countries with high maternal mortality ratio (673/100,000 live births)(3) and the 4th in the world in maternal death (4). The fifth MDG addresses the need to improve maternal health and sets a target of achieving 75% reduction in the maternal mortality ratio by 2015 from the level in 1990. For this target, two indicators have been selected to help track progress: maternal mortality ratio and proportion of births attended by skilled health personnel(5). As it is indicated in the above MM ratio is highest and skilled attendance at birth is one of the lowest in the world 6%(3), even it is very low compared to developing countries 53% (6). Thus, reduction in maternal mortality ratio by three quarter as speculated in the MDG target is a challenge for Ethiopia to attain.

1.2 Statement of the problem

Maternal mortality is great public health issue in Ethiopia with its high magnitude. The government and its development partners aim at reducing this maternal mortality. Ideally avoiding maternal death is possible, even in resource-poor countries, but requires information from facilities in which death occurred and /or community at which majority of maternal death take in (6). But, why mothers die can‟t be answered easily; because multiple factors can contribute for their death. This study employs facility based maternal death review supplemented by focused group discussion. The importance of this study is that with this great problem evidences to identify the magnitude and factors affecting maternal death are not sufficient at different administrative structures in Ethiopia; thus, this study is expected to provide information on magnitude, cause and contributing factors for maternal death at selected hospitals which would be helpful for health manager‟s programmers and planers to plan and act on reducing maternal mortality in SNNPR, while the results of this study will have a wider implications for the country at large.

2. Literature review

A Maternal death is a death of women while pregnant or within 42 days of termination of pregnancy irrespective of the duration and the site of pregnancy, from any cause related or aggravated by pregnancy or its management, but not from accidental or incidental causes(7). As historical studies shows, MMR decreased in industrialized nations in the beginning of the 20th century. These reductions have not been attributed to economic growth but to the diffusion and professionalization of obstetric care. The most important factors that led to the reduction in maternal mortality were introduction of penicillin, blood transfusion on a large scale, and improved obstetric care in general(8).

In Ethiopia culturally the value for having many children is very high which may be related to high total fertility rate (5.4) in the country. In contrast to this the contraceptive prevalence rate is low (16%). Additionally, preferred location for delivery by Ethiopian women is at home (>90 %) which was mostly assisted by TBAS, making very low skilled attendant at delivery (6%) in the country(3). Similarly, women with complicated deliveries may not reach a functional EmOC facility in time (**0**.4 facilities per 500,000 populations) (9) indicating lack of access to appropriate facility when labour gets complicated.

2.1 Socio demographic factors

Maternal death audit in periurban Dhaka Hospital, Bangladesh revealed that the mean age of the deceased mothers was 24.85± 5.65 years and 50% belongs to 20-24 years age group. One quarter of the mothers was primipara and about one third were in their second pregnancy(10).

As a facility based maternal death review in Ethiopia showed age was a contributing factor in some of the cases. About 20.5% (7 out of 34) were aged less than 18 years and 12 (36%) of the deceased mothers were primigravida. Furthermore most of them were from rural area,73.5% (25 out of 34) and traveled long distance to get a health facility (mean walking distance about eight hours)(11).

2.2 Cause of maternal death

A district-based audit of the causes and circumstances of maternal deaths in South Kalimantan, Indonesia showed that the leading causes of death were haemorrhage (41%), followed by hypertensive diseases (32%). In the same study only 41.5% of the women were seen by a

midwife or a doctor before death, and 69.2% of deaths occurred elsewhere than in a health facility(12).

Maternal death audit study in Bangladesh periurban hospital revealed the primary obstetric causes of death were severe pre-eclampsia and eclampsia (42.50%), haemorrhage (17.50%), obstructed labour (12.50%) and sepsis (7.50%) respectively(10).

National level Assessment on Emergency obstetric care by MOH/UNFPA/AMDD in Nicaragua identified 41 maternal deaths in health facilities between 2004 and 2005. Direct obstetric cause of death accounts for 60% mothers, among those direct causes, pre-eclampsia/eclampsia was the leading cause of death at 40%, followed by haemorrhage at 30% (13).

A study to assess factors for change in maternal and prenatal audit systems in Dar es Salaam hospitals, Tanzania, showed that 78% of all maternal deaths which occurred in these institutions were attributed for direct cause of obstetric complication (eclampsia, obstetric haemorrhage, severe anemia, sepsis and ruptured uterus). The collective hospital-based MMR was 218/100,000 live births (ranging from zero - 385/100,000 live births)(14).

Facility based maternal death audit in Tigray, Ethiopia identified as the main causes (haemorrhage, infection and Pregnancy induced hypertension) and it should not be difficult to make adequate preparations to avoid death from these causes. In this maternal death audit, the vast majority, 82.3% of the deaths, happened after the mother had delivered, the high-risk post partum period(11).

In facility based national survey conducted by FMOH Ethiopia on EmONC in 2008, all governmental and nongovernmental hospitals and health centers were included. They identified causes of maternal death with direct obstetric complication 69%, indirect obstetric complication 21% and unspecified 10%. Major obstetric complications obstructed labour and ruptured uterus 25 %, hemorrhage 12%, and eclampsia 12%, purpural sepsis 5% and abortion 6 % (15).

2.3 Contributing factors

Numbers of maternal deaths reported through maternal and perinatal audit system, South Kalimantan, a five year districts based study identified aggregate of information on contributing

factors. Out of it delay in decision-making and poor quality of care at the health facility were seen as contributing factors in 77% and 60% of the deaths, respectively. Among the most prevalent aspects of poor quality of care mentioned were delays in seeing a health provider, inadequate care, and care that did not conform to protocols. Economic constraints were believed to have contributed to 37% of deaths(12).

Verbal autopsy carried out in Mexico found that most of the mothers did not know danger signs and did not have access to transport(16).

Maternal death audit in periurban Dakah Hospital, Bangladesh showed that more deaths happened within six hours of admission; this indicates delay in coming to hospital. All patients came from the catchment areas, not very far from the facility, with quite good access to transport indicating of lack of awareness of "danger signs" and delay in making decisions by the patients or the family for coming to hospital. Experience of different interventions for safe motherhood reveals that the medical decisions by the community are often based on non medical reasons. Cultural appropriateness and alternative healing systems are strong competitors for seeking proper medical care. Concerning about antenatal care except one all of them did not receive ANC. Regarding delivery status, about 73% deaths occurred in the post-partum period and 17.54% in the ante-partum period. The interval between admission to hospital and death was less than six hours in 30% deaths. Majority of the admission was during routine office hours indicting that there is a tendency of rejecting cases out of working hours (10)

A district-based audit of the causes and circumstances of maternal deaths in South Kalimantan, Indonesia in one verbal autopsy identified that several factors contribute to maternal death, and it was difficult to put a single factor. This is illustrated by the case of a woman with a retained placenta who bled to death. In her case all the three delays occurred and lead her to death (12).

A facility-based maternal death reviews in Roi Baudouin district hospital, Dakar, Senegal with one year base line and three years intervention study identified 153 maternal deaths in the three years of study period. Of these deaths, 139 (91%) were associated with avoidable factors. Decrease in the overall maternal mortality rate between the baseline period and year 3 were observed. Most of the reductions in maternal mortality in the study period were due to a decrease in deaths related to haemorrhage and hypertensive disorders (50.1% and 26.3%) respectively.

Analysis restricted to women with obstetric complications and adjusted for maternal characteristics and care factors showed a significant decrease of maternal mortality in year 2 and year 3 compared with that during baseline(17).

Intervention based maternal death review performed in Gambia in 32 cases using verbal autopsy revealed that health service factors were the most contributing factors for maternal mortality in the study area. Seven out of 32 were delayed in decision making and 27 of the 32 women had died because of delay in reaching an appropriate obstetric care after appropriate decision was made. However, even after reaching an appropriate obstetric care facility, 31 out of the 32 cases had not received the obstetric care services they needed(18).

Egyptian national maternal mortality study identified the three delays as contributing factors for maternal death. They were classified into three categories: health provider factors, health facility factors, and woman and family factors. Shortage of blood was to16% of maternal deaths and playing an especially important role in deaths from hemorrhage, ruptured uterus, and complications of cesarean section. Delay in seeking care, mainly because of failure to recognize danger signs during pregnancy or delivery, was the most frequent patient and family factor, contributing to 30% of maternal deaths. Delay was also associated with initial care seeking from general practitioners and private practitioners who were unable to manage obstetric emergencies or delayed referral to hospital. In addition, compared with women in Egypt in general, women who died were less likely to have been using modern contraception and more likely to have experienced contraceptive failure and a higher proportion had unwanted pregnancies(19).

Health facility-based maternal death audit in Tigray, Ethiopia revealed that, the three delays with poor recording. According to the review, delay in seeking care on the side of the women was the major contributing factor. However medical factors and lack of transportation also made significant contributions. In about a quarter (26.5%) of the women, all three factors contributed to the death. Although some of the women were attended by skilled attendants they were not properly handled to avoid death; since for approximately 87.5% of the deaths medical service-related factors were identified. As care providers declared lack of transportation; improper medical care due to lack of blood for transfusion; delay in treatment initiation; inappropriate treatment and patient factors such as delay to seek care and home delivery while having bad

obstetric history and congenital anomalies of the vagina were important. Thirty-two percent of the women did not receive definitive care at the hospitals, indicating that referral or care seeking was delayed. The other problem was poor reporting and these results in underestimate of maternal deaths. Of 34 maternal deaths obtained from registration book only 14 were reported in health information management system(11).

Knowledge, attitude and belief study in maternal care seeking behavior and practices in pregnancy and childbirth in Ethiopia revealed that having community support for expectant mothers is important, both morally and practically during pregnancy and childbirth. Many prefer delivering at home in the company of known and trusted relatives and friends where customs and traditions can be observed. Even though communities are aware of the dangers around childbirth, it will be more helpful and life saving, if they add contingencies for potential complications, such that most families hope or pray that things will turn out well. When things go wrong valuable time is vanished in finding resources and man power to assist in the transfer to a health facility. Home delivery is linked with socio-cultural aspects of the society. This should be recognized by the health care providers and incorporated into the care provided at the health facilities this may reduce maternal mortality(20).

Findings of a confidential enquiry into maternal deaths in Ghana showed that fee exemption helped early arrival of women with obstetric complication to hospitals, but it needs proportional allocation of resources(21).

As the most common direct maternal cause of death is hemorrhage, the innovation for blood transfusion and different technology brought change in maternal mortality in different parts of the world. For further reduction of maternal mortality knowing the cause and contributing factor for maternal death is important. Different forms of cause and contributing factors related to maternal death, out of which socio cultural influence, delay in decision making, delay at arrival to the appropriate health facility level and the quality of service provided at facility were contribute to maternal death .To investigate these factors and to act accordingly there is no vital registration and death certification in the country. Based on the available data this study provides a clue and identifies different causes and contributing factors for maternal death in the study areas.

3. Objectives

General objective

To assess magnitude, cause and contributing factors for maternal death in three selected hospitals of SNNPR from 2007/2008 to 2009/2010.

Specific objectives

1. To describe hospital based maternal mortality ratio and rate in selected hospitals of SNNPR.
2. To identify medical causes of maternal death in selected hospitals of SNNPR.
3. To explore patient factors related with maternal mortality in selected hospitals of SNNPR.
4. To assess provision of care at health facility related with maternal death in selected hospital of SNNPR.

4. Methods

4.1 Study area and period

4.1.1 Study area

The study was conducted in the SNNPR. Based on 2007 Census conducted by the (CSA) of Ethiopia, the SNNPR has an estimated total population of 15,042,531, out of which 7,560,480 (50.3%) are women, from total population 1,738,910 (11.6%) women estimated to be of childbearing age. And 89.72% of the population is estimated to be rural inhabitants; SNNPR is one of the nine ethnic divisions ("killiloch") of Ethiopia. Its capital city is Hwassa 275 km away from Addis Ababa, contains over 45 indigenous ethnic groups and the working language of the state is Amharic. The region has 15 hospitals of this 13 perform comprehensive emergency obstetric care.

Overview of the three hospitals

Yirgalem, Welayita Soddo and Arbaminch hospitals are 45,150 and 250 km away from Hwassa, respectively. They are among the comprehensive emergency care providing hospitals in the region. They are situated in zonal city providing service for the wider area coverage. To provide the maternal health care each hospital in the maternal case team were having gynecologist, general practitioners at least one and at most three. Concerning midwifery nurses 13, 11 and 16 in Arbaminch Soddo and Yirgalem hospital, respectively except for Yirgalem hospital others have BSC midwifes. All hospitals have anesthetist.

4.1.2 Study period

The study was conducted from August 2010 to May 2011

4.2 Study design

A retrospective register based study was conducted in selected hospitals of SNNPR on maternal death which occurred during 2007 /2008 to 2009/2010. The study used both quantitative and qualitative research method.

4.3 Population

4.3.1 Source population and study population

All deceased mothers due to maternal causes of death recorded in the three selected hospitals of SNNPR from 2007/2008- 2009/2010.

Operational definition

Maternal death is a death of women while pregnant or within 42 days of termination of pregnancy irrespective of the duration and the site of pregnancy, from any cause related or aggravated by pregnancy or its management, but not from accidental or incidental causes.
Maternal mortality ratio is Number of maternal deaths during a given time period per 100 000 ***live births*** during the same time-period
Maternal mortality rate is Number of ***maternal deaths*** in a given period per 1000 women of ***reproductive age*** during the same time-period

4.5 Inclusion criteria

The cases eligible for inclusion were:

The cases need to be classified as a maternal death according to the WHO ICD 10 definition;

Death must have occurred between the time intervals of September 11th of 2007 to September 10th of 2010 G.C and

The death must have occurred within the selected Hospitals or/and registered.

The exclusion criteria used were:

Data which are incomplete for cause of death and date of death were not taken.

4.4 Sampling procedure

4.5.1 Sampling techniques

Three hospitals having the highest maternal case flow in the region were selected out of 15 government hospitals in SNNPR.

Selection criteria for hospitals

High maternal case flow, relatively from others hospitals in SNNPR, based on information obtained from regional health bureau and,

General hospital covering wider area (more than one region or zones)

The selected hospitals were namely Yirgalem, Sodo and Arbaminch hospitals.

4.5.2 Sample size

All the maternal death that occurred in selected hospitals and recorded in the last three years, and met the inclusion criteria were included. From 2007/ 2008 to 2009/2010 127 maternal deaths were recorded in the three selected hospitals (Arbaminch 21, Sodo 53 and Yirgalem 53). A total of 12 focus group discussions were conducted, in which nine from community and three from health works on average having 8 members. Communities FGD were conducted after collection of data from hospital register. Based on the frequency of maternal death obtained from register of each hospital weredas with high maternal death frequency were selected. These are Shebedino, Humbo and Konso from Yirgalem, Soddo and Arbaminch hospitals, respectively. Then with the help of wereda health office 12 kebeles were selected. From the selected kebele, three people including the leader, one woman in the reproductive age group and one male age 15-59 were selected by the kebele leader. They were called at the compound of wereda health bureau and the discussion made there in different group at different time in the same day. Providers in the selected hospital, who are involved in care provision, (midwifes, nurses) were selected in each hospital. Discussion was made in quit room to avoid disturbance in each hospital.

4.7 Data collection procedure

4.7.1 Data collection method

For hospital based case review data was retrospectively collected from case records (admission register, case file and delivery register). In some cases patient chart may not found in their usual place in this case registration books only used. As the study was conducted using secondary data, it was supplemented by FGD. It (FGD) was used for health care providers, community leaders, women in reproductive age group, male age 15-59. If the community FGD participants are farmers, they were compensated by payment for time lost during the discussion. Not to miss what is thought by discussants, tape recorder was used during discussion in addition to note taking. FGDs were in Amharic language except for women in Konso, in that case and rarely in other discussion translation by facilitator used.

4.7.2 Data collection instrument

Data were collected by using check list for all maternal deaths in the hospital. The check list was designed to explore profile of the patient, time of admission, diagnosis at the time of admission, mode of delivery, intervention, time of death and cause of death. The check list was including details of the mothers' backgrounds (age, marital status, and place of residence) and complete obstetrical histories. For FGD semi structured questionnaire was used for probing each group.

4.7.3 Data collectors

For the Hospital record review midwives from nearby health center was recruited. Supervisor for hospital record review was recruited from health science college‟s instructors in each hospital. For FGD principal investigator and other two people participated, one note taker and one facilitator of the discussion. Principal investigator was the leader of discussion. The facilitators (three for three sites of FGDs) were perfect in Amharic and local language and aware of local customs, traditions and sensitive to them. Additionally he/she was having skill in probing, and volunteers to travel to rural part of the wereda. Facilitators, when there is language barrier, worked as translators.

4.7.4 Data quality assurance

The supervisors in each case of data collection checked the completeness and validity of the collected data. Finally the principal investigator checked each questionnaire for the same purpose. Training was given in each hospital for data collector and supervisor on the purpose of the investigation and the importance of obtaining the information without bias. Pre test was conducted in Arbaminch hospital to see whether the questioner meets the objective of the study or not. Based on the result of pre test questioners were corrected and some variables were added. After correction made the pretest result were included in to the study, because the study subjects are the deceased once. Additionally in each hospital data collectors made familiar with the questioners along with the training. In case of FGD facilitator and note taker were taught, how to probe for information in a sensitive manner and without biasing the responses discussants. In case of FGD pre test was conducted in Dalle wereda chume kebele. FGD questioner was translated in to Amharic and data collectors who are perfect in local and Amharic languages were used.

4.8 Variables

Maternal Death

Socio demographic factors:

- Age
- Residence
- Marital status

Obstetric history

Medical causes of death

Contributing factors (three delays)

Delay in care seeking

- Labour at home
- Time b/n admission and death

Delay in arriving at appropriate level of care

- Condition to arrive at health facility
- (Distance, transportation or availability of ambulance etc…)

Delay in receiving care at institution

- Interventions (medication, blood transfusion, fluid administration…)

4.9 Data analysis

Quantitative analysis

Data were entered and cleaned by using EPI info v.rs 3.5.2 and a descriptive Statistical analysis was performed using SPSS version 16. For hospital based maternal death review quantitative analysis were applied to identify and see any patterns or trends among the women on the basis of a variety of characteristics. i e. by age , residence , time in which death occurred, gravidity, gestational age, pregnancy outcome, antenatal care, type of delivery , place of delivery, duration of labour at home and cause of death. Data was summarized and presented using tables and figures. A ninety-five percent confidence interval was calculated using two population proportions by open EPI info. And p value < 0.05 was considered as statistically significant

Qualitative analysis

The collected data through FGD from tape recorder and note were transcribed and translated in to English language as it is. Then the document was analyzed and summarized by content analysis.

4.10 Ethical consideration

The proposal was submitted to the Research Ethical Committee of Addis Ababa University, college of health science for approval. Following the approval by REC, regional health Bureau was informed about the objective of the study through a support letter from the School of Public Health, AAU. From the regional health Bureau written permission was obtained to each zonal health office and they extend the permission letter to each Hospital and wereda which was selected for the study. For review of record as the study was conducted through review of records, name was excluded from the data collection tool to keep the information anonyms. For FGD verbal consent form was used to confirm their agreement to participate in the study.

5. Result

5.1 Socio Demographic characteristics of the deceased women

From2007/ 2008 – 2009/2010, in the selected three hospitals of SNNPR, a total of 127 maternal deaths were recorded. Of these, 53 (42 %), 53 (42 %) and 21(16 %) occurred in Yirgalem, Soddo and Arbaminch hospitals, respectively. In Soddo hospital, of 53 maternal deaths recorded in the registration book, patient card was obtained only for 32(60.3%), for Yirgalem and Arbaminch hospitals all patients‟ cards were available. Mean age of the deceased mothers in this study was 26.4±6.86 years. Among the deceased mothers, 45(35.43%) were young mothers (age 15-24), 43(33.6%) were in the age group 25-29 years. Information on marital status was recorded for only 79(62.2%) of deceased mothers, out of which 78(98.7 %) were married. About their residence, again information was recorded only for 102 (80%), out of which 84(82.7%) were from rural area.

Table 1 **Socio Demographic characteristics of the deceased women from 2007/2008- 2009/ 2010 in the selected three hospitals of SNNPR**

Characteristics	**Number**	**Percent**
Maternal death in each hospital	(n= 127)	**%**
Yirgalem	53	**42**
Soddo	53	**42**
Arbaminch	21	**16**
Age	(n=127)	
15-19	15	**11.81**
20-24	30	**23.62**
25-29	43	**33.62**
30-34	23	**18.11**
35-39	11	**8.66**
40-44	4	**3.15**
45-49	1	**0.79**
Residence	(n=102)	
Rural	84	**82.3**
Urban	18	**17.7**
Marital status	(n=79)	
Married	78	**99**
Single	1	1

According to the FGD which was conducted in Leku and Humbo community, the discussants recognized that early marriage is still being practiced in their community and they said that, it is related to maternal deaths. All of the discussant agreed that rural mothers are dying, because of lack of awareness, distance (accessibility) transportation cost, tradition and economic factors. Male and leader participants in Humbo stated that traditionally pregnancy before marriage is shame for the family and the girl herself. When this happens, either she decides to kill herself or the family keeps silent the condition and refuses any medical care during labor, then she dies at home.

5.2 Maternal mortality ratio and rate

Maternal mortality ratio on average for the three years of study period in the three hospitals of SNNPR was 1360/100,000 live births, ranging from 230 in Arbaminch hospital in 2010 to 3622/100,000 live births in Soddo hospital in 2009). In Arbaminch hospital maternal mortality ratio is declining in the three years period, where as for Soddo and Yirgalem hospitals maternal mortality ratio was higher in 2009 (3622 & 2464), respectively.

Table 2: Maternal mortality ratio/100,000 live births for deceased mothers in Yirgalem, Soddo and Arbaminch hospitals of SNNPR from 2007/2008-2009/2010

Hospital	Years	live birth	women age 15-49	Maternal Death	MMR/100,000 live birth	MMR/1000 women in reproductive age
Yirgalem	2007/8	1390	1738	15	1079	8.6
	2008/9	974	1429	24	2464	16.75
	2009/10	1126	1836	14	1243	7.6
Soddo	2007/8	618	1084	9	1456	8.3
	2008/9	635	1147	23	3622	20.1
	2009/10	924	1509	20	2164	12.25
Arbaminch	2007/8	1284	1329	11	856	8.27
	2008/9	1260	1641	7	555	4.26
	2009/10	1302	2007	3	230	1.49

The average maternal mortality rate was 9.24/1000 women in reproductive age in the three years of study period. Compared to the baseline; 8.3 per 1000 in (2008), maternal mortality rate has significantly declined to1.5 per 1000 in 2010 using a two population proportion; 95% CI: 6.8(1.6, 11.9) per 1000 in Arbaminch Hospital. In the other two study hospitals, maternal mortality rate is almost the same (P >0.05).

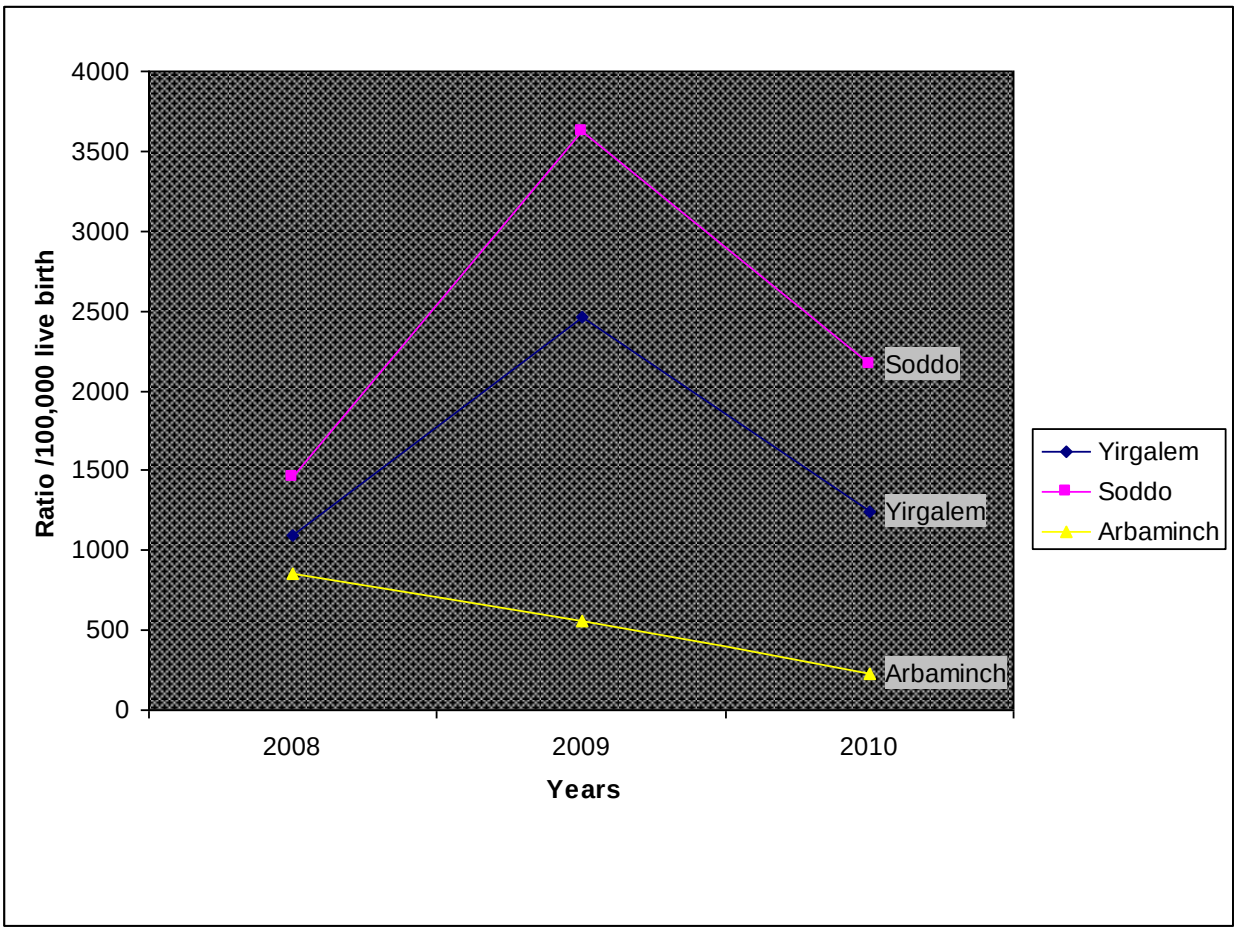


Figure 1 : Maternal mortality ratio in selected hospitals of SNNPR from 2007/2008-2009/2010

5.3 Obstetric history of the deceased mothers

Data on gravidity, gestational age, delivery type, pregnancy outcome and time of death were recorded for only 94(74%), 86(67.7%), 62(48.8%), 93(73.2), and 112(88.2%) of mothers, respectively. The aforementioned variables were computed only for respective mothers having complete data. Accordingly, regarding gravidity of deceased mothers, 42(44.7%) were multi gravida, followed by primigravida; 28 (29.8%) and grand multi gravida, 24(25.5%). Similarly, concerning type of delivery by deceased mothers, about half, 48.4 % (30/62) gave birth by spontaneous vaginal delivery followed by Caesarian section 42% (26/62). Among SVDs 80% (24/30) was home delivery. That of home delivery PPH / retained placenta which accounts 58% (14/24) cases followed by25% (6/24), 17% (4/24) eclampsia and purpural sepsis were respectively. On the other hand along with C/S cases 57% (15/26) were from the 36 cases of ruptured uterus that means 58 % (21/36) of them were not treated by the same management. Moreover there were 64% (23/36) cases of ruptured uterus that came after two to three days of labour at home. Out of which 43% (10/23) were managed by C/S and the remaining 57% (13/23) wouldn‟t. Gestational age of pregnancy at the time of death of mothers was also determined. Majority, 87% (75/86) of maternal death occurred in 3rd trimester. Almost equal number of deaths occurred in 1st and 2nd trimesters 6% (5/86) vs. 7% (6/86). Regarding pregnancy outcome in the deceased mother, 62 %(57/93) were delivered and 39 % (36/93) were undelivered. Among delivered, 40 %(23/57) were live birth including home delivery and the remaining 35% (20/57), 25 %(14/57) were macerated and fresh still births respectively. Concerning time of death, of maternal death 58 %(65/112) occurred in the post partum period; (Table 3).

Table 3: ***Obstetric history of deceased mothers in Yirgalem, Soddo and Arbaminch hospitals of SNNPR from 2007/2008- 2009/2010***

Obstetric history		Number	Percent
Gravidity		(n=94)	
	Primigravida	28	**30**
	Multi gravida	42	**45**
	Grand multi gravida	24	**25**
Gestational age		(n=86)	
	1st trimester	5	**6**
	2nd trimester	6	**7**
	3rd trimester	75	**87**
Types of delivery		(n=62)	
	SVD	30	**48**
	Caesarian section	26	**42**
	Forceps	3	**5**
	Vacuum	1	**2**
	Distractive	2	**3**
Outcome of pregnancy		(n=93)	
	Live birth	23	**25**
	Fresh stillbirth	14	**15**
	Macerated stillbirth	20	**21**
	Undelivered	36	**39**
Event		(n=112)	
	Ante partum	23	**21**
	Intra partum	24	**21**
	Post partum	65	**58**

5.4 Medical Cause of death

Direct obstetric cause of death accounts for 117 (88%) and the indirect cause of death were 16(12%). Major direct obstetric causes of death were obstructed labor in 44 (33.08%) of cases followed by 31(23.3%) hemorrhage and 20(15.04%) of Eclampsia. Of the indirect causes of maternal death, malaria was the leading 11(8.3%) out of all causes.

Table 4: Cause of maternal death in Yirgalem, Soddo and Arbaminch hospitals of SNNPR, from 2007/2008- 2009/ 2010

Cause of death	Yirgalem (n=56)	Soddo(n=55)	Arbaminch (n=22)	Total	
Direct cause	**No**	**No**	**No**	**No**	**%**
Hemorrhage	**15**	**14**	**2**	**31**	**23**
APH	4	4	2	10	
PPH/retained placenta	9	8	0	17	
Hypo volumic shock	2	2	0	4	
Obstructed labour	**21**	**11**	**12**	**44**	**33**
Ruptured uterus	16	10	10	36	
Prolonged/labour	2	1	2	5	
Ruptured uterus / Anesthesia	1	0	0	1	
CPD / metabolic emboli	1	0	0	1	
Hand prolaps	1	0	0	1	
Eclampsia	**12**	**8**	**0**	**20**	**15**
P. SEPSIS	**3**	**2**	**5**	**9**	**7**
PROM	1	0	1	2	
Abortion	**3**	**4**	**0**	**7**	**5**
Others	**1**	**4**	**1**	**6**	**5**
IUFD	0	3	0	3	
Hyper emesis	1	1	1	3	
Indirect cause	**2**	**12**	**2**	**16**	**12**
Malaria	0	9	2	11	
CHF	2	1	0	3	
RVI	0	1	0	1	
Anemia	0	1	0	1	
Total	**56**	**55**	**22**	**133**	**100**

Number of possible causes of death are 133 while number of deceased mothers was 127; this is because some of them die of multiple causes. For example, a woman dies with a diagnosis of malaria and eclampsia.

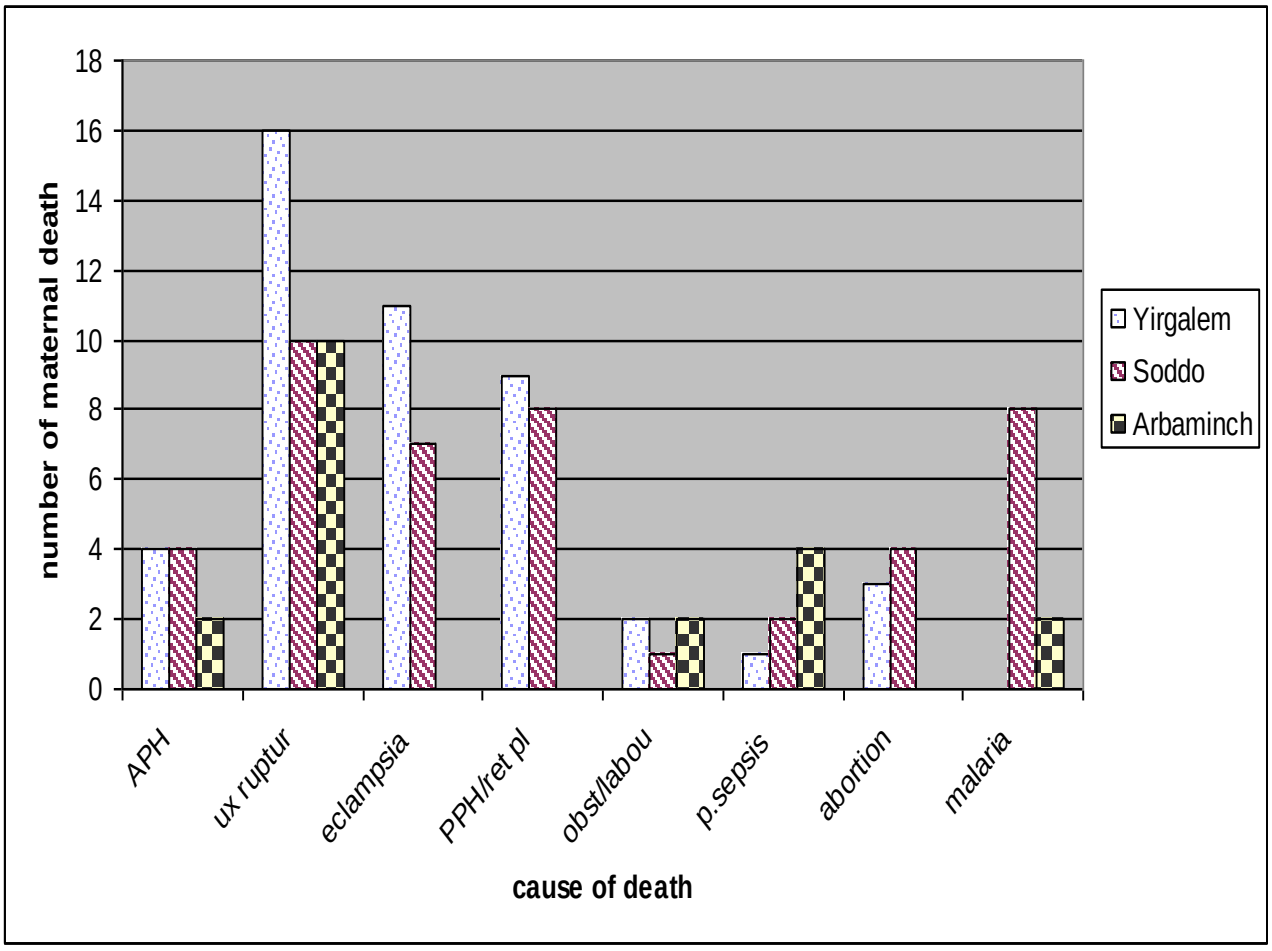


Fig 2: Major cause of maternal death in selected hospital of SNNPR from 2007/2008-2009/2010

Among the major direct obestetric causes of maternal deaths,utrine ruptur is the leading in all the three hospitals.in the case of Yirgalem and Soddo hospitals, eclmpsia and retained placenta are the second leading major direct obestetric cause of maternal death (fig 2).

More of maternal deaths 65(58.02%) occurred during post partum period (Fig, 3).

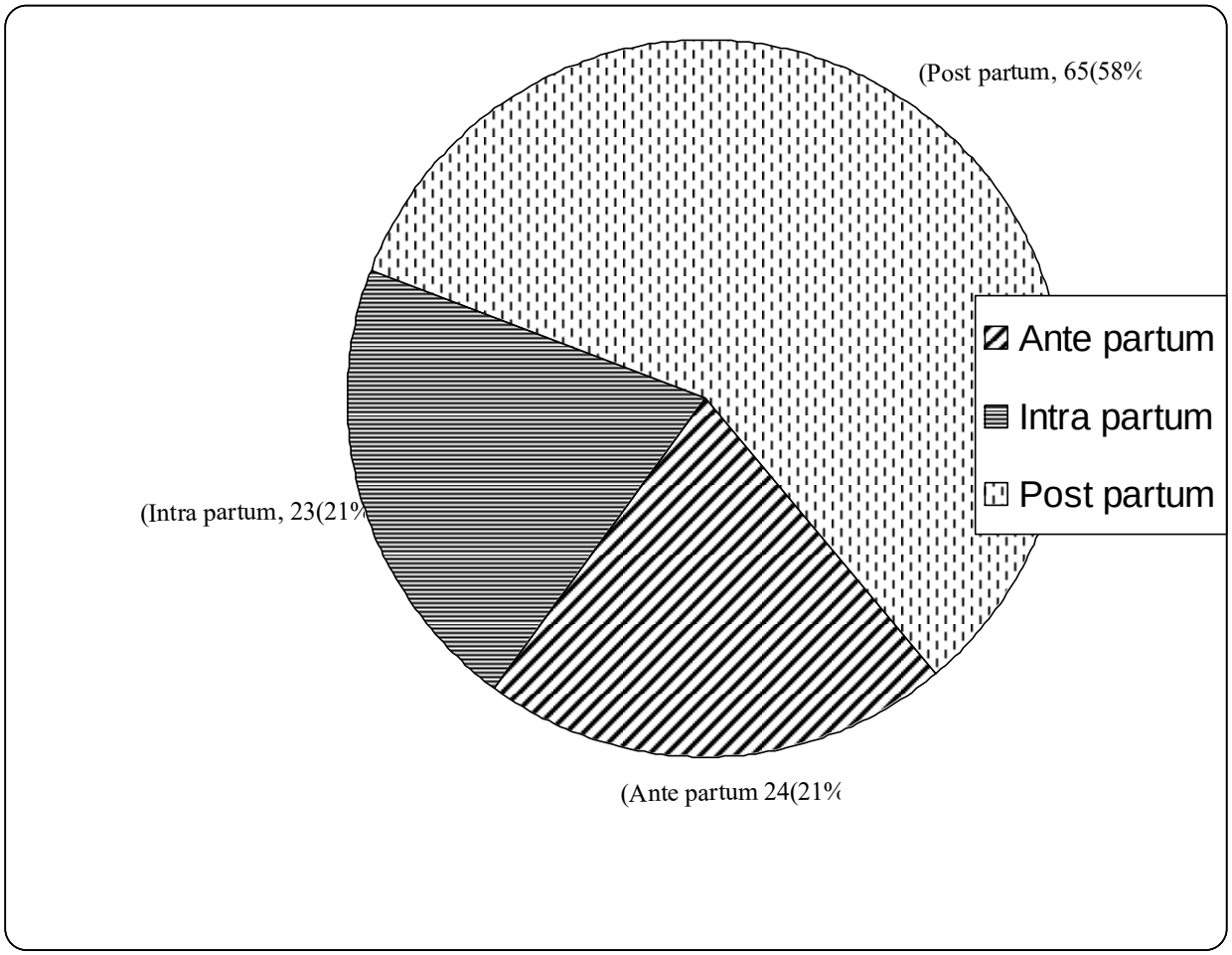


Fig 3: Period in which maternal death occurred in Yirgalem, Soddo & Arbaminch hospitals of SNNPR from 2007/2008-2009/2010

5.5 Patient factors related to maternal death

Only 4 (3.1%) of the deceased mothers had attended the antenatal care. Information on labour was obtained for 104(82%) of deceased mothers, out of which, 89 (85.6%) were in labour. From those in labour data on the duration of labour at home were available only for 47(52.8%). Of these, 19 (40.42%) and 14(29.79%) were in labour for two and three days, respectively. Ruptured uterus case was the highest in duration of labour at home; out of 36 cases 23(64%) were in labour at home for two to three days. In relation to the FHB during admission, data were found only for 62(49%) of mothers and FHB was negative for 51(82%) of them. Regarding their

place of delivery for deceased mothers, 40(60.6%) delivered at hospital and 26(39.4%) delivered at home and died in the hospital. With respect to referral, only 24(18.9%) were referred from health centers and majority 85(66.9%) of cases were self referred. Regarding the time of death of mothers, 60 (48.4%) of 124 mothers died in the day of admission, and 24 (19.4%) within the next day of admission. The remaining 40(32%) deaths occurred between 2-23 days of admission.

Table 5: Patient factors related to maternal death for deceased women in Yirgalem, Soddo and Arbaminch hospitals of SNNPR from 2007/20008-2009/2010.

Characteristics	Number	Percent (%)
Antenatal care	**(n=109)**	
Yes	4	3.8
No	105	96.2
Labour	**(n=113)**	
Yes	89	78.8
No	24	21.2
Duration of labour at home	**(n=47)**	
Less than one day	6	12.8
One day	8	17.0
Two days	19	40.4
Three days	14	29.8
FHB	**(n=62)**	
Positive	11	18
Negative	51	82
Place of delivery	**(n=66)**	
Hospital	40	60.6
Home	26	39.4

More than half of FGD participating groups, including health professionals mentioned that poor habit of ANC follow up was related to maternal death. Almost in all FGDs home delivery was acknowledged as a related factor with maternal death. Woman in labour may be brought to health facility when she is in difficulty of labour after two to three days in labour at home or when she is exhausted and between life and death. Lack of awareness related to signs of abnormal labour was mentioned by health professionals during the discussion, "*They do not recognize abnormality, even when the fetal movement ceases they don"t consider it as abnormality and may come to health facility after a month when she gets ill*".

The most frequently raised factors related to maternal death was poverty, majority of maternal deaths occurred in poor mothers. In addition to poverty, people from rural area were affected because of lack of awareness, distance (accessibility) transportation cost; traditional delivery which takes place in warm, closed room where no one allowed entering except females and a traditional birth attendant. Additionally, there is amiss conception of a disease; they come after their problem gets worse. Health professional from Yirgalem hospital said that, "*most common case in this hospital was eclampsia; they bring the woman after she fall down on the fire, when you ask them why they are late*", "*because it is evil eye we were praying for her"*

5.6 Care provision in the hospital that is related to maternal death

Regarding the intervention, recorded data were found only for 62(48.8%) of deceased mothers, out of which, 20(32.2%), 17(27.4%), 14(22.6%) and 11(17.8%) were given medication, operation, blood transfusion, and resuscitation, respectively. As well 26(42%) of them received more than one types of intervention. Hence, only 10% (1/10) of APH cases, 16 %(3/19) of PPH cases, and 21 %(8/38) of ruptured uterus cases were given blood transfusion. On the other hand, regarding fluid resuscitation, no case of APH was intervened by fluid resuscitation, but only 21% (4/19) of PPH cases and 21% (8/38) of uterine ruptured cases received resuscitation with fluid.

A discussant at Yirgalem hospital agreed that the presence of delay in the hospital, when physicians are not sure of the diagnosis and when they are on call. In the case of on call „"when *you call them because they awake from sleep, they say, „Iwill come"*""and arrive late. This was before the implementation of BPR, but now, every worker assigned for eight hours, so that everybody is ready to mange emergency cases. The other reason was shortage of blood due to the unwillingness of the relatives to donate blood and in case of the presence of blood bank, workers in blood bank, need to replace the blood before they give to the patient. Additionally delay in hospital may occur when buying medication,""""*After taking the prescription the relatives waste several time to return with the needed drug"*"this can be due to lack of money, (Health workers from Arbaminch and Yirgalem).

Delay in health center was revealed in every community FGDs with community due to lack of skill and confidence, "*Fresh health workers in the health center lack skill, after checking for several hours, they called for someone a senior health worker from his house ,then he referred me to hospital* ""female FGD participant from Konso.

With respect to signal function for comprehensive emergency management of obstetric complication all (three) hospitals were complete. Regarding the important drug magnesium sulfate was not found in all hospitals. Furthermore in Soddo hospital there is no blood bank (Table 6).

Table 6: **Indicators for emergency obstetric and neonatal care in Yirgalem, Soddo and Arbaminch hospitals of SNNPR**

Indicators for EOC	Arbaminch	Soddo	Yirgalem
Blood transfusion	Yes	Yes	Yes
Oxytocine	Yes	Yes	Yes
Blood bank	Yes	No	Yes
Magnesium sulfate	No	No	No
Methyldopa	Yes	Yes	Yes
Fluids	Yes	Yes	Yes
Diazepam	Yes	Yes	Yes
Hydralizine	Yes	Yes	Yes
Signal function			
Parenteral antibiotics	Yes	Yes	Yes
Parentral oxytocin	Yes	Yes	Yes
Parentral ant convalescent	Yes	Yes	Yes
Manual removal of placenta	Yes	Yes	Yes
Removal of retained product	Yes	Yes	Yes
Assisted vaginal delivery	Yes	Yes	Yes
Neonatal resuscitation	Yes	Yes	Yes

FGD participants in the three hospitals stated that while a woman is in critical condition, relatives are not cooperative to donate blood, including her husband, her mother and father. In the community discussion all the discussants agreed on the problem. In all three hospitals, maternal cases are seen by midwives immediately on their arrival to hospital. The hospitals are opened for twenty four hours and all the services are provided including weekend and holyday. Ambulance service is available only in Soddo hospital. About service fee, average fee for SVD is

175 birr and for C/S 610 birr. Concerning training on emergency obstetric and neonatal care, minimum of two trained midwives are available in each hospital.

Table 7: **Factors related to health care provision in Arbaminch, Soddo &Yirgalem hospitals of SNNPR**

Characteristics	Arbaminch	Soddo	Yirgalem
Service fee in birr			
Average fee for SVD	200	150	175
Average fee for CS	630	600	600
Average waiting time	0	0	0
Services not given at holiday or weekend	-	-	-
Opening hours	24	24	24
Ambulance service	No	Yes	No
Trained professional on EMoNc			
Physicians	0	1	0
Nurses	0	0	0
Midwifes	4	2	2

All FGD participants commented on high service charge as a reason, why pregnant and delivering mothers do not came to health institution as early as possible. Besides their economic constraints, the absence of ambulance in hospitals and woreda level increased the problem of transportation, male community FGD participants in Shebedino said that, "*While we are searching money, women may die, if there is an ambulance service the life of mothers can be saved".*

6. Discussion

The identified 127 maternal deaths in the three hospitals with in the three years were too many in its absolute number. Moreover, as data from all FGD participants‟ shows, majority of maternal deaths occur in the community before arrival to hospital. Thus, the above hospital finding may not indicate the actual number of maternal death Tigray, Ethiopia (10).

When we look to socio demographic factor of maternal death, age, residency and marital status are related factors. In this study (35.43%) of death occurred between age 15-24 years in spite of several actions by Ethiopian government(22) this finding may possibly indicate for the presence of early marriage or early sexual initiation. It was also supplemented by FGD participants‟ that early marriage is a contributing factor for maternal death. This result is somewhat lower than similar study in Tigray, Ethiopia which was (20%) (10), this difference may be due to difference in the magnitude of early marriage between SNNPR and Tigray area. The mean age of deceased mothers were 26.37± 6.09 which was 24.85± 5.65 years in similar study of Dhaka Hospital, Bangladesh but, age 20-24 (9).

With respect to residency, majority of deceased mothers were from rural parts of the country it is 82.3% which was 73.5% in similar study in the country (10). From FGDs results maternal death is common in rural women due to lack of awareness, distance (accessibility) transportation cost, tradition and economic factors.

One percent of maternal death occurred in single woman this small number may be related to traditional factor. As reflected by FGD participants in Humbo and Soddo, pregnancy before marriage makes them deprived of the service, because of tradition. It is shameful for family and the woman herself to be pregnant before marriage.

Maternal mortality ratio on average for the three years of study period in the three hospitals of SNNPR was 1360/100,000 Live birth, ranging (3622-230 in Soddo hospital in 2009 and in Arbaminch hospital in2010) this is higher than national survey EDHS 2005 this is facility based review in which all deaths were taken and in the case of survey the study was sample based, and very high compared to Dare Salaam hospitals, Tanzania (13) which was 218/100,000 live birth, this difference may be Tanzania have initially lower MMR compared to our country (578/100,000 live births in 2005) and it is lower than Gambia, which was 4,452 per 100,000 live births (18). The other thing that makes maternal mortality ratio higher in this study may

be due to its measurement. In measuring MM Ratio the denominator is live birth that is recorded in the hospital registration book, in case of home delivered mothers admitted due to post partum complication the condition of their baby is not known. As a result while their mothers are included in the numerator their newborns are not in the denominator.

In Arbaminch hospital maternal mortality rate was significantly declining from the base line. This may be because, in Arbaminch hospital there is a project which works in maternal mortality reduction, by establishing emergency surgery in rural hospitals and health centers .it may contribute for reduction of maternal mortality ratio in Arbaminch hospital.

Direct obstetric cause of death accounts for 88% seems higher, compared to other studies elsewhere (12, 13, and 14). This may be due to variation methods in identifying maternal deaths (where current study was limited to cases which were admitted to the obstetrics and gynecology wards), and variation in study area (the previous studies unlike the current study were conducted in private, government hospitals and health centers). Moreover, criteria used by different hospitals to admit cases in the obstetrics and gynecology ward may vary from hospital to hospital. The other possible reason may be individual health personal capacity of diagnosing cases accurately may vary from person to person, as multiple possible causes of diagnosis found in single patient and also in health professionals FGD participants cited miss diagnosis as a factor for delay at health facility.

Major obstetric causes of maternal death were obstructed labour, hemorrhage and Eclampsia, appears to be concurrent with facility based national survey Ethiopia (14) and different to South Kalimantan, Indonesia and Tigry, Ethiopia (11, 10) in which leading cause were hemorrhage and in Dhaka Hospital, Bangladesh, Nicaragua (9, 12) Eclampsia was leading.

Antenatal care follow up was very small 3.8 %, again failure to have ANC follow up was recognized as a contributor for maternal death by majority of FGD discussants. Similar finding was revealed in South Kalimantan, in which only one of the deceased mothers received ANC follow up(9). Even if every pregnancy is at risk, the current focused ANC is helpful since it provides information on birth preparedness and emergency readiness at individual context.

This study identified quarter of maternal deaths occurred in grand multi gravid mothers. Family planning is suggested to reduce maternal mortality. Community FGD participants mentioned that

too frequent birth and too many children in the family might contribute for maternal mortality. If those mothers could have been thought on family planning and had received family planning, quarter of maternal death would have been avoided or at least minimized.

More than a quarter (6/20) of Eclampsia cases were in postpartum period. This may be explained by misconception on disease which resulted in delay for decision making in the community to seek health care. As discussed in FGDs they come after their problem gets worse, a case of Eclampsia brought late and; when you ask them why they were late," *because it is an evil spirit we were praying for her ".*

In current study obstructed labour being the leading cause of death which may be explained by delay in health seeking behavior of community. Delay in health seeking behavior was seen in 70% of deceased mothers who came to hospital after 2-3 days of labour at home, and also all of FGD participants agreed that woman in labour may be brought to health facility when she is in difficulty of labour after two to three days in labour at home or when she is exhausted and between life and death. This finding is similar to a finding of study in Ethiopia *"He will take me there only when the illness becomes serious or when I am close to death" (20).*
Delay in health seeking behaviors was seen in 64% of ruptured uterus cases in which that they came to hospital after two to three days of labour at home. Out of which 43% was managed by C/S making delay only at home where as 57% were not treated with C/S in this case both delay at home and delay at health institution occurred. Beside this only less than half 42% of ruptured uterus cases were managed by C/S indicating in appropriate management in the rest of cases (delay at health facility).

Additionally, 82% of deceased mothers were admitted with negative fetal heart bit. This result is supported by the FGD finding among health care providers where "*mothers come even after a month of cessation of fetal movement*"; this delay may be due to lack of awareness on danger signs during pregnancy and labour. And it is also in line with the finding that only few, 3.8% of deceased mothers had ANC follow up.

Near to half of maternal deaths occurred during the first day of admission. This can be regarded as a proxy indicator of delay in health seeking behavior. And therefore, almost half of maternal death could have been avoided if, they arrived earlier.

In line with the above finding, different reasons were raised in FGD for delay. Rural residence, distance, transportation, tradition, awareness on danger sign of decision makers and economic factor were recognized as key factors. A study in Ethiopia pointed out almost similar factors in health seeking behavior as a cause of patient side delay(20).

There is an improvement in all three hospitals in provision of maternal care. Previously screening was in the outpatient department emergency room, a bleeding case may die at OPD. Waiting time becomes zero and the door is open for every maternal case for 24 hours including weekend and holyday. As FGD (health professionals) discussant agrees, after the implementation of Business Administration Re- engendering (BPR) many of the problems in health professionals were changed.

Even if there were changes, there is also inappropriate care related to maternal death. It was seen in direct obstetric cases which are potentially in need of blood transfusion. Ninety percent, 84% and 79% of APH, PPH and ruptured uterus cases respectively, died without receiving blood transfusion when they were in need. This finding may imply that, if they were transfused with blood, this much death could have been avoided.

Lack of blood transfusion to mothers in need might be due to reluctance of people to donate as explained in FGDs. Additionally, it can be related to absence of blood bank in Soddo hospital and even in the hospitals with blood bank, lack of voluntariness to donate blood for replacing it to bank could be cited as possible reasons. Apart from blood transfusion, which could have been constrained by the reasons mentioned so far, no case of APH and only 21% (4/19) of PPH and 21% (8/38) of uterine ruptured cases were resuscitated using intravenous fluids other than blood. This finding may indicate delay from health care provider side in instituting appropriate type of intervention.

In all FGD high cost for service fee in hospital for maternal case was complained. As we have seen majority of maternal deaths was from rural area, distant from comprehensive emergency obstetric complication management sites. In this study, rural societies are mostly affected, the other bottle neck is their economic condition, most of them cannot afford transportation and

hospital charge cost, so that they die at home. "*While we are searching for money & people to carry, time will be lapsed; the women may die at home or in the way to hospital or she may die immediately on arrival to hospital*".

Making the service free of charge were recommended by National bases line survey on emergency management in Ethiopia (14) where as another study in Ghana, (21) realized the risk of exemption of service fee without increasing the other resources.

Most of community FGD participant raised the importance of ambulance service in health center and hospital to decrease maternal mortality. "*While we are searching money within short time women may die, if there is an ambulance service, by calling to ambulance, the life of mothers can be saved*". Except Soddo hospital others do not have ambulance service.

The recommended drug for management of Eclampsia/ pre Eclampsia was magnesium sulfates, but none of the hospitals used this drug. Since, it was not found in any of the hospitals. In this study Eclampsia was the third leading cause of maternal death 15%, if the drug would have been found in the hospital, some of the mothers would have been saved.

7. Strength and limitation

Strength

The finding from facility based maternal death reviews was supplemented by the views of the community and health professionals through FGD.

Weakness / limitation

- Because hospitals were selected purposively, the result may not be representative
- Use of secondary data

8. Conclusion

Maternal mortality ratio generally was high for the three hospitals in the three years. Among direct obstetric cause of maternal mortality, obstructed labour was identified as leading cause followed by hemorrhage and eclampsia. Concerning patient factors contributing for maternal death were, delay in health care seeking behavior, which was seen in mothers who come after two to three days of labour at home, mothers who died in the day of admission and who were admitted with negative fetal heart bit. ANC service utilization was near to nil. Similarly FP service utilization was also found to be very low; which was seen in death of grand multi gravid mothers. Additionally different forms of socio cultural factors like early marriage, traditional beliefs and values likely to have contribution in maternal mortality. The study revealed that failure by health care providers to institute life saving interventions (IV fluid resuscitation and blood transfusion) for mothers in need. High service charge and in availability of ambulance was also as the other drawback for redaction of maternal mortality.

9. Recommendation

To zonal health office

- The government and its partner together with community, make the comprehensive emergency obstetric care service accessible to the rural society in which the majority live.
- Refresher training for health professionals and supportive supervision in maternal service.
- Should have programs on health education to increase the community awareness on birth preparedness emergency readiness and traditional things that are related to maternal death.
- By working with partners should fill a gap in material supplies i.e important drugs and ambulance at least in woreda level.

To Hospitals

- Managers in the hospital should follow the quality of care provided for patients and fulfill the require materials to reduce maternal mortality.
- Each hospital should have its own maternal death audit or confidential enquiry into maternal deaths in the community and hospitals.
- Service charge should be minimized for maternal causes to attract the poor.
- Community related factors that contribute to maternal death should be addressed through health education.
- Should have the ready available blood in their blood bank.
- Increase awareness of the community on the importance of ANC, FP and institutional delivery.

TO the community

- The community should create a means for those who die at home at emergency condition ie.(„eder‟ for the sick rather than for died).
- By taking family planning the community should reduce maternal death in grand multi gravid mothers.

Nongovernmental organization

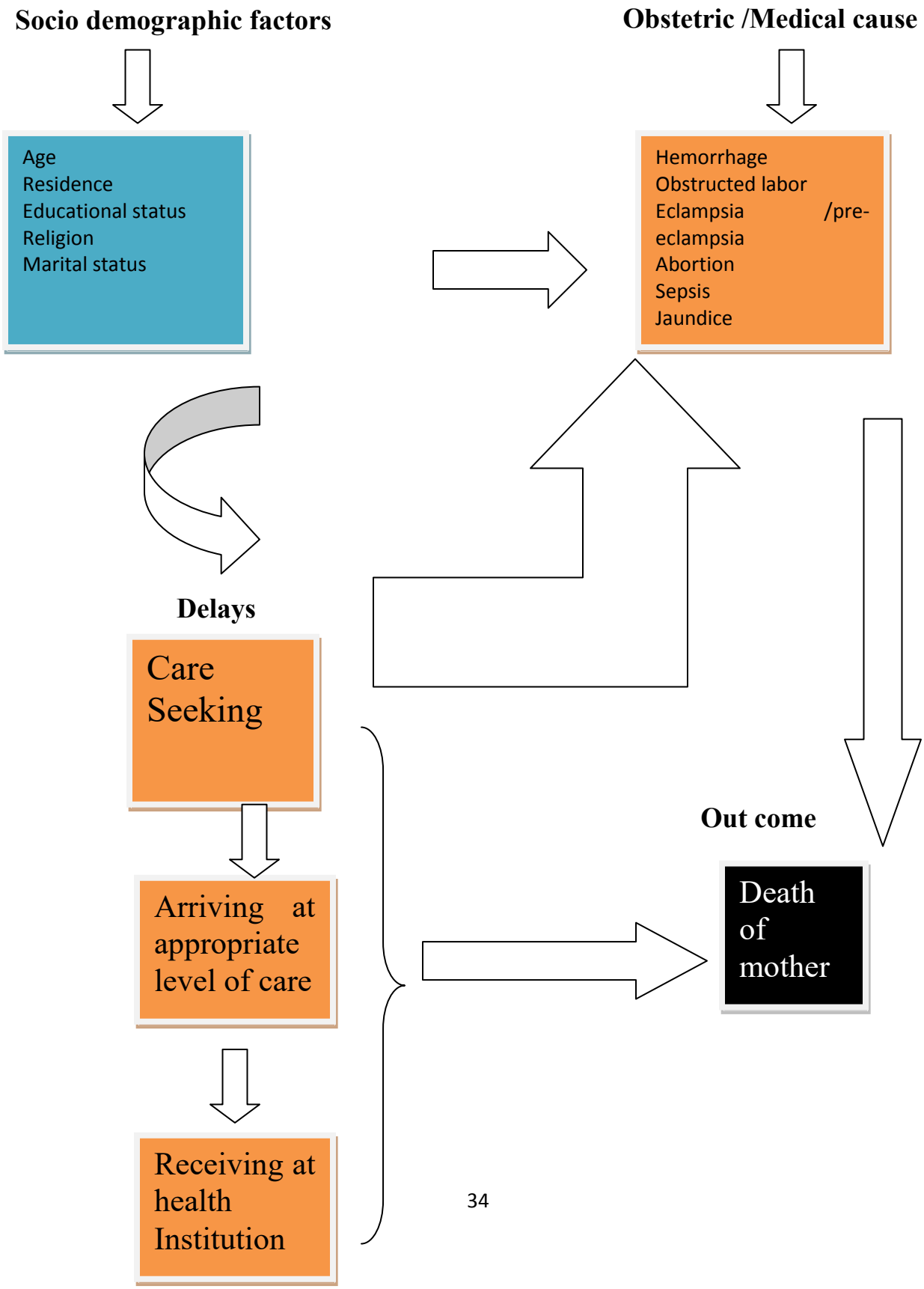
- Funding different programs which help in reducing maternal mortality.

10. Reference

1. UNICEF. The state of the world's children: maternal and newborn health.2009.
2. WHO Maternal mortality in 2005: Estimates developed by WHO, UNICEF, UNFPA, and the World bank. Geneva 2007.
3. CSA, ORC MACRO, Calverton, Maryland, USA. Ethiopia Demographic and Health survey 2005. Addis Ababa, Ethiopia, 2006.
4. Carla A., Tessa W., Kenneth H., and Yoonjoung C. Maternal Mortality in 2000: *Estimates Developed by WHO, UNICEF and UNFPA*: Johns Hopkins University2000.
5. WHO. Strategic direction for accelerating the reduction of maternal mortality in the Eastern Mediterranean region Cairo2005.
6. Gwyneth L. Beyond the number: reviewing maternal deaths and complications to make pregnancy safer. British medical Bulletin2003;67.
7. WHO. ICD-10 second edition International statistical classification of diseases and related health problems in Geneva: WHO; 2004.
8. Loundon I. Death in Chilled Birth: an international study of maternal care and maternal mortality 1800-1950. Oxford University Press1992.
9. FMOH. Health sector development program (HSDP III). Addis Ababa, Ethiopia2010.
10. S. TASNIM , N. KABIR , A. AHMED , S. CHOWDHURY Maternal Death Audit: Experience from a periurban Hospital. J Bangladesh coll physurg2006; 24:5-9.
11. Hailu S, Enqueselassie F, Berhane Y, . Health facility based maternal death audit in Tigray ,Ethiopia. Ethiop j Health Dev2009;23(2):115-9.
12. Gunawan S, Meg E, Endang A, Surekha C, A district based audit of the causes and circumstances of maternal death in South Kalimantan, Indonesia. Bull World Health Organ2002; 80:228-34.
13. MOH, UNFPA, AMDD. National Level Assessment : Emergency Obstetric Care Nicaragua2002-2005.
14. Angelo S Nyamtema, David p Urassa, Andrea B Pembe, Felix Kisanga, Jos van Roosmalen. Factors for change in maternal and perinatal audit systems in Dar es Selam hospital, Tanzania. BMC Pregnancy and Childbirth2010;10(29).
15. FMOH, UNICEF, UNFPA, WHO, AMDD. National Baseline Assessment for Emergency Obstetric & Newborn Care Addis Ababa, Ethiopia, 2008.
16. Langer A. , Berer M., Ra vindran T. Identifing interventions to prevent maternal mortality in Mexico: a verbal autopsy study. Black well science 1999(critical issues London):127-36.
17. Alexandere D, Alioune G, Luc de B, Nils C, Anne L, D J, et al. Facility based maternal death reviews; effects on maternal mortality in a district hospital in Senegal Bull World Health Organ2006;84.
18. Mamady Cham. Maternal Mortality in the Gambia: Contributing factors and what can be done to reduce them. Norway: University of Oslo 2003.
19. Hamza S. The maternal mortality: Egyptian National Maternal Mortality Study. Ain Shams University ASJOG2005;302(2).
20. Charlotte W. Care seeking for maternal health: challenges remain for poor women. Health Dev 2010; 24(Special issu 1):100-4.
21. Janet A, Margaret A, Daniel A, Suzanne P, Julia H. Hospital based maternal care in Ghana- finding of a confidential enquiry in to maternal death Ghana Medical Journal 2007;42(3).
22. Justice Mo. draft Family Law. 2006.

11. Appendixes

11.1 Maternal mortality conceptual frame work



11.2 Check List for Facility Review

Addis Ababa University
School of public health
Check list on Facility Based Maternal Death Review in SNNRP

Facility based review

Data from facility record

S. No.		Questions	Answer	Remark
1		Personal information		
	1.1	Hospital Name		
	1.2	Address		
	1.3	Cared No		
	1.4	Age		
	1.5	Educational level		
	1.6	Marital status		
	1.7	Residence		
	1.8	Religion		
	1.9	Ethnicity		
	1.10	Estimated distance from home to facility (specific kebele)		
2		Date of admission dd/mm/yy		
3		Parity gravidity		
	2.1	Gravida		
	2.2	Para		
	2.4	Time of admission and death		
		2.4.1 Time of admission		
		2.4.2 Time at death		
2.5		Time between admission and intervention		
3		Diagnosis		

3.1	diagnosis at time of death		
3.2	Diagnosis at admission		
4	gestational Age at time of delivery		
5	Gestation at time of death		
	Referral from another facility if so name of the facility		
6	Antenatal care (ANC)		
6.1	ANC given	1.Yes 2. No	
6.2	Week or month of pregnancy when first attending		
6.3	Total number of visit		
6.4	Risk in pregnancy If Yes, specify	1.Yes 2. No	
7	Delivery		
7.1	Did labour occur	1.Yes 2. No	
7.2	If yes , duration of labour at home	Hours One day Two days Three days Not mentioned	
7.3	If ,Yes for Q 7.1 ,was partogram used	1.Yes 2. No	
7.4	If yes for Q.7.3 , duration of labour total hours		
7.5	Delivered at **tick only one**	1.Hospital 2.Home 3.On the way to hospital	
7.6	Death occurs at **tick only one**	1.Hospital 2.Home 3.On the way to hospital	
7.7	Death occurred during	1.Ante partum 2.Intra partum 3.Post partum	
7.8	If, Death occurs during postpartum period hrs after delivery		
7.9	Types of Delivery **tick one**	1.Normal vaginal	

		2.Breech extraction 3.Instrumental Vacuum Forceps Vacuum Cesarean section	
7.10	Outcome of delivery (tick only one)	1.Live birth 2. Undelivered 3. Fresh stile birth 4. macerated still born	
7.11	FHB(fetal heart bit) at admission	+ -	
6.11	Intervention if any		
7	Cause of death		
7.1	Immediate cause (**tick)**	1. Shock , 2. Cardiac failure , 3. Multi-organ failure, 4. DIC, 5. Renal failure 6. Anastasia , 7. Resuscitation problem, 8. Airway problem 9. Breathing problem 10. Circulation problem	
7.2	Underlying cause(**tick)**	1. APH, 2. PPH, 3. ECTOPIC , 4. Anesthesia, 5. Embolism , 6. Sepsis, 7. Unknown 8. Other specify_____	

Name of data collector _____ signature_____ date _____

Name of Supervisor _____ signature _____date_____

Completeness of the data: Complete_____ Incompletely filed _____

Missing from the system _____

11.3 Check list for observation

S. No.		Questions	Answer	Remark
1		Assessment of standard of care to reduce maternal death (only maternity case team head)		
	1.1	drugs for maternal case available		
		1. oxytocine	1.Yes 2. No 3. Yes but not sufficient	
		2. Blood transfusion available	1.Yes 2. No	
		3. Functional Blood bank	1.Yes 2. No	
		4. Magnesium sulfate	1.Yes 2. No	
		5. Methyldopa	1.Yes 2. No	
		6. Fluids	1.Yes 2. No	
		7. Hyderalizin	1.Yes 2. No	
	1.2	Number and qualification of health workers at maternity case team		
		Specialist /gynecologist General practitioner doctors Nurse midwives(BSC) Nurse midwives diploma Clinical nurses (BSC) Clinical nurse diploma Anesthetist	number _____ number _____ number _____ number _____ number _____ number _____ number _____	
		Trained health professionals on EMoNc Physicians Nurse Midwifes		

	1.3	**Signal Function**		
		Parenteral antibiotics	1.Yes 2. No	
		Parenteral oxytocics	1.Yes 2. No	
		Parenteral anticonvulsants	1.Yes 2. No	
		Manual removal of placenta	1.Yes 2. No	
		Removal of retained products	1.Yes 2. No	
		Assisted vaginal delivery	1.Yes 2. No	
		Neonatal resuscitation	1.Yes 2. No	
		Blood transfusion1	1.Yes 2. No	
		Surgery (cesarean)	1.Yes 2. No	
		Service fee		
		Average fee for normal delivery Average fee for c/s		
	1.4	Average waiting time for expectant mother	_____	
	1.5	Opening hours	_____hrs/ day	
		Ambulance service	Yes No	
	1.6	Services that are not given during holyday or weekend	_____	

		Number of death reported in each year and recorded on the registration book	2000_____&_____ 2001_____&_____ 2002_____&,_____	
		Live birth in each year	2000_____ 2001_____ 2002_____	
		Number of women in reproductive age (15-49)	2000_____ 2001_____ 2002_____	

Name of data collector _____ signature_____ date _____

Name of Supervisor _____ signature _____ date_____

Completeness of the data

Complete _____

Incompletely filed _____

11.4 Guide format for Focus Group Discussion

ADDIS ABABA UNIVERSITY

SCHOOL OF PUBLIC HEALTH

Information sheet for health workers who participate in FGD

Good morning /good afternoon and Welcome

- I am Yemisrach Shiferaw post graduate student in Addis Ababa University in school of public health. This study is supported by Addis Ababa University School of public health .I am team of this work, _____facilitator of the focus group discussion and _____ is note taker .this project is named as facility based assessment of cause and contributing factors for maternal death in SNNPR in selected hospitals. One of the selected hospitals is _____ hospital. The purpose of this study is to provide information on why and how women die while giving birth. This information will be used for reducing maternal mortality by health planners and managers in different level in SNNPR for reducing maternal mortality. Focus group will last about one hour, feel free to move around, we will not try to achieve consensus, and we"re gathering information, no virtue in long lists: we"re looking for priorities. In this project, we are doing both review of records and focus group discussions. This allows us to understand the context behind the review and helps us explore topics in more detail. The information you give us is completely confidential, and we will not associate your name with anything you say in the focus group. You may refuse to answer any question or withdraw from the study at anytime.

Consent form (verbal consent)

The purpose of this study is to learn how mothers die while giving birth. We hope to learn things that the different level of managers can use to decrease the maternal mortality. We would like to tape the focus groups so that we can make sure to capture the thoughts, opinions, and ideas we hear from the group. No names will be attached to the focus groups and the tapes will be destroyed as soon as they are transcribed.

If you have any questions now or after you have completed the discussion, you can always contact a study team member like me, or you can call the IRB (School of public health) team leaders whose names and phone numbers are on this form.

PI Address Yemisrach Shiferaw tel – 0911 04 06 75 Addis Ababa Ethiopia
IRB address (School of Public health) tel - 0115 - 15 77 01

Do you agree to participate in the discussion?

Thank you for agreeing to participate. We are very interested to hear your valuable opinion on how to reach to the cause and contributing factors for maternal death.

Introduction:

Send the Sign-In Sheet with a few quick demographic questions (age, gender, and years at this facility) around to the group while you are introducing the focus group.

Explanation of the process

Ask the group if anyone has participated in a focus group before. Explain that focus groups are being used more and more often in health and human services research.

Ground Rules

Ask the group to suggest some ground rules. After they brainstorm some, make sure the following are on the list.

- Everyone should participate.
- Information provided in the focus group must be kept confidential
- Stay with the group and please don‟t have side conversations
- Turn off cell phones if possible

1. **Turn on Tape Recorder**

2. Ask the group if there are any questions before we get started, and address those questions.

3. Introductions
   - Go around table: job here, where you attended your graduate school first?

Questions:

Part I health seeking behavior of women with obstetric complication patients

1. Let‟s start the discussion by talking about what makes this hospital a good for maternal health care. What are some of the positive aspects of this facility for expectant mothers?
2. How do you see the health seeking behavior of mothers with obstetric complication in your hospital?
3. What do you think about the recognition of the problem (severity) by the community?
4. What did you observed on the decision making of family of the deceased that are important to save life of the women that happened in your hospital?
5. Who made the decision mostly for care seeking in relation to the power of women in her own life
6. How do you understand the economic constraints on delay of care seeking

Probing questions

Lack of knowledge of danger sign
Economic constraint
Refusal to seek care
Perceived Inadequate care
Lack of information about danger sign of labour
Family problem
Use of traditional medicine

Part II delay at arrival to appropriate level of care

- In your opinion why delivering mother delay from reaching appropriate health care level of facility?
- Probing questions

  Long distance to medical facility

Lack of transportation

Difficult road condition

No health provider near case

Lack of health care facility

Part III quality of care by health care provider and/or at health facility (delay at getting appropriate)

From your experience why expectant mothers delay from getting appropriate care in the facility after their arrival?

Equipment storage = Not available, Not ready for use

Health provider factor

Physician not around to perform procedures
Physician lack of skill
Health workers an aware of the problem
Health workers are lack responsibility for their work
Lack of skilled staff
Lack of health care provider
Care not in accordance with protocols
Sub standard care by health personals
Referral delays

Drug problem= Shortage, Available but not given

Administrative problem

Lack of information, Lack of Communication, Lack of blood bank, Lack of blood, Lack of oxygen, Lack of ICU facility, Poor resuscitation and Lack of fluid.

That concludes our focus group. Thank you so much for coming and sharing your thoughts and opinions with us.

11.5 Guiding format for Focus Group Discussion (English)

ADDIS ABABA UNIVERSITY
SCHOOL OF PUBLIC HEALTH

Information sheet community members who participate in FGD

Good morning /good afternoon and Welcome

- I am Yemisrach Shiferaw post graduate student in Addis Ababa University in school of public health. This study is supported by Addis Ababa University School of public health .I am team of this work, _____facilitator of the focus group discussion and _____ is note taker .this project is named as facility based assessment of cause and contributing factors for maternal death in SNNPR in selected hospitals. One of the selected hospitals is _____ hospital. You are selected because many of maternal deaths that occurred in _____ hospital are from your woreda / Keble. The purpose of this study is to provide information on why and how women die while giving birth. This information will be used for reducing maternal mortality by health managers in the SNNPR. Focus group will last about one hour, feel free to move around, we will not try to achieve consensus, and we"re gathering information, no virtue in long lists: we"re looking for priorities. In this project, we are doing both review of records and focus group discussions. This allows us to understand the context behind the review and helps us explore topics in more detail. The information you give us is completely confidential, and we will not associate your name with anything you say in the focus group. You may refuse to answer any question or withdraw from the study at anytime.

Consent form (verbal consent)

The purpose of this study is to learn how mothers die while giving birth. We hope to learn things that the different level of managers can use to decrease the maternal mortality. We would like to tape the focus groups so that we can make sure to capture the thoughts, opinions, and ideas we hear from the group. No names will be attached to the focus groups and the tapes will be destroyed as soon as they are transcribed.

If you have any questions now or after you have completed the discussion, you can always contact a study team member like me, or you can call the IRB (School of public health) team leaders whose names and phone numbers are on this form.

PI Address Yemisrach Shiferaw tel – 0911 04 06 75 Addis Ababa Ethiopia

IRB address (School of Public health) tel - 0115 - 15 77 01

Do you agree to participate in the discussion?

Thank you for agreeing to participate. We are very interested to hear your valuable opinion on how to reach to the cause and contributing factors for maternal death.

Introduction:

Take note with a few quick demographic questions (age, gender, and years at this facility), while you are introducing the focus group.

Ask the group if anyone has participated in a focus group before. Explain that focus groups are being used more and more often in health and human services research.

Ground Rules

Ask the group to suggest some ground rules. After they brainstorm some, make sure the following are on the list.

- Everyone should participate.
- Information provided in the focus group must be kept confidential
- Stay with the group and please don‟t have side conversations
- Turn off cell phones if possible

1. **Turn on Tape Recorder**

2. Ask the group if there are any questions before we get started, and address those questions.

3. Introductions
   - Go around table: How you travel from her to center (hospital is located)?

Questions:

Part I health seeking behavior of women with obstetric complication

1) Let"s start the discussion by talking about what makes this area good for maternal health care. What are some of the positive aspects of this community for expectant mothers?

2) Would you tell me about health seeking behavior of mothers with obstetric complication in your community?

3) What can you say about the recognition of the problem (severity) by the community?

4) What did you observed on the decision making of family of the deceased that are important to save life of the women that happened in your hospital?

5) Who made the decision mostly for care seeking in relation to the power of women in her own life

6) How do you understand the economic constraints on delay of care seeking

Probing questions

Lack of knowledge of danger sign
Economic constraint
Refusal to seek care
Perceived inadequate care in the facilities
Lack of information about danger sign of labour
Family problem
Use of traditional medicine

Part II delay at arrival to appropriate level of care

- From your experience in this community why delivering mother delay from reaching appropriate health care level of facility?
- Probing questions

  Long distance to medical facility

  Lack of transportation

Difficult road condition

No health provider near case

Lack of health care facility

Perceived severity is lower

Thinking the condition is normal

Part III quality of care by health care provider and/or at health facility (delay at getting appropriate)

From your experience why expectant mothers delay from getting appropriate care in the facility after their arrival?

Equipment storage = Not available, Not ready for use

Health provider factor

Physician not around to perform procedures
Physician lack of skill
Health workers an aware of the problem
Health workers are lack responsibility for their work
Lack of skilled staff
Lack of health care provider
Referral delays

Drug problem= Shortage, Available but not given

Lack of information

Lack of Communication

Lack of blood bank

Lack of blood

Lack of oxygen

That concludes our focus group. Thank you so much for coming and sharing your thoughts and opinions with us.

አዲስ አበባ ዩኒቨርሲቲ

የሕብረተሰብ ጤና ት/ቤት

ለጥናቱ መረጃ መስጫ ቅጽ ለሕብረተሰብ አባላት (የቡድን ወይይት)

እንደምን አደራችሁ /እንደምን ዋላችሁ እዲሁም እንኳን ደህና መጣችሁ እኔ የምሰራች ሽፈራው እባላለሁ ። በአዲስ አበባ ዩኒቨርሲቲ በሕብረተሰብ ጤና ትምህርት የድህረ ምረቃ ተማሪ ነኝ።

- ይህ ጥናት በአዲስ አበባ ዩኒቨርሲቲ በሕብረተሰብ ጤና ትምህርርት ቤት ድጋፍ ሚካሄድ ሲሆን እኔም የጥናቱ ቡድን ነኝ።---------- ውይይቱን አቀላጣጠፊ ሲሆን ---------- ደግሞ ማስታወሻ ያዥ ነው። ይህ ፕሮጀክት ስራ ስያሜው ጤና ድርጅቶችን መሰረት ያደረገ የእናቶችን ሞት ምክንያትና ለሞቱ አስተዋጽኦ ያላቸውን ሁኔታዎች ማፈላለግ ሲሆን የሚሰራው በደቡብ ብሔረሰቦችና ሕዝቦች ክልል ውስጥ ከተመረጡ ሆስፒታሎች ነው።ከተሰመረጡት ሆስፒታሎች መሐል ይህ ---------- አንዱ ነው። እርሶ /እናንተ የተመረጣችሁበት ምክንየት ብዞዎቹ የእናቶች ሞት በ---------- ሆስፒታል ከተመዘገቡት በወሊድ ምክንያት ከሞቱ እናቶች መካከል አብዛኛው በዚህ አከባቢ (ወረዳ/ቀበሌ) በመሆኑ ነው።የዚህ ጥናት ጠቀሜታ ጥናቱ በሚካሔድበት አካባቢ ያሉ እናቶች በወሊድ ጊዜ በምን ምክንየትና ምንምን ነገሮች ለሞታቸው አስተዋጽኦ ያደርጋሉ ለሚሉ ነገሮች መረጃ ለመስጠት ያገለግላል። ይህ መረጃ በክልሉ (በደ/ብ/ብ/ሕ/ክ) ውስጥ ያሉ የጤና ድርጅቶች ስራ አስኪያጆች እና እቅድ ሚያቅዱ ክፍሎች በወሊድ ምክንያት የሚከሰተውን እናቶች ሞት ለመቀነስ ይጠቅሙታል።እኛ ከእናንተ ብዙ ነገሮችን እንማራለን እነዚህም ጥሩም መጥፎም ነገሮችን ልታነሱ ትችላላችሁ ስምምነት ላይ እንድንደርስ አይጠበቅብንም የምነፈልገው መረጃ ነው የትኛውም የምትናገሩት ነገር የሚጣል አይሆንም ነገር ግን ቅድሚያ የመስጠት ሁኔታ ነው ከምንወያይበት ርዕሰ ጉዳይ አኳያ የትኛው ቅድሚያ ይሰጠው የሚለውን አገናዝባችሁ እንድንወያይ ያስፈልጋል። በዚህ ጥናት ሆስፒታል ውስጥ ያሉ መዛግብትን እናያለን በተጨማሪ የቡድን ውይይት እናደርጋለን ይህን የምናደርግበት ምክንየት ሁለቱን መንገዶች በመጠቀም የተሻለ ጥልቅ መረጃ ለማግኘት ነው ። ቁጥራቸው ውስን በሆኑ ሰዎች መካከል በሚደረገው ውይይት ከሆስፒታል መዛግብት ከምናገኘው መረጃ የተሻለ ነገሮችን በጥልቀት እንድናውቅ ይረዳናል።ወይይቱ ወደ አንድ ሰአት ገደማ ይወስዳል ፡ ነጻ ሆናችሁ ተንቀሳቀሱ፡እራሳችሁን ዘና ለማድረግ ሞክሩ

የስምምነት መግለጫ (በቃል ስምምነት)

- የዚህ ጥናት ጠቀሜታ እናቶች በወሊድ ምክንየት እንዴት እንደሚሞቱ ማወቅ ና በተለያዩ የጤና አስተዳደር ላይ ያሉ ሰዎች መረጃው ካላቸው የእናቶችን ሞት ለመቀነስ ይጠቀሙታል ብለን ተስፋ እናደርጋለን፡፡
- የምንነጋገር ባቸው ነጥቦች ከእኛና ከእናንተ ውጭ ለማንም አይገለጽም ስማችሁም ከምትናገሩት ነገር ጋር አናገናኝም፡፡
- ውይይታችንን በመቅረጸ ድምጽ በመጠቀም እንይዘዋለን ምክንያቱም በኋላ ላይ በእርግጠኝነት እናንተን ሐሳብ በሚገባ ለማግኘት እንድንችል ሲሆን ስማችሁ በምንም አይነት ሁኔታ በንግግር ውስጥ አይጠቀስም የምንፈልገውን ነገር ካገኘን በኋላ የተቀደው ውይይት ይደመሰሳል፡፡

በውይይቱ ለማሳተፍ ፈቃደኛ ነዎት አዎን ወይም አይደለም፡፡

ፈቃደኛ ስለሆኑ እናመሰግናለን፡፡ እኛ እጅግ በጣም ደስተኞች ነን፡፡ እርስዎን ጠቃሚ የሆነ ሐሳብ በመነሳት እናቶች በወሊድ ምክንያቶችና ለዚህም አስተዋጽኦ የሚያደርጉ ነገሮችን እንድናይ ይረዳናል (ነገሮች ወደ ማወቅ ያደርሰናል)

- በማንኛውም ጊዜ መመለስ የማይፈልጉትን ጥያቄ ለመመለስ አይገደዱም በፈለጉት ጊዜ አቋርጠው መውጣት ይችላሉ፡፡
- በማንኛውም ጊዜ ከውይይቱ በኋላ ሆነ በፊት ጥያቄ ካለዎት የጥናቱን ቡድን ማነጋገር ይችላሉ ለምሳሌ እኔን

አወያይ

ስም የምስራች ሸፈራው

ስልክ - 0911 04 06 75----------

የቡድኑ

ስም ----------

ስልክ----------

መግቢያ

- አጠር ያለ ማስታወሻ (እድሜ፣ጾታ፣የአገልግሎት ዘመን ውሰድ)
- እግረመንገድህን የውይይቱ አባላትን እየተዋወቅህ
- ከተወያያቹ ውስጥ ከዚህ በፊት በቡድም ውይይት ውስጥ ተሳትፎ የሚያውቅ ካለ ጠይቅ። የቡድን ውይይት በጤናና የሕዝብ አገልግሎት ሰጭ ተቋማት ላይ በጣም እየተለመደ የመጣ ነገር ነው።

የውይይቱ ሁኔታ

-

የውስጥ ደንቦች

በውይይታችን ወቅት የምናካሂዳቸውን የውስጥ ደንቦችን በጋራ እናውጣ። የእነርሱን ከሰማህ በኋላ እነዚህ ነጥቦች መኖራቸውን አረጋግጡ።

1. ሁሉም ሰው መሳተፍ አለበት
2. በውይይቱ ወቅት የሚነሱ ነጥቦች በሙሉ ከቡድኑ ውጪ መነሳት የለባቸውም
3. ሐሳባችን በውይይቱ ላይ ማደረግ
4. ከጎን ካለ ሰው ጋር አለማወራት (በቡድን ውስጥ እንጂ ከቡድን ውጪ አለማውራት)
5. ሞባይል ካላችሁ ከተቻለ ብታጠፉት

ሂደት

1. መቅረጸ ድምጹን ይክፈቱት ?
2. ከመጀመራችን በፊት ጥያቄ አላችሁ ግልጽ ያልሆነ ነገር ?
3. የመግቢያ ጥያቄ

   በተወያዮች መሐል እየተዘዋወሩ (አንዱን ተወያይ ጠቅሰው) ከዚህ ሆስፒታል ወዳለበት ቦታ ለመድረስ እንዴት ትሔዳለህ?

ጥያቄዎች

ክፍል አንድ ፡- ሳንካ የገጠመው የወሊድ ሒደት ላይ ያለች እናት የህክምና እርዳታ የመፈለግ ሁኔታ

1. ውይይታችንን ለመጀመር ያህል ይህ አካባቢ በወሊድ ምክንያት ሳንካ ለገጠማት እናት ምን ጥሩ ሁኔታዎች አሉት ?
2. ይህ አካባቢ በወሊድ ምክንያት ችግር ለገጠማት እናት ምን ጠቃሚ ነገር አለው?
3. እስኪ በወሊድ ምክንያት ችግር የገጠማቸው (ምጥ የጠናባቸው) እናቶች የህክምና እርዳታ የመፈለግ ሁኔታ ምን ይመስላል?
4. አንዲት እናት በወሊድ ምክንያት ችግር ቢገጥማት ችግሩን የማወቅና የመለየት ሁኔታ ምን ይመስላል?
5. አንዲት እናት በምጥ ምክንያት ችግር ላይ ብትሆን የቤተሰቡ ፈጥኖ ወደ ጤና ድርጅ ለመውሰድ ፈጥኖ የመወሰን ሁኔታ ምን ይመስላ?
6. የሴትየዋ ድርሻ በውሳኔው ላይ ምን ይመስላል?
7. የገንዘብ እጥረትን ከህክምና እርዳታ ከመፈለግ አንጻር እንዴት ያዩታል?
8. በሴትየዋ ህይወት ላይ የህክምና እርዳታ ለመውሰድ እሷ ያላት ድርሻ ምን ይመስላል?

አውጣጭ ቃላት

- አደገኛ ምልክቶችን የማወቅ ሁኔታ
- ገንዘብ ያለው ሚና
- ወደህክምና መሄድ አለመውደድ
- በቂ ህክምና አይኖርም ብሎ ማሰብ
- የቤተሰብ ችግር
- ባህላዊ ህክምና መምረጥ

ክፍል ሁለት፡- ወደተፈላጊው የህክምና ክፍል ለማድረስ ስለመዘግየት

1. ካለው ተሞክሮ በዚህ አካባቢ ሳንካ የገጠመው የወሊድ ሂደት ላይ ያለች እናት ወደተገቢው ህክምና ለመድረስ ምን ችግር ይገጥማታል?

አወጣጭ ቃላት

- ረጅም ርቀት መጓጓዣ፣የመንገድ ችግር ፣በቅርቡ ባለሙያ አለመኖር ፣በቅርቡ ጤና ድርጅት አለመኖር ፣ ነገሩን ቀለል አድርጎ መመልከት፣ችግርን ጤናማ አድርጎ መመልከት

ክፍል ሶስት፡- የጤና ድርጅት ውስጥ የሚሰጠው አገልግሎት የመዘግየት ሁኔታ

ካሎት ልምድ አንጻር በወሊድ ምክንያት ሳንካ የገጠማት እናት ተገቢው የህክምና ቦታ ከደረሰች በኋላ በቶሎ እርዳታ የማግኘት ሁኔታ ምን ይመስላል?

የማውጣጫ ቃል፡-

- የእቃ መጓደል
- የባለሙያ ሁኔታ
- ጤና ባለሙያዎቹ ችግሩን የመረዳት ሁኔታ
- ወደ ሌላ ሆስፒታል ፈጥኖ የመላክ ሁኔታ
- የመድሐኒት ሁኔታ
- የመረጃ ሁኔታ

Declaration

I, the under signed, declare that this thesis is my original work in partial fulfillment of the requirements for the degree of Masters of Public Health. All the sources of the materials used for this thesis and all people and institutions who gave support for this work are fully acknowledged.

Name: Yemisrach Shiferaw (BSc, Public Health)

Signature- ----------

Place of submission: Addis Ababa University, School of Public Health, Faculty of medicine

Date of submission: **----------**

Approval of the primary advisor

This thesis has been submitted for examination with my approval as a university Advisor.

Advisor's name-Professor Mesganaw Fantahun (MD, MPH, PHD)

Signature----------

Date: May, 2011