Federal Democratic Republic of Ethiopia

Ministry of Health

Maternal Death Surveillance and Response (MDSR) Technical Guideline

Addis Ababa, Ethiopia

September, 2013

Foreword

Though pregnancy is considered to be a normal healthy state, every woman is at risk of developing a serious complication, and therefore disability and death, during pregnancy and childbirth. EDHS 2011 states that the MMR is 676 per 100,000 live births.

Counting Maternal Mortality alone cannot generate important information to avert maternal deaths. Knowing the statistics on levels of maternal mortality is important but not enough to identify what can be done to prevent such unnecessary deaths. In order to stop the deaths, the right kind of information is needed upon which to base actions.

Maternal Death Surveillance and Response is now promoted as a means of availing such actionable information locally and in real time making maternal deaths visible events that beg for response. By reviewing the death it helps to sensitize communities and health workers in facilities to the fact that women need not die and encourages discussion and thought about prevention. It provides information about why the woman died and suggests ways that deaths like hers can be prevented in the future. It also connects actions to results.

Maternal death audit (MDA) at community and health facility level is among the activities prioritized in HSDP IV. All sector ministries and development partners having a stake in the wellbeing of mothers and newborn will be working with Ministry of Health for operationalizing MDA.

This MDSR Standard Operating Procedure provides guidance for health professionals, health care planners and managers, and policy makers working in the area of maternal, newborn, and child health who strive to improve the coverage and quality of care provided. They must be willing to take action based on the MDSR findings and use the information to improve maternal health outcomes. Those with the ability to drive change should be involved in the process to ensure that the recommended changes are implemented.

The Federal Ministry of Health acknowledges all stakeholders for their contribution towards the development of this guideline.

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List of Abbreviations

BEmON C	Basic Emergency Obstetric and Newborn Care
CEmON C	Comprehensive Emergency Obstetric and Newborn Care
CEO	chief Executive Officer
D&C	Dilatation &Curettage
EDHS	Ethiopian Demographic Health Survey
EHNRI	Ethiopian Health and Nutrition Research Institute
ESOG	Ethiopian Society of Obstetrics and Gynecologists
FMHAC A	Food, Medicine and Health care Administration and Control Authority of Ethiopia
FMOH	Federal Ministry of Health
GDP	Gross Domestic Product
HC	Health Center
HCW	Health Care Workers
HDP	Hypertensive Disorders of Pregnancy
HEW	Health Extension Workers
HIV	Human Immuno deficiency Virus
HMIS	Health Management Information System
HO	Health Officer
HPDP	Health Promotion and Disease Prevention
IEOS	Integrated Emergency Obstetrics and Surgery

IMR	Infant Mortality Rate
KPI	Key Performance Indicators
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MDR	Maternal Death Review
MMR	Maternal Mortality Rates
MNH	Maternal and Newborn Health
NGO	Non Governmental Organization
OPD	Out Patient Department
OR	Operation Room
PHCU	Primary Health Care Unit
RH	Reproductive Health
RHB	Regional Health Bureau
SMH	Safe Motherhood
TB	Tuberculosis
TOR	Terms of Reference
TWG	Technical Working Group
UN	United Nations
VA	Verbal Autopsy
WRA	Women of Reproductive Age

Definitions

Maternal death is defined as the death of a woman while pregnant or within 42 days of the termination of pregnancy irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. (ICD-10).

> **Direct obstetric deaths** are maternal deaths resulting from complications of the pregnancy, labor or purperium or from interventions omissions or incorrect treatment.
>
> **Indirect obstetric deaths** are maternal deaths resulting from previously existing disease or newly developed medical conditions that were aggravated by the physiologic change of pregnancy.

Late maternal death is defined as a maternal death which occurs from 42 to 365 days after the termination of pregnancy. (ICD-10)

Pregnancy related death is defined as all deaths of women during or within 42 days of termination of pregnancy regardless of cause. (ICD-10)

Maternal near-miss is defined as a woman who nearly died but survived a complication that occurred during pregnancy, child birth or within 42 days of termination of pregnancy. In practical terms, women are considered near miss cases when they survive life threatening conditions (i.e. organ dysfunction).

Severe maternal outcomes: are maternal near misses and maternal deaths.

Maternal death surveillance and response (MDSR) has been defined as "a component of the health information system, which permits the identification, the notification, the quantification, and the determination of causes and avoidability of maternal deaths, for a defined time period and geographic location, with the goal of orienting the measures necessary for its prevention".

Maternal Death Audit (MDA) is used to describe maternal death case reviews, confidential enquiries, and maternal death surveillance.

Clinical audit has a more specific meaning and recently has been described as "a quality improvement process that seeks to improve patient care and outcomes by the systematic review of care against explicit criteria and the implementation of change.

Verbal Autopsy (Community-based maternal death review) is a method of finding out the medical causes of death and ascertaining the personal, family or community factors that may have contributed to the deaths in women who died outside of a medical facility. It identifies deaths that occur in the community and consists of interviewing people who are knowledgeable about the events leading to the death such as family members, neighbours and traditional birth attendants.

Maternal Death Review (Facility-based maternal deaths review) is a qualitative, in-depth investigation of the causes of and circumstances surrounding maternal deaths occurring at health facilities. Deaths are initially identified at the facility level but such reviews are also concerned with identifying the combination of factors at the facility and in the community that contributed to the death, and which ones were avoidable.

Introduction

1. Back ground

Pregnancy is a normal healthy state which most women aspire to at some point in their lives. Yet this normal, life affirming process carries with it serious risks of death and disability. Most maternal deaths are preventable, even where resources are limited, provided that preventive measures are taken and adequate care is available. It is generally believed that maternal mortality offers a litmus test to the status of women, their access to health care and the adequacy of the health care system to respond to their needs. The International health and development community has repeatedly called for action to address this problem and governments have formally committed themselves to doing so, notably the International Conference on Population and Development (Cairo 1994), and the Fourth World Conference on Women (Beijing 1995) as well as their follow up conferences and more recently the Millennium Declaration in 2000. Improvement in Maternal Health is enshrined as one of the essential prerequisites for development and for poverty reduction.

According to the report on “Trends in Maternal Mortality between 1990 and 2010” released by the UN Agencies in 2012, the number of maternal deaths has reduced globally from 543,000 in 1990 to 280,000 in 2010, a decrease by 47%. Likewise, the global MMR reduced from 400/100,000 LB in 1990 to 210 by 2010.The latter averages to a 3.1% annual decrease in maternal deaths.

However it is to be noted that the reduction is lower than the needed level of annual reduction (5.5%) to reach the MDG goal of reducing MMR by 75% between 1990 and 2015. Moreover, millions of women continue to needlessly suffer illness and disability due to complications associated with pregnancy and child birth.

Ethiopia, a country with more than 80 million people living in a geographically diverse environment (1,104,300 square kilometres of land area ranging from high peaks of 4,550m above sea level to a low depression of 110m below sea level) carries a high burden of maternal ill health. It is one of the six countries that contribute to about 50% of the maternal deaths worldwide; the others being India, Nigeria, Pakistan, Afghanistan and the Democratic Republic of Congo. (Lancet, April 2010). There has been tremendous progress in the country over the past decade in terms of improving access to essential health services aimed at improving the health status of the population in general and women and children in particular. Among the progress documented are reductions in the average fertility rate from 6.4 in 1990 to 4.8 in 2011 and CPR has risen from 5% to 29% in the same period (DHS 2011). According to the global estimates for “trends in Maternal Mortality”, the MMR for Ethiopia has come down from 950/100,000 LB in 1990 to 350/100,000 LB in 2010 which shows an average annual decline of 4.9%. However it is worth noting that DHS 2011 shows a higher MMR estimate (676/100,000 LB) and there are also other global estimates with different figures highlighting the challenges in estimating maternal deaths, especially in areas where civil registration is weak.

2. Rationale

Because measuring maternal mortality is difficult and complex, reliable estimates of the dimensions of the problem are not generally available and assessing progress towards the goal of reducing maternal mortality is difficult. Moreover, counting Maternal Mortality alone cannot generate important information to avert maternal deaths. It tells only part of the story. In particular, it tells us nothing about the faces behind the numbers, the individual stories of suffering and distress and the real underlying reasons why particular women died. Most of all, it tells us nothing about why women continue to die in a world where the knowledge and resources to prevent such deaths are available or attainable. Knowing the statistics on levels of maternal

mortality is important but not enough to identify what can be done to prevent such unnecessary deaths. In order stop the deaths, the right kind of information is needed upon which to base actions.

To help tackle these challenges, a variety of methods for reviewing and analysing deaths and produce actionable information have been implemented throughout the world. Maternal Death Surveillance and Response is now promoted as a means of availing such information locally and in real time making maternal deaths visible events that beg for response. By reviewing the death it help sensitize communities and health workers in facilities to the fact that women need not die and encourages discussion and thought about prevention.It provides information about why the woman died and suggests ways that deaths like hers can be prevented in the future. It also connects actions to results.

Each maternal death has a story to tell and can provide indications on practical ways of addressing its causes and determinants. Detailed Systematic Reviews to the cause of maternal death provide evidence of where the main problems in overcoming maternal mortality and morbidity may lie, produce an analysis of what can be done in practical terms and highlight the key areas requiring recommendations for health sector and community action as well as policy directions.

The MDSR done with clear standards should provide information that can be used in the development of programs and interventions to improve maternal health, reduce maternal morbidity, and improve the quality of care of women during pregnancy, delivery, and puerperium. Counting cases is important but not enough. The data must lead to information that can, in turn lead to specific recommendations and actions, as well as to an evaluation of the effectiveness of interventions.

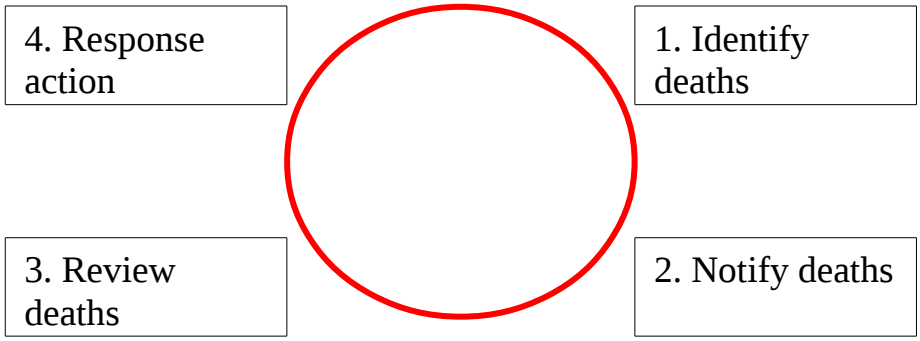

Figure : Maternal death surveillance and response system: a

continuous action cycle at community, facility, regional & national level

The information contained in the MDSR can increase awareness of maternal mortality at the community, health care system, and intersectoral (policy-making) levels. Increased awareness can lead to changes in practice among the public and health practitioners, as well as lead to a reallocation of resources to activities for decreasing maternal mortality. An enabling environment of collaboration rather than blame is needed to conduct MDSR and apply the findings towards action.

MDSR has two underlying rationales:

First: MDSR provides information about avoidable factors that contributed to a maternal death and guides actions that need to be taken at the community level, within the formal health care system, and at the intersectoral level (i.e. in other governmental and social sectors) to prevent similar deaths in the future.

Second: MDSR establishes the framework for an accurate assessment of magnitude of women's deaths related to pregnancy. By having an accurate assessment of maternal mortality, policy and decision makers may be more compelled to give the problem the attention it deserves. In addition, evaluators will more accurately assess the effectiveness of interventions to decrease mortality rates.

Ultimately an MDSR system will aim to identify every maternal death in order to accurately monitor maternal mortality and the impact of interventions to reduce it. The FMOH is aiming at conducting MDSR at large scale to ensure each maternal death is notified in time, the reasons behind the death are identified locally and corrective actions taken to make sure that similar deaths are subsequently prevented.

This Guideline is prepared to guide key players in the conduct of MDSR, standardize the implementation and help ensure actionable items are identified locally and appropriate corrective measures are taken at different levels o

Key messages of this guide:

- Avoiding maternal death and improving quality of care is possible, even in resource constrained settings. Obtaining the right kind of information to guide action is critical.
- Every maternal death is a tragedy and should be a notifiable event that is reviewed, discussed and that leads to corrective actions to address the problems encountered.
- Understanding the underlying factors leading to the deaths is critical to preventing future mortality.
- Data collection must be linked to action. A commitment to act upon findings is a key prerequisite for success.
- As a starting point, all maternal deaths in health facilities and communities should be identified, reported, reviewed and responded to with measures to prevent future deaths.
- While response is critical and the primary purpose of MDSR, there is also a need to improve the measurement of maternal mortality by working to identify all deaths in a given area because otherwise we do not know if our actions are truly effective.

Users

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Goal and Objectives of the MDSR Guideline

The overall goal of the MDSR technical guideline is to guide effective implementation and scale up of MDSR in systematic, standardized and integrated manner.

The objectives are:

- Strengthen the capacity of program managers and service providers in the analysis and interpretation of information from maternal deaths.
- Ensure standardization and harmonization of the MDSR process at community, facility, district, regional and federal level
- Guide program managers in the timely undertaking of implementation, monitoring and supervision of the MDSR process at the different levels
- Serve as basic tool to guide service providers in the undertaking of MDSR

- Improve use of information to produce local solutions to root causes of maternal death
- Empower decision makers/ facility managers to make local level actions

Maternal Death Surveillance and Response(MDSR) System

I. Process of the MDSR system (Identification, reporting and reviewing of maternal deaths)

1. Sources of information

There are two major sources of information for the: Communities and facilities.

1.1. Community

The HEW will establish a link with all possible sources of information for identifying the deceased women. For identifying deaths of women in the reproductive age, in a community, the sources for the information include:

- Health Development Army members
- Religious leaders/institutes
- Community leaders
- Administrative leaders
- The HEW
- Community members

Once the deceased is identified and notified, the sources of information to carry out the verbal autopsy will include:

- Persons who primarily attended the women during illness
- Persons who attended the women in labour/delivery at home
- Persons who were present at the side of the woman at the time of death
- Husband

1.2. Facility

The head of the maternity/labour ward is responsible for notifying maternal deaths to the head of the health facility/the medical director. The sources of the information for facility deaths reviews include:

- Referral sheets
- Medical records
- Log books (OR, maternity, OPD, anaesthesia)
- Attending health workers (OPD, maternity, OR)
- Others

2. Identification and reporting of maternal deaths

2.1 Identification and reporting of maternal deaths in the community

Maternal death reporting from the community will be done by health extension workers (HEWs). Ideally the health extension worker will identify deaths of all women of reproductive age. S/he will report the death to the head of the health center within one week. The ~~assigned person from the~~

~~HC~~HEW will ~~go out to the~~also determine whether the death was likely to be causally related to the pregnancy, by filling out the screening questions on the notification form in consultation with family or other community ~~and~~members ~~determine whether the death was causally related to the pregnancy~~. An assigned person from the Health Center will review this form and confirm the likelihood that the death was a maternal death; ~~I~~if it is determined as related to pregnancy data will be collected by the same individual within three to four weeks of notification of the event and review of the case will be conducted by the team

2.2 Identification and reporting of maternal deaths in facilities

Head nurse of the labour/ other wards will be responsible for checking death logs and other records from the previous 24 hours on a daily basis. Any death of a woman of reproductive age should trigger a review of her medical record to assess whether there was any evidence the woman was pregnant or within 42 days of the end of a pregnancy. If there is such evidence, the head nurse of the ward has to report to the facility medical director within 24 hours of identifying deaths.

3. Data contents and Data collection

A maternal death review collects data from various sources, including family cards, antenatal care records, medical records from health facilities, and interviews with family members, local community members/leaders, traditional health workers and health care workers. Each data sources may provide different information. Table1 lists information that would be helpful in understanding why a woman died.

For community level death reviews the assigned professional from the HC will be trained on and fill the VA tool. The medical director of the HC responsible for that kebele will have supervisory role. Data collectors for both facility and community level should be fluent in the local language.

4. **Reviewing of the Event**

The chairperson of the review committee at each level of the review process will assign two reviewers for every death to be reviewed. Death reviewers will be oriented on how to review the death and produce summary reports.

The information provided for the review process should be anonymous, which is to say that the case information presented to the review committee should contain no identifying data regarding the patient, health care providers, or facilities. After data collection is complete, all data files and instruments should be made anonymous, although a key linking the case number to the identity of the mother can be kept in a locked storage space.

At the death review committee meeting, members may take turns reading the case summaries. After each case summary is read, the members then discuss the case, the events that may have led to the mother's death. If any points are unclear, the reviewers will explain. The rapporteur should keep a list of the main points of the discussion. A checklist produced by the TWG can be used to help ensure that the full range of possible problems is considered in the discussion.

The means of communicating findings of the review should follow three principles:

The first principle is that there should always be a feedback of the findings and the recommendations at the level of the facility or the community where the information was collected.

Secondly, this feedback should be in a de-identified form so that the individual families or health care providers cannot be identified.

Finally, legal safeguards should be in place to prevent the use of the review findings in litigation.

The process of the review is summarized in the following figures.

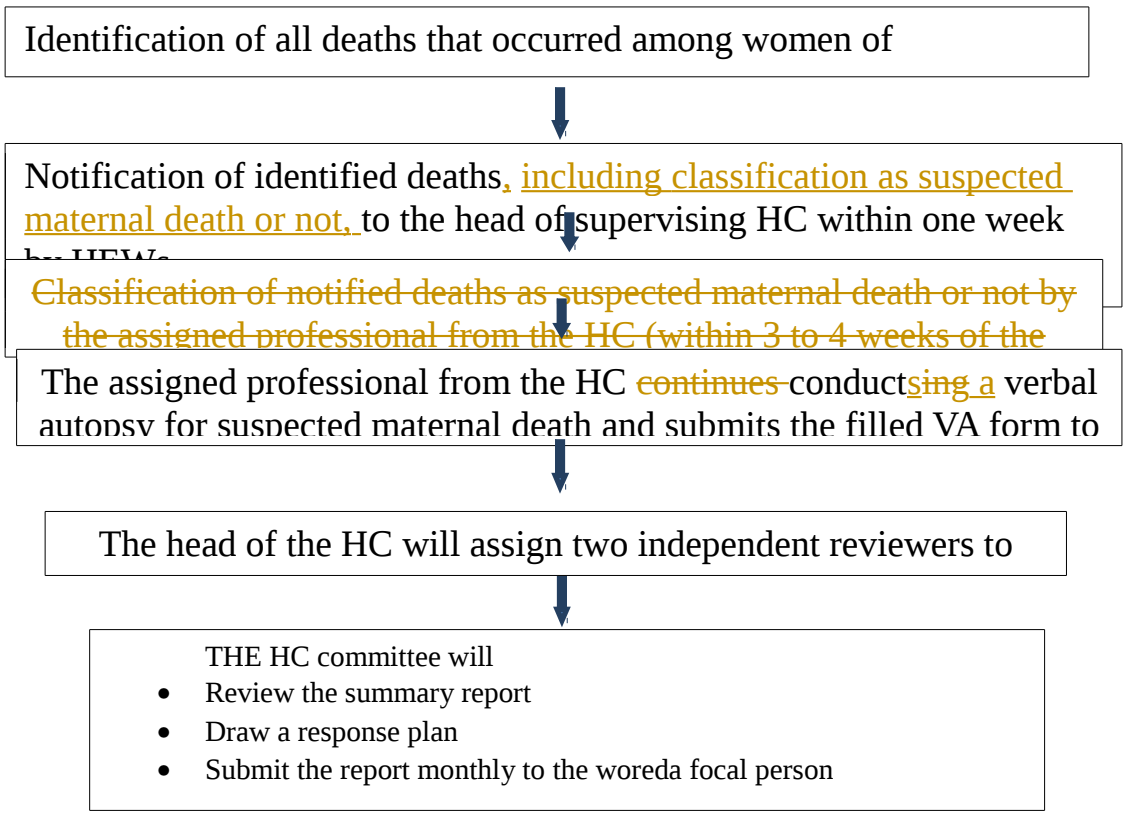
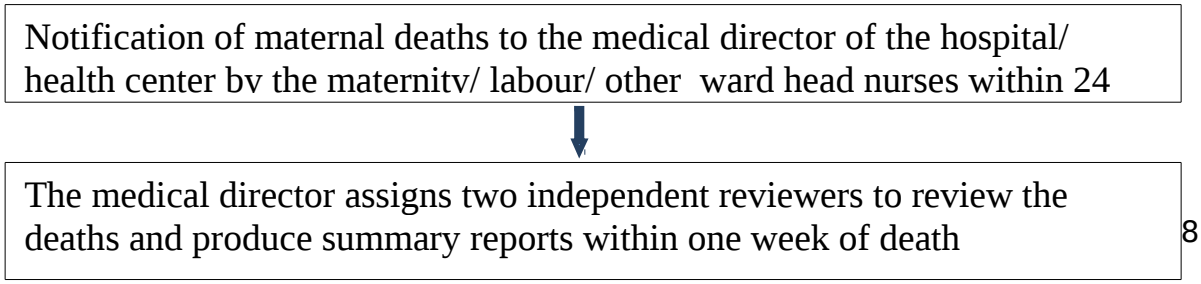


Figure 2: Maternal death review at community level



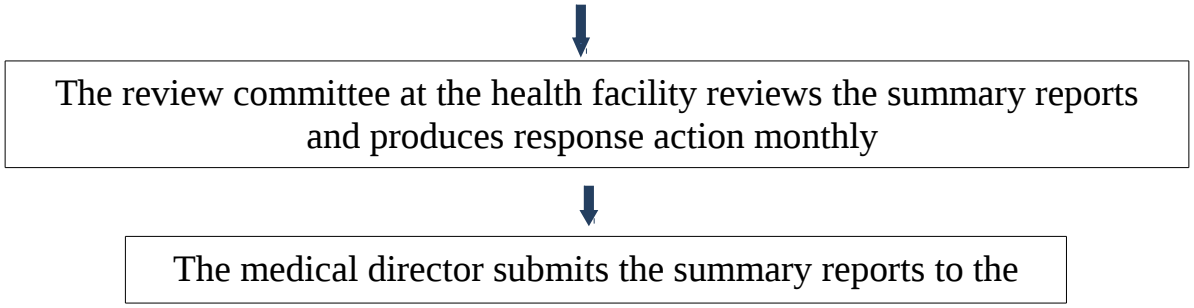


Figure 3: Maternal death review at facility level

The following general principles can help make the review process more effective and efficient:

- The problems leading to maternal death are frequently not all medical - think holistically.
- Focus only on those events that may have directly contributed to the maternal death throughout pregnancy and delivery, not everything that happened.
- Quality of care received by the mother should be compared both to accepted local practice as well as best medical practice.
- While most cases are unique, try to group problems into general categories (e.g., lack of transportation to health care facility) while keeping enough information so that a specific strategy can be developed (e.g., not "improve health care system").

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Facility deaths

The medical cause of death can frequently be established from the medical records. Interviews of facility personnel involved in the care of the woman may provide additional information that can be used to corroborate facts in the facility record. This is particularly important in situations where there are questions on quality of care.

Deaths occurring outside the facility:

In some cases, a woman who dies outside the facility may have had antenatal care or been hospitalized prior to her death. Medical records may be helpful but are sometimes unavailable in these situations. Verbal autopsy is a tool that can be used to determine the medical cause of death.

b. Determine the non-medical causes of death

Non-medical causes of death are often more important in determining whether a woman lives or dies than the medical condition itself. It is important to investigate these in order to reduce maternal mortality. Major examples of non-medical causes of death include the timeliness of the problem recognition and decision making, access to care and logistics of the referral process (see ***figure 3***: pathway to survival).

Figure 4: Pathway to survival

care? Were any risk factors present that may have been missed because the woman did not seek prenatal care or because prenatal care was inadequate?

- If the problem was recognized, was the decision made to seek care? If not, why not? Again, did the death occur too suddenly?

Did the woman refuse to seek care? Were there family obstacles to a referral? Was concern over access to care an obstacle to decision making?

- Did any beliefs or cultural practices create barriers to obtaining appropriate medical care? Did previous poor experiences with the health care system make the patient or TBA reluctant to seek care?

ii. **Access to care/logistics of referral:**

- Was geography a factor? Were there problems with transportation? Or with the roads? Did the woman live far away from the necessary health care services?
- Were financial factors obstacles to obtaining care? Were actual costs a deterrent to the woman or her family? Did the health care delivery provider refuse appropriate care because the patient could not pay, or for cultural reasons?
- Were there delays in transferring the patient to an appropriate level of care, such as from a clinic to a hospital? Was there a delay in her receiving care at the institution?

iii. **Assess the quality of medical care:**

- The investigation should include information about the medical management of the women's condition in order for the committee to determine if the recommendations and treatment were appropriate and the quality of care was adequate.
- The quality of any prenatal care such as screening for risk factors or underlying conditions also needs to be assessed. This is true of postnatal care, if the death was post-delivery. For both facility and out of facility deaths the quality of care evaluation should include that care given by traditional birth attendants, nurses, midwifes and physicians.

4.2 Determination of preventability

The purpose of every death investigation is to determine the causes of death, whether the death was preventable and if so, how it could have been

prevented. The aim of this investigation is not to blame a particular person or facility for the death. Rather preventability is a pro-active concept in which lessons are learned and applied to prevent future deaths from similar factors. The following factors should be considered when assessing if a death was preventable:

a. Family/community level

Patient/family factors– did the woman and her family

- Recognize that a problem existed
- Seek medical care
- Seek prenatal care
- Comply with any medical advice given

Delivery attendant factors – did the Delivery attendant

- Manage the labour and delivery correctly
- Recognize that a problem existed
- Refer the women appropriately and without delay
- Consider herself part of the local health care system

b. Formal health care delivery-system level

Antenatal care – Determine whether

- The woman received antenatal care
- Antenatal care followed country guidelines
- Risk factors and medical problems were correctly assessed and treated
- Patient received education on signs and symptoms of complications

Health facility factors– determine whether

- Essential obstetric functions were available at the first referral level
- Resources were adequate to resolve the problem
- Protocols/norms were available and appropriate
- Care was available regardless of the ability to pay

Health care provider factors – determine whether the health personnel

- Were trained to treat the problem correctly. If so, treated the problem adequately
- Were sensitive to the social and cultural values of the patient and her family

c. Intersectoral level

Transportation factors – assess if transfer was hindered by:

- Availability of transport
- Adequacy of transport
- Ability to travel at night
- Cost
- Education factors
- Communication factors
- Status of women

Based on information obtained from the investigation the committee will make recommendations to prevent such deaths in the future. As cases accumulate and patterns emerge, especially at the regional and national levels, interventions can be priorities according to which will have the greatest impact.

Case review need to be linked to a response–Every case review should include a recommendation (with response/ action) to prevent future deaths**.**

II. Set Up

For successful implementation of MDSR, the following settings are needed

1. Establish National, regional and local committee

1.1. National MDSR task force: will be composed of national focal person, representatives from HPDP, FMHACA, EHNRI, a focal person from policy and planning directorate, representatives from development partners, ESOG, Ethiopian Midwives Association and Ethiopian Anaesthetists Association. The chair of this team will be the national focal person for the MDSR and the representative from

FMHACA will be secretary of the task force. This task force will be a sub group of national safe motherhood TWG. The task force will conduct regular meetings.

Roles and responsibilities of this national task force:

- Develop detailed TOR and Plan of action of the committee.
- Organize the overall MDSR system in the nation
- Revise/ develop national technical guidelines, tools and other relevant documents
- Coordinate the involvement of stakeholders from planning to implementation of the MDSR
- Oversee the review process
- Work for the sustainability of MDSR
- Compile monthly data and devise action points at a national level
- Provide regular monitoring and supervision in the implementation of MDSR in the country bi-annually
- The task force should work closely with FMHACA to set-up legal framework for the implementation of MDSR (for legal back up/data protection)
- Evaluate the MDSR system

1.2. Regional safe motherhood technical working group/ RH task force: It comprises a multidisciplinary profession including regional MNCH focal person, a senior midwife from midwifery association, member of ESOG, a representative from FMHACA and development partner representatives. The RHB deputy head will be chair of this committee. The assumption is that there is an MNH TWG/ RH task force in each region and MDSR can be implemented through that group.

Roles & responsibilities of the regional committee include:

- Develop detailed TOR and Plan of action for the committee.

- Plan and implement MDSR in the region
- Coordinate all issues related to maternal and new born health
- Compile and analyse data coming from the woreda /zones/ facilities.
- Involve stake holders in the MDR system
- Devise action points for the outputs of the review process
- Regular monitoring and supervision of the MDSR
- Compiles and reports to the national MDSR team monthly.
- Evaluate the MDSR system
- Conduct selected death reviews for at least 5 to 10% of the reported deaths

1.3. Facility based MDSR committee:

1.3.1. Hospital: It comprises of an obstetrician & gynaecologist/IESO officer, a senior midwife, anaesthesiologist /anaesthetist, CEO, medical director, pharmacy case unit head quality officer and support staff (non-health workers) representative of the hospital. The medical director will chair this committee.

The roles and responsibilities of this committee include:

- Develop detailed TOR and plan of action
- Reviews all maternal deaths in the hospital within 48 hours of death notification
- Devise and implement action points based on findings according to their expertise
- Keeps the filled review tool confidential and ensure it will not be used for any other purpose including litigation
- Conducts anonymous reviewing of all cases of maternal death and cases of near miss to avoid blaming and bias

- The number of near misses reviewed will be dependent on the facility case load. A minimum of 50% of near misses should be reviewed.
- Compiles and reports the findings of maternal death reviews to RHB SMH/TWG every month.
- Conducts in-depth investigation of selected cases
- Provides technical assistance to health centres as needed

1.3.2. Health centres:

The committee at HC comprises a HC head/director, a midwife working in the delivery case team, a nurse working in MNCH case team, pharmacist/druggist, HEW from the kebele where the deceased mother resided and woreda health office representative. For deaths that occurred at home/HP level, two community representatives (e.g. kebele chairpersons, HDA team leader from where the deceased was a member) will be added to the HC committee. The HC head will chair the committee and assign a senior midwife and HO to review the death and produce a summary for deaths.

Roles and responsibilities of the health centre committee:

- Develops its own TOR that guide and facilitate the task
- Assign a professional to collect data (verbal autopsy) for all deaths reported by HEWs irrespective of place of death
- Conducts monthly meeting to review and produce summaries.
- Develops response actions and follows implementation
- Keeps the filled review tool confidential and ensure it will not be used for any other purpose
- Conducts anonymous reviewing of cases to avoid blaming and bias
- Compiles and reports the findings to woreda health office focal person on monthly basis

1.3.3. Zones: (where applicable)

Roles and responsibilities of the zonal committee:

- Plans and implements MDSR in the zone
- Develop detailed TOR and Plan of action for the committee.
- Compiles the monthly MDSR reports from woredas
- Submits monthly reports to the region
- Proposes action points & follows their implementation

2. Roles and responsibilities of key actors

2.1. Zonal MNCH focal person (Where there are zones)

- Takes part in the monthly meetings of maternal death review at health facilities.
- Compiles the monthly MDSR reports from woredas
- Proposes action points & follows their implementation
- Submits monthly reports to the region
- Facilitates the regional audit of selected cases

2.2. Woreda MNCH focal person

- Takes part in the monthly meetings of maternal death review at health facilities.
- Compiles the monthly MDSR reports from facilities
- Proposes action points & follows their implementation
- Submits monthly reports to the zone/region
- Facilitates the regional audit of selected cases

2.3. Medical director of hospital / health center

- Chairs the review committee
- The HC head
  - will receive death notification from the HEWs
  - assigns one professional to conduct screening and verbal autopsy
  - will keep all filled screening forms (whether the death is identified as maternal or not)
- The medical director of the hospital receives and keeps the filled death notification forms from the wards

- Assigns two independent reviewers (one being the inpatient process owner) for the deaths.
- Collects relevant medical records and makes them anonymous (by giving numerical codes to records) before handing over to the assigned independent reviewers
- Receives the summary report from the reviewers and presents it to the review committee

2.4. Health extension workers:

- Fill the notification form in duplicates for all deaths of women in the reproductive age group, including answering the screening questions to determine whether the death was causally related to pregnancy.
- Submit the filled notification form to the HC head within one week of death. Keep a copy of the notification form at HP level.
- Assist the assigned HC professional in conducting the verbal autopsy
- Attend the meeting of the HC review committee when it discusses the death at the respective kebele.
- Follow implementation of action plans at community level

2.5. HMIS focal persons at woreda, zone, region and national level

- Collect data from the lower level
- Analyse the data,
- Prepare report and disseminate to relevant bodies

3. Availing tools and guidelines for MDSR

The original tools/guideline prepared by the FMOH will be distributed to RHBs. The RHBs and Woreda Health Offices are responsible for producing

and distributing the required quantities of tools/guidelines to their health facilities. The tools that are to be used in the MDSR process include:

- Notification and verbal autopsy tool
- Verbal autopsy consent form
- Facility based abstraction form
- Summary form for VA
- Action plan template
- Reporting template from Health facility to Next level
- Reporting format from Woreda to region
- Reporting format from Region to National
- Near miss review forms will be made available to all hospital facilities
- Review committee disclaimer

4. Legal and ethical considerations

Ideally, maternal death reviews should be part of the routine supervision and monitoring of maternal health outcomes. However, given the potential for lawsuits, health personnel who attend to the cases under review might be reluctant to participate. Ministry of Health will provide the committees with legal backing to prevent use of the findings for litigation. In this regard, consent forms (or disclosure statement) should be administered prior to interviewing family members. After the committee meeting, all notes with identifying information collected for the purposes of the audit will be kept secured. Further, the notes with identifying information should not be shared by electronic means, such as email.

Ethical issues will be considered when reviewing maternal deaths both at community and facility level. These include:

a. **Informed decision:** family and friends of the deceased should be well informed about the review process. Their voluntary participation should be sought for and the interview can be interrupted at their request. This particularly applies for verbal autopsy. Their consent should be sought.

b. **Confidentiality:**

- Families and health care workers directly and indirectly involved in the review process have to be reassured of their privacy.
- The identities of the deceased, family and health care providers involved in the management should be kept confidential and known only to those who are doing the actual review.
- Anonymizing staff member may be done for example by labelling them as Midwife A, Midwife B, Doctor X etc.
- All persons having access to identifiable information will sign a confidentiality agreement stating that they will not disclose any identifiable information.
- Data collection forms, case summaries, review meeting minutes and reports or dissemination results will not contain any personal identifiers.
- All records of cases reviewed & any discussion will be kept secured; hard copy information will be kept in locked cabinets/offices and electronic data in password protected files.

c. **Beneficence:** Data obtained through the MDSR should be tailored in a way that enables production of response actions at different levels so that further maternal deaths will be prevented.

II. Awareness creation among health care workers and the community

In MDSR system, health care workers will be involved in a variety of ways such as data collection, revision or care provision. Therefore, every individual involved in the process will have basic understanding of the review; appreciate the significance and their role in generating quality data for the success of the MDSR. The committees at different levels will arrange and execute orientations to their respective health care staff on objectives, processes and principles of MDSR

In addition, awareness creation to the wider community will be the top priority to be accomplished as those deaths occur there and for establishment of ownership of the review process. The health development army will be used for awareness creation among the community through their regular meetings and also the pregnant mothers' conference. For community deaths they'll assist the HEWs in notifying deaths of reproductive age women. Furthermore the HDA will work on assuring the implementation of the community based action plans to prevent maternal deaths. For community-based reviews, in addition to the HDA the support of local village leaders and religious & cultural leaders will be sought.

III. Analysis (aggregation of multiple case reviews) - perspective on national, regional and woreda level.

The purpose of all the data collection and analysis is to have the information on which to act, to understand the problems which led to the deaths and use that knowledge to develop appropriate interventions. Data analysis is critical to provide useful information to guide action. It is important to analyse data in a thoughtful way, maintaining the focus on identifying problems in the

system that may contribute to maternal deaths, especially those that could

Key message: **A guide to categorizing contributory factors**

Non-medical problems	**Medical / service problems**
Lack of awareness of danger signs of illness	No health service available or too far away
Delay in seeking care due to lack of family agreement	Sought care but no staff were available
Geographic isolation	Medicine not available at the facility and must be provided by the family
Lack of transportation or money to pay for it	Doctor would not see woman without payment
Other responsibilities	Woman was not treated immediately after arriving at the facility
Cultural barriers, such as prohibitions on mother leaving house	Health facility lacked needed supplies or equipment
Lack of money to pay for care	Staff did not have knowledge/skills to diagnose and treat mother
Belief in use of traditional remedies	Had to wait many hours for qualified staff to see mother
Belief in fate controlling outcome	No transport available to reach referral hospital
Dislike of or bad experiences with health care system	Poor staff attitude

Analysis of data depends on the level of health service delivery:

1. **Woreda level analysis**- the woreda based analysis should be done annually which entails a detailed analysis on:
   1.1. Background information of the deceased including :-

   - Age
   - Residential address
   - Marital status
   - Education
   - Occupation
   - Income
   - Ethnicity
   - Religion
   - Parity
   - ANC
   - Place of death(home, facility)
   - Timing of death in relation to pregnancy (Antepartum, intra partum, postpartum)
   - Fetal outcome (abortion, ectopic, live birth, still birth, neonatal death)

   1.2. Cause of Death
   - Direct obstetric (haemorrhage, obstructed labor, HDP, unsafe abortion, sepsis)
   - Indirect obstetric (anaemia, malaria, HIV, TB, etc.)
   - Preventability

   1.3. Contributory factors
   - Health seeking (delay one)
   - Transport access (road, vehicle, communication)
   - Transport cost
   - Health system related (human resource, supplies, equipment, service cost, etc.)

   1.4. Status of implementation of the proposed action plan
   -
2. **Regional level analysis-** the regional based analysis should be done bi-annually. This entails analysis on
   2.1. Background information of the deceased including :-
   - Age
   - Residential address (urban/ rural)
   - Marital status (married, unmarried, others)
   - Education (illiterate, primary, secondary, higher education)
   - Parity

- ANC (booked, un booked)
- Place of death (home, facility)
- Timing of death in relation to pregnancy (Antepartum, intra partum, postpartum)

2.2. Cause of Death
- Direct obstetric (haemorrhage, obstructed labor, HDP, unsafe abortion, sepsis)
- Indirect obstetric (anaemia, malaria, HIV, TB, etc.)
- Preventability

2.3. Contributory factors
- Health seeking (delay one)
- Transport access (road, vehicle, communication)
- Transport cost
- Health system related (human resource, supplies, equipment, service cost, etc.)

2.4. MMR
-

3. **National level analysis**: the national analysis should be done quarterly. This entails analysis on

3.1. Background information of the deceased including :-
- Age
- Residential address (urban/ rural)
- Marital status (married, unmarried, others)
- Education (illiterate, primary, secondary, higher education)
- Parity
- ANC (booked, un booked)
- Place of death (home, facility)
- Timing of death in relation to pregnancy (Antepartum, intra partum, postpartum)

3.2. Cause of Death
- Direct obstetric (haemorrhage, obstructed labor, HDP, unsafe abortion, sepsis)
- Indirect obstetric (anaemia, malaria, HIV, TB, etc.)
- Preventability

3.3. Contributory factors
- Health seeking (delay one)
- Transport access (road, vehicle, communication)
- Transport cost
- Health system related (human resource, supplies, equipment, service cost, etc.)

3.4. MMR

- ***V. Dissemination of results***

- The information needs to be disseminated using a variety of channels to enable a wide range of people to access it, to ensure that the information gets to the right audience, namely those who can act on the recommendations. If specific causes of deaths are identified as particularly problematic, conferences or seminars can be held to educate health staff.

1. **Whom to inform of the results**

    - The general principle is to get the key messages to those who can implement the findings and make a real difference towards saving mothers' lives. They may include:

- Ministry of Health
- Local, regional, and/or national health care planners, policy-makers and politicians
- Professional organizations and their members, including paediatricians, general physicians, obstetricians, midwives, anaesthetists and pathologists who are involved at each level
- Leaders in other health care systems, such as Social Security and the private sector
- Health promotion and education experts
- Public health or community health departments
- Academic institutions
- Local health care managers or supervisors
- Local governments
- Community members like HDA
- National or local advocacy groups
- The media
- Representatives of specific faith or cultural institutions or other opinion leaders who can promote and facilitate beneficial changes in local customs
- All those who participated in the survey

2. **The following are all methods that have been used for dissemination of results:**

- Community/facility level:
  - Team meetings
  - Thematic seminars at facilities
  - Community meetings
  - Printed reports
  - Training programmes
  - Posters
  - Text messages
  - Video clips
  - Woreda/ Regional or national level:
  - Printed reports for policymakers
  - Statistical publications
  - Scientific articles
  - Professional conferences
  - Training programmes
  - Media
  - Press releases
  - Websites
  - Newsletters and bulletins
  - Fact sheets
  - Posters
  - Video clips

3. **Publish the results**

   - Publishing a report is one of the primary ways to disseminate the findings and recommendations. The report should be written in simple language, be easy to follow and should include some standard sections. The scope, depth and breadth of the report may vary, depending on the approach that was chosen and the number of cases reviewed.

- A single facility death review report may be an internal document, copied and distributed to all staff, relevant decision makers in the area, and colleagues outside the facility. The objective is to share the findings and recommendations. As it is likely that many people involved will know the identities of the deceased women's family and staff involved in the care, it will be particularly important to focus on positive recommendations, rather than placing blame.
- Facilities-based review report may have broader audiences: all the facilities involved in the review, other facilities in the area (public and

private), various decision makers, insurance companies and teaching institutions, as well as national authorities and the public.

- A community-based review may have a report that is distributed to leaders of the area of the review, individuals involved in local programs, and district or state health officials.

    - However, remedial action does not need to wait for the report to be published. Sometimes the findings of a single case review can reveal a significant problem that needs to be addressed immediately. The frequency and importance of other problems may only become apparent after the information from the qualitative review is quantitatively analysed.
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Suggested standard sections for a MDSR report

1. Background of area covered by review.
2. Characteristics of women of reproductive age in area.
3. Characteristics of births in area (number, live or stillborn (fresh vs. macerated), birth weight, gestational age).
4. Maternal deaths by area, mother's age, ethnicity (with denominator if possible).
5. Maternal deaths by medical cause of death.
6. Problems leading to death by medical cause and non-medical cause and their frequencies
7. Recommendation to prevent future deaths

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promotion and education programmes, facilitation of financial access as well as possible changes in community service provision, changing home practices or in the practices or attitudes of the health care facilities, or improved infrastructure such as roads, bridges, and communication technology. Information from facilities may point to the need for changes in clinical practice or modification of service provision. The needed actions may be in the area of direct patient care, or at the system level, such as how to provide the necessary drugs and personnel at a health care facility or perhaps the need for clinical guidelines for care or capacity building. Information from the findings of combined data analysis can cover all these issues on a far wider basis and are used at institutional, local and national levels by politicians, health service planners, professionals, public health personnel, educators and women’s advocacy groups. They may also lead to the development of programs to improve maternal health.

- Responses at different levels should include the following, but not an exhaustive list:

1. **Community level:**

- Creating awareness about the need for skilled care for all pregnancies and danger signs in [pregnancy, labour and delivery by using different mechanisms
- Addressing traditions and beliefs that are inhibiting health seeking behaviours
- Devise mechanisms to have a pooled money that can be borrowed during emergency conditions
- Establish a mechanism to transport mothers to health facilities without delay
- Avoiding/ preventing traditional practices such as early marriage, FGC, etc

2. **Health facility**

- Make services available 24 hrs a day and 7 days a week
- Ensure providers have the needed knowledge and skills to prevent, manage and appropriately refer when needed mothers with complications
- Avail all essential supplies needed for maternal and new-born health with good stock level as well
- Establish a no blame-no shame principle with all health care worker staffs
- Good referral network with transfers based on MNH directory, ETC

3. **Woreda/ district level**

- Devise strategies to address barriers for health seeking behaviour by using cultural and community sensitive issues by using such interventions as community dialogue and HDA
- Avail transport means such as tricycle or regular ambulances
- Establish linkage with other inter-sectoral offices to address maternal and new-born health issues
- Ensure adequate staffing of health facilities with appropriately qualified health workers
- Equip health facilities with all essential supplies and equipment and needed health care workers, ETC

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4. **Regional level**

- Work for using relevant communication/ media means to increase community awareness
- Avail all essential equipment and supplies to health facilities within the region
- Staff all health facilities with the required kill mixes
- Establish inter-sectoral partnerships to address maternal and newborn health
- Avail tricycle or regular ambulances
- Produce SOPs for maternal and newborn referrals and directory
- Establish the platform to organize development partners for resource mobilization
- Work on avoiding/preventing harmful traditional practices such as FGC and early marriage, ETC.

5. **National level**

- Produce guidelines, guidelines and management books based on evidences and findings of the review
- Work to include in the IDSR system of the nation
- Avail essential reproductive health commodities
- Produce referral standards
- Establish the inter-sectoral collaboration to address maternal and newborn health problems
- Avail ambulances (tricycle or regular or both)
- Work for higher budget allocation for maternal and newborn health
- Organize and coordinate with development partners for resource mobilization, ETC

6. **Other stakeholders:**

- Encourage women and girls education
- Good infrastructure at the community level to the extent so that referral will be facilitated.
- Work with ministry of justice for women empowerment and working for legal back up for confidential enquiries.

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▪ *VII.M&E for MDSR*

▪ 1. Framework for monitoring

- Monitoring and evaluation of the MDSR system itself should be in place to ensure that the major steps in the system are functioning adequately and improving with time. It is also important to assess the timeliness of the information and the coverage of the system. Monitoring of the MDSR system is carried out both at national and regional level. The monitoring framework with indicators is shown in Table 4.

- **2. Evaluation of the MDSR system**

- In addition to the monitoring indicators that provide a quick snapshot of whether the system is improving, periodically a more detailed evaluation is useful particularly if i) the indicators demonstrate that one or more of the steps in the MDSR process is not reaching expected targets, or ii) if maternal mortality is not decreasing. Since the main purpose of MDSR is to lead to action to reduce maternal deaths if this is not happening the system is failing. A more detailed evaluation can also be used to assess whether the system can function more efficiently. Ideally, an evaluation of the quality of information provided would also take place periodically. The evaluation of MDSR system should take efficiency and effectiveness into consideration.

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- **Table 4.** MDSR monitoring framework

▪ **Indicator**	▪ **Target**	▪ **Means of verification**

▪ **Overall system indicators** ▪ Maternal death is a notifiable event ▪ National maternal death review task force exists - that meets regularly ▪ National maternal mortality report published annually ▪ % of facilities with maternal death review committees ▪ % of woredas with someone responsible for MDSR	▪ ▪ Yes ▪ Yes ▪ At least quarterly ▪ Yes ▪ ▪ 100 % ▪ ▪ 100 %	▪ ▪ HMIS ▪ Report ▪ Minutes ▪ Report ▪ ▪ MDSR report ▪ ▪ Report
▪ **Identification and reporting** ▪ Facility: ▪ All maternal deaths are reported - % within 48 hours ▪ Community: ▪ % of woredas with zero reporting monthly ▪ [% of expected maternal deaths that are reported?] ▪ % of community maternal deaths reported within 1 week	▪ ▪ ▪ Yes ▪ >90 % ▪ ▪ 100 % ▪ 80% ▪ >80 % ▪	▪ ▪ ▪ Survey ▪ Survey ▪ ▪ MDSR report ▪ MDSR

		▪ report ▪ Survey
▪ **Review** ▪ Facility ▪ % of facilities with a review committee ▪ % of facility maternal deaths are reviewed ▪ Community ▪ % of verbal autopsies conducted for pregnancy related deaths ▪ Region ▪ Regional maternal mortality review committee exists - and meets regularly to review facility and community deaths - percentage of deaths reviewed by the region among reported ones ▪	▪ ▪ ▪ 100 % ▪ 100 % ▪ ▪ 100 % ▪ ▪ ▪ Yes ▪ At least quarterly ▪ 10% ▪ ▪	▪ ▪ ▪ Report ▪ MDSR report ▪ ▪ Survey ▪ ▪ ▪ Report ▪ Minutes ▪ Report

▪ **Data Quality Indicators – TBD** ▪ Cross check data from facility and community on same maternal death ▪ Sample of WRA deaths to ensure they are correctly identified as not maternal ▪	▪	▪ ▪ Survey ▪ ▪ Survey
▪ **Response** ▪ Facility ▪ % of committee recommendations that are implemented - quality of care recommendations - other recommendations ▪ Community ▪ % of committee recommendations that are implemented	▪ ▪ ▪ 80% ▪ ▪ ▪ 80%	▪ ▪ ▪ ▪ Survey ▪ ▪ Survey
▪ **Reports** ▪ National Committee produces annual report ▪ Regional committee produces annual report ▪	▪ ▪ Yes ▪ Yes ▪	▪ ▪ Report ▪ Report ▪
▪ **Impact** ▪ Quality of care - case fatality rate (facility) ▪ National maternal mortality ratio ▪ Regional maternal mortality ratio ▪	▪ ▪	▪ ▪ MDSR reports ▪ MDSR reports

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- ***VIII Near Misses (for Hospital facilities only)***
- This provides an opportunity to include maternal morbidity in the surveillance system as resources allow or a small number of deaths is identified. It is suggested that a minimum of 50% of cases of near miss are reviewed. If there are few maternal deaths more cases of near miss can be reviewed.
- Near miss reviews have the advantages of

- being less threatening to health providers than death reviews

- occurring in larger numbers and therefore allowing quantification of avoidable factors

- the possibility of interviewing the woman herself if needed (consent should be obtained)

- providing useful complementary insights into the quality of care

  - The near miss tool should be used as a comprehensive intervention for strengthening district health systems, specifically contributing to monitoring the quality of care, assessing the implementation of key interventions, informing the mechanism of referral and strengthening all levels of health care services.
  - **Maternal near-miss** is defined as a woman who nearly died but survived a complication that occurred during pregnancy, child birth or within 42 days of termination of pregnancy. In practical terms, women are considered near miss cases when they survive life threatening conditions (i.e. organ dysfunction)
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  - **Inclusion criteria**
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- Women who are pregnant, in labour, or who delivered or aborted up to 42 days ago arriving at the facility with any of the listed conditions
  - or
- Women who develop any of those conditions during their stay at the health-care facility are eligible.
- Women that develop those conditions unrelated to pregnancy (i.e. not during pregnancy or 42 days after termination of pregnancy) are **not** eligible.
- Women who are already dead when they are brought to the health-care facility or those who die on arrival at the facility should be included in the MDSR system because they are likely to represent cases involving a major delay in accessing care.

- The eligibility is not restricted by gestational age at which complications occurred (i.e. women having abortions or ectopic pregnancies and presenting with any of the inclusion criteria are eligible).
- Women must have either suffered a **severe complication** or undergone one of the **interventions** as listed below to be included
  -
    -
      - **Severe maternal complications**
- **Severe Post partum Haemorrhage**
    - Genital bleeding after delivery, with at least one of the following:
      - Perceived abnormal bleeding (1000 ml or more)
      - Any bleeding with hypotension
      - Blood transfusion.
  -
- **Severe pre eclampsia**
    - Blood pressure > 160/110
    - Plus one of
    - proteinuria of 5 g or more in 24 hours
    - oliguria of <400 ml in 24hours
    - HELLP syndrome
    - pulmonary oedema
  -
- **Eclampsia**
    - Generalized fits in a patient without previous history of epilepsy. Includes coma in pre-eclampsia.
  -
- **Sepsis or severe systemic infection**
    - Presence of fever (body temperature >38°C),
    - a confirmed or suspected infection (e.g. chorioamnionitis, septic abortion, endometritis, pneumonia),
      - **and** at least one of the following:
        - heart rate >90,
        - respiratory rate >20,

- leukopenia (white blood cells <4000),
- leukocytosis (white blood cells >12 000).

- **Ruptured Uterus**
  - Rupture of uterus during labour confirmed by laparotomy
- **Severe complications of abortion**
  - Sepsis, haemorrhage or perforated uterus following abortion
  - **Critical Interventions**

- Admission to intensive care unit
- Laparotomy (includes hysterectomy, excludes Caesarean Section)
- Blood transfusion

  - **Identifying women with near misses**
  - All staff at the facility are eligible to report a near miss to the focal person. Posters should be made to stimulate identification.
  - Morning meetings are an opportunity to identify potential cases.
  - A log book should be made available for staff to enter the Identifying number of the case . The log book should be kept in a recognised, accessible place.
  - **Case Review**
  - The case summary should be prepared prior to the MDSR Committee meeting and the near miss cases reviewed after the Maternal Deaths.
  - An action plan should be prepared for each near miss using the action tool.
  - Each Hospital should determine their own ground rules. Confidentiality and no punitive use of information are of paramount importance in establishing an effective review system.

- **Additional considerations** – for broadening the system
- **Perinatal death review**
- As perinatal deaths are closely linked to the access and quality of obstetric care, the need to carry out perinatal death review can complement the MDSR system.
- **Pregnancy surveillance**
- Identification of all pregnant women at any given time in a location is one method to obtain denominators, identify women at higher risk, and determine pregnancy outcomes reliably. Establishing a pregnancy surveillance system, while beneficial, should take in account the resources available and the goals of the system itself.
- **Linkage to vital records**
- Identification of maternal deaths can be accomplished by reviewing vital records. Additional deaths may be uncovered using other approaches. Creating a system of verifications of the newly identified deaths is important for data validity. The valid deaths identified by other methods, if confirmed to not already be listed in the vital registration system, should be then added. In this way, the MDSR provides an opportunity to strengthen the vital registration system.
-

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Annex 1

Notification and verbal autopsy tool

Federal Democratic Republic of Ethiopia

Ministry of Health

-
- ~~June~~September, 2013
- Addis Ababa, Ethiopia
-

Notification and identification form

To be filled out for *ALL* deaths to women of reproductive age (15-49)

(To be filled in duplicate; one copy kept at Health centre and one sent to Woreda MH Lead)

I. **Notification (To be filled by Health Extension Worker)**

1. Name of the deceased:_____
2. Name of head of the household:_____
3. Household address:

   Woreda/Subcity_____Kebele_____Gott_____

   HDA team_____ house number:_____
4. Date of the women's death:_____
5. Who informed the death of the woman?
   - 1. HDA
   - 2. Religious leader
   - 3. Self (HEW)
   - 4. Others (specify)_____
6. Date of Notification:_____
7. Name of the HEW:_____
8. Telephone number of HEWs:_____
9. Signature:_____

II. **Screening (To be filled by Health Extension Worker) ~~(to be filled by Health Centre staff member)~~**

1. **Age of the woman:**_____
2. **Did she die whi**le pregnant? 1. Yes 2. No
3. Did she die with 42 days of termination of pregnancy? 1. Yes 2. No
4. Has she missed her menses before she dies? 1. Yes 2. No 3.Unknown
5. Place of death:
   i. Home
   ii. On the way to HP
   iii. HP
   iv. On the way to Health facility (HCs, hospitals)
   v. Managed at health facility

NB: If answer to ANY of questions 2-4 is YES, then the death is a suspected maternal death and requires a verbal autopsy to be conducted

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- **(To be filled by Health Centre staff member)**

6. Suspected maternal death: 1. Yes 2. No
7. Name of HEW supervisor:
8. Date:
9. Signature:

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▪ Verbal autopsy tool/ community based maternal death review tool

I. People who participated in the interview:

▪ Interviewee will be those who were there at the time of illness/death (up to 4 interviewees possible)

▪ Name	▪ Relationship	▪ Was around at the time		▪ When do they join/leave the interview
		▪ Illness	▪ Death	
▪	▪	▪	▪	▪
▪	▪	▪	▪	▪
▪	▪	▪	▪	▪
▪	▪	▪	▪	▪

▪

II. Interviewer related:

1. Interviewer name:
2. Date of interview:
3. Language of interview:
4. Phone number of interviewer

▪

III. Identification/ Back ground information:

▪ **INSTRUCTIONS FOR ALLOCATING AN ID NUMBER ARE AT THE END OF THIS FORM**

▪

No	Question	Response
1	ID Number (see instructions below)	
2	Age of deceased	(years)
3	Time of death and date of death	
4	Ethnicity	
5	Address where death occurred (Select ONE) COMMENTS: (provide address if death occurred in a home, name of HP, HC or hospital, or how far from destination if in transit)	Home/ Relatives' Home _____ Health Post _____ Health Centre _____ Hospital _____ In Transit _____ Comments: _____ _____
6	Place of usual residence	Woreda/subcity _____ Got_____ Kebele _____ House number_____
7	Marital status of the deceased	1. Single 2. Married 3. Divorced 4. Widowed 5. Others (specify)
8	Religion	1. Orthodox 2. Muslim 3. Protestant 4. Others (specify)------
9	Educational status of the deceased	1.Illiterate 2.No education, but can read and write 3. Grade completed _____ 4. Don't know
10	Level of education of the husband	1.Illiterate 2.No education, but can read and write 3. Grade completed

- Do you have a death certificate? 1. Yes 2. No
- If yes, *ask to see the document.* Record important cause of death and identified problems

1. **Pre Existing Problems**:

Has she ever attended basic Antenatal care (ANC)?	1. Yes 2. No 3. Not known
If yes, **where** did she receive ANC services (Check *all* that apply)	1. HP 2. Public HC 3. Public Hospital 4. Private clinic or hospital (specify) _____

- Were any of the following conditions identified during ANC or previously? Check *ALL* that apply:

CONDITION	**CHECK IF IDENTIFIED**	**WHEN WAS THE CONDITION IDENFITIED?**
Malaria (fever, chills, rigors)		
Tuberculosis (cough> 3 weeks,		

fever, night sweating, etc.)		
▪ HIV/AIDS	▪	▪
▪ Anemia	▪	▪
▪ Hypertension	▪	▪
▪ Diabetes	▪	▪
▪ Epilepsy	▪	▪
▪ Others (Specify)	▪	▪

▪

▪ *1.2.* **Did she receive treatment for any of the conditions mentioned above?**

▪ *Specify Treatment provided for each condition (separating modern and traditional treatments) If NO treatment was provided, leave blank.*

▪ *Disease*	▪ *Modern treatment*	▪ *Traditional/cultural treatment*
▪ *Malaria (fever, chills, rigors)*	▪	▪
▪ *Tuberculosis (cough> 3 weeks, fever, night sweating, etc.)*	▪	▪
▪ *HIV/AIDS*	▪	▪
▪ *Anemia*	▪	▪
▪ *Hypertension*	▪	▪
▪ *Diabetes*	▪	▪
▪ *Others (Specify)*	▪	▪

▪

IV. Pregnancy related questions

No.	Questions	Response
1	Number of pregnancies including those that ended in miscarriage and still births	
2	Number of living children	
3	Duration of the index pregnancy in months	
4	State of the pregnancy at the time of death	1. Delivered live birth 2. Delivered still birth 3. Undelivered 4. Abortion
5	If it was delivery, who assisted the delivery?	1. Family/elderly 2. TBA 3. HEWs 4. HCWs 5. Others (specify)
6	Were any of the following problems experienced *during pregnancy*?	
	Tick *ALL* those that apply • Seizure/abnormal body movement • Bleeding • Fever • Other (specify) _____	☐ ☐ ☐ ☐
	Did she seek care?	1. YES 2. NO If YES, briefly DESCRIBE

V. **Community factors**

No	Item	Response
1	Number of days/hours she was sick before she died (*Number of hours and days - specify*)	
2	Problems before she died: Tick *ALL* that apply • Vaginal bleeding • Fits • Fever • Baby stuck/Prolonged labor • Other (specify)	☐ ☐ ☐ ☐ ☐
3	Was any care sought for the problem?	1. Yes 2. No
	If “No” to question number 3 go to number 9	
4	If yes to Q3 above, how long after the problem/illness was detected? (*Number of hours and days - specify*)	
5	Where was care sought and obtained?	1. Traditional Healer 2. Health Extension Worker 3. Health Centre 4. Hospital
6	How long after seeking care did she arrive at a modern health facility? (*Number of hours and days - specify*)	
7	What mode of transport was used if care was obtained?	
8	For how long was the care given? (*Number of hours and days - specify*)	

▪ 9	▪ If no to Q3 above, what was the main reason why care was not sought?	1. Not knowing the impact of the illness 2. Past good obstetric out comes at home 3. Lack of money 4. Lack of transport 5. No nearby health facility 6. Others (Specify)
▪ 10	▪ How long would it take to walk from this house to the nearest (*Number of hours and days - specify*): • Health post • Health center • Hospital	▪ ▪ ▪ ▪ _____Hours/ days ▪ _____Hours/ days ▪ _____Hours/ days
▪ 11	▪ If you want to go to health center or hospital, what mode of transport would you be able to use? (Tick *ALL* that apply)	▪ 1. Rented public transport ▪ 2. Police car ▪ 3. Ambulance ▪ 4. Private car ▪ 5. Others (specify) ▪ _____ _____

▪

▪ **INSTRUCTIONS**: This form should be stored with a copy of the relevant Verbal Autopsy Summary form (Annex 3) and Annex 4 in a secured location (e.g. locked cupboard in HC manager's office)

▪ Instructions for coding a maternal death with a unique identifier number

- A unique number is to be given by the Health center for each maternal death for whom a verbal autopsy is conducted. This number will be used in reporting the death to the woreda level. The Health center staff member who is assigned to make the visit to the village from where a death of a woman in the reproductive age is reported will be allocating the number to the deceased, **after conducting the screening and identifying it as a suspected maternal death**. The HC head is responsible for making sure that the numbering is given correctly by checking it upon receiving the filled format. Coding is only for those suspected of a maternal death. Health facilities investigating a facility death will be using the MRN and no other coding is given at facility level. But every woman, irrespective of place of death, will be given the code number at community level during verbal autopsy.

- The following system will be used in coding a maternal death:

- Three letters for the region
- Three letters for the zone
- Three letters for the woreda
- Three letters for the HC
- Year in Ethiopian calendar on which the death occurred.
- Month Number in Ethiopian calendar on which the death occurred.
- Serial number for the individual death in the health center in the month of investigation

- Examples:

- A midwife from Kokofe Health center in Kiramu woreda, East Wolega Zone, Oromia is to investigate a suspected maternal death of a woman from Bedesa kebele who died on 21/05/03. There was another death she investigated during the same month in another kebele. The number she assigns to the deceased will be:

- ORO-EWE-Kir-Kok-03-05-02

- A 27 year old woman from woreda 07 to Gulele Health center in Gulele subcity, Addis Abeba died on the 7th day of Miazia 2004. The midwife assigned by the HC to investigate the death uses the screening questions and determines it to be a suspected maternal death. She then writes the following code on the verbal autopsy form:

- ADD-GUL-07-GUL-04-08-01
    - For a maternal death to be investigated by a staff member from Kele health Center in Amaro special woreda, SNNPR, whose passing happened in the month of Nehassie 2002, the assigned number will be:
- SOU-AMA-AMA-Kel-02-12-01
    -
    - The list of zonal codes is shown in the table below. For consistency reasons, all are advised to use as it is for Maternal Death Surveillance and Response activities. Woreda and Health center codes are to be given at the respective levels. That means the woreda will be giving the three-letter code to be used by all of its HCs and each HC will allocate its own facility code.
    - Alphabetical List of Zonal codes

SN	Region	Name of the zone	Zonal code	SN	R	Name of the zone	Z
1	Addis Abeba	ADDIS KETEMA	ADD-ADK	48	O	HORO GUDURU	O
2	Addis Abeba	AKAKI/KALITI	ADD-AKK	49	O	ILLUABABORA	O
3	Addis Abeba	ARADA	ADD-ARA	50	O	JIMA	O
4	Addis Abeb	BOLE	AD	51	O	Jima Town	O

	a		D-BOL					
▪ 5	▪ Addis Abeba	▪ KIRKOS	▪ ADD-KIR	▪	▪ 52	▪ O	▪ KELEM	▪ O
▪ 6	▪ Addis Abeba	▪ GULELE	▪ ADD-GUL	▪	▪ 53	▪ O	▪ Nekempt Town	▪ O
▪ 7	▪ Addis Abeba	▪ KOLFE KERANIO	▪ ADD-KOK	▪	▪ 54	▪ O	▪ N SHOA	▪ O
▪ 8	▪ Addis Abeba	▪ LIDETA	▪ ADD-LID	▪	▪ 55	▪ O	▪ SHASHEMENE Town	▪ O
▪ 9	▪ Addis Abeba	▪ NEFAS-SILK LAFTO	▪ ADD-NSL	▪	▪ 56	▪ O	▪ SW SHEWA	▪ O
▪ 10	▪ Addis Abeba	▪ YEKA	▪ ADD-YEK	▪	▪ 57	▪ O	▪ W ARSI	▪ O
▪ 11	▪ Afar	▪ AFAR 1	▪ AFA-AF1	▪	▪ 58	▪ O	▪ W HARERGHE	▪ O

▪ 12	▪ Afar	▪ AFAR 2	▪ AFA-AF2	▪	▪ 59	▪ O	▪ W SHEWA	▪ O
▪ 13	▪ Afar	▪ AFAR 3	▪ AFA-AF3	▪	▪ 60	▪ O	▪ W WELLEGA	▪ O
▪ 14	▪ Afar	▪ AFAR 4	▪ AFA-AF4	▪	▪ 61	▪ S	▪ ALABA	▪ S
▪ 15	▪ Afar	▪ AFAR 5	▪ AFA-AF5	▪	▪ 62	▪ S	▪ BENCH MAJI	▪ S
▪ 16	▪ Amhara	▪ AWI	▪ AMH-AWI	▪	▪ 63	▪ S	▪ DAWRO	▪ S
▪ 17	▪ Amhara	▪ BAHIR DAR	▪ AMH-BAH	▪	▪ 64	▪ S	▪ GAMO GOFA	▪ S
▪ 18	▪ Amhara	▪ EGOJJAM	▪ AMH-EGJ	▪	▪ 65	▪ S	▪ GEDEO	▪ S

▪ 19	▪ Amhara	▪ N. GONDAR	▪ AMH-NGN	▪	▪ 66	▪ S	▪ GURAGHE	▪ S
▪ 20	▪ Amhara	▪ N. SHEWA	▪ AMH-NSA	▪	▪ 67	▪ S	▪ HADIYA	▪ S
▪ 21	▪ Amhara	▪ N. WOLLO	▪ AMH-NWO	▪	▪ 68	▪ S	▪ HAWASSA CA	▪ S
▪ 22	▪ Amhara	▪ ORO MIA	▪ AMH-ORO	▪	▪ 69	▪ S	▪ KEFA	▪ S
▪ 23	▪ Amhara	▪ S. GONDAR	▪ AMH-SGN	▪	▪ 70	▪ S	▪ KEMBATA/TEMBARO	▪ S
▪ 24	▪ Amhara	▪ S. WELLO	▪ AMH-SWO	▪	▪ 71	▪ S	▪ KONTA	▪ S
▪ 25	▪ Amhara	▪ WAGHIMRA	▪ AMH-WAG	▪	▪ 72	▪ S	▪ Segen	▪ S
▪ 26	▪ Amhara	▪ W. GOJJAM	▪ AMH-W	▪	▪ 73	▪ S	▪ SHEKA	▪ S

			GJ					
▪ 27	▪ Benshangul-Gumuz	▪ ASOSA	▪ BEN-ASO	▪	▪ 74	▪ S	▪ SIDAMA	▪ S
▪ 28	▪ Benshangul-Gumuz	▪ KEMASHI	▪ BEN-KEM	▪	▪ 75	▪ S	▪ SILTI	▪ S
▪ 29	▪ Benshangul-Gumuz	▪ MAO-KOMO	▪ BEN-MAK	▪	▪ 76	▪ S	▪ S Omo	▪ S
▪ 30	▪ Benshangul-Gumuz	▪ METEKEL	▪ BEN-MET	▪	▪ 77	▪ S	▪ WOLAYTA	▪ S
▪ 31	▪ Benshangul-Gumuz	▪ PAWE	▪ BEN-PAW	▪	▪ 78	▪ S	▪ YEM	▪ S
▪ 32	▪ Dire-Dawa	▪ DIRE-DAWA	▪ DIR-DIR	▪	▪ 79	▪ S	▪ AFDER	▪ S
▪ 33	▪ Gambela	▪ AGNUAK	▪ GAM-AGN	▪	▪ 80	▪ S	▪ DOLLO	▪ S
▪ 34	▪ Gambela	▪ GAMBELLA	▪ GAM	▪	▪ 81	▪ S	▪ FAFAN	▪ S

			-GAM					
▪ 35	▪ Gambela	▪ MEJENGER	▪ GAM-MEJ	▪	▪ 82	▪ S	▪ JARAR	▪ S
▪ 36	▪ Gambela	▪ NUER	▪ GAM-NUE	▪	▪ 83	▪ S	▪ KORAH	▪ S
▪ 37	▪ Harari	▪ HARERI	▪ HAR-HAR	▪	▪ 84	▪ S	▪ LIBEN	▪ S
▪ 38	▪ Oromia	▪ ADAMA Town	▪ ORO-ADA	▪	▪ 85	▪ S	▪ NOGOB	▪ S
▪ 39	▪ Oromia	▪ ARSI	▪ ORO-ARI	▪	▪ 86	▪ S	▪ SHEBELE	▪ S
▪ 40	▪ Oromia	▪ BALE	▪ ORO-BAL	▪	▪ 87	▪ S	▪ SITI	▪ S
▪ 41	▪ Oromia	▪ BISHOFTU Town.	▪ ORO-BIS	▪	▪ 88	▪ T	▪ C.TIGARY	▪ TI
▪	▪ Orom	▪ BOR	▪ O	▪	▪	▪	▪ E	▪

42	ia	ENA	RO-BOR	89	T	.TIGARY	TI
▪ 43	▪ Oromia	▪ EHARERGHE	▪ ORO-EHA	▪ 90	▪ T	▪ MEKELLE	▪ TI
▪ 44	▪ Oromia	▪ ESHEWA	▪ ORO-ESH	▪ 91	▪ T	▪ NW TIGARY	▪ TI
▪ 45	▪ Oromia	▪ EWELLEGA	▪ ORO-EWE	▪ 92	▪ T	▪ SE TIGARY	▪ TI
▪ 46	▪ Oromia	▪ Finfine Zuria	▪ ORO-FIZ	▪ 93	▪ T	▪ S .TIGARY	▪ TI
▪ 47	▪ Oromia	▪ GUJI	▪ ORO-GUJ	▪ 94	▪ T	▪ W. TIGARY	▪ TI

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- ***Annex 2: facility based abstraction form***
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  - **Facility based maternal death summary form**
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- June, 2013
- Addis Ababa, Ethiopia
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- **I. Abstractor related**

1. Name of the abstractor:_____
2. Qualification of the Abstractor_____
3. Telephone number of the abstractor:_____
4. Date of abstraction:_____
5. Was the abstractor involved in the management of the case? 1. Yes 2. No

-
- **II. Identification/ Back ground information**

No	Question	Response
1	Medical Record Number of the deceased	
2	Age of deceased	Years
3	Time of death and date of death	
4	Ethnicity	
5	When did the death occur?	In transit _____ While waiting for treatment _____ Following start of treatment _____
6	Place of usual residence	Woreda/subcity_____ Kebele_____ Got_____ House number_____
7	Religion	1. Orthodox 2. Muslim 3 Protestant 4. Others (specify)------
8	Educational status of the deceased	1.Illiterate 2.No education, but can read and write 3. Grade completed _____ 4. Don’t know
9	Marital status of the deceased	1. Single 2.Married 3. Divorced 4. Widowed 5. Others (specify)
10	Level of education of the husband	1.Illiterate 2.No education, but can read and write 3. Grade completed _____ 4. Don’t know
11	Occupation of the deceased	1. Farmer 2. Merchant/tradesperson 3. Public employee 4. Daily labourer 5. Unemployed 6. Others (e.g. housewife) _____

VI. **Obstetric characteristics**

No	Question	Response
1	Gravidity	
2	Parity	
3	Number of living children	
4	Attended ANC?	1. Yes 2. No 3. Not known
5	If yes, where is the ANC?	1. Health post 2. Health center 3. Hospital 4. Other (specify)
6	If yes, number of visits	
7	Basic package of services provided (Tick *ALL* that apply) RPR Hgb, Blood group, HIV status, U/A BP measurement during the follow up Fefol supplementation TT immunization Other (Specify) _____	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
8	Problems or risk factors in the current pregnancy: (Tick *ALL* that apply) I. ***Pre existing problems*** Hypertension Anaemia Diabetes HIV positive Cardiac problem Malaria Tuberculosis	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

	▪ Hepatitis ▪ Other (Specify) _____ ▪ II. ***Antenatal/ intranatal problems/risks*** ▪ (Tick *ALL* that apply) ▪	
	▪ Pre eclampsia / eclampsia ▪ Placenta praevia ▪ Previous Caesarean Section ▪ Multiple gestation ▪ Abnormal lie/presentation ▪ Anaemia ▪ Malaria ▪ UTI/pyelonephritis ▪ Unintended pregnancy ▪ Other (specify)	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
▪ 9	▪ State of pregnancy at the time of death	1. Antepartum 2. Intrapartum 3. Postpartum 4. Postabortion 5. Ectopic
▪ 10	▪ If delivered, what is the outcome?	1. Live birth 2. Stillbirth
▪ 11	▪ Date and place of delivery	▪ Date: _____ ▪ Place of delivery:_____
▪ 12	▪ Gestational Age at the time of death in antepartum and /or intrapartum events (specify time period in months & weeks)	▪
▪ 13	▪ If the death was post partum or postabortion, after how many days did the death occur?	▪ days

▪

▪ **Facility Episode**

▪ No	▪ Question	▪ Response
▪ 1	▪ Date of admission	▪

▪ 2	▪ Day of admission		▪ 1. Working days 2. Weekends ▪ 3. Holiday
▪ 3	▪ Time of admission		▪ 1. Working hours 2. Nonworking hours
▪ 4	▪ Main reason/symptom for admission		▪
▪ 5	▪ Is it a referred case?		▪ 1. Yes 2. No
▪ If “No” to question number 5 go to number 9			
▪ 6	▪ Referred from (Name of health facility)		▪
▪ 7	▪ Reason for referral		▪
▪ 8	▪ Comment on referral • Accompanied by HCWs • Appropriate management		▪
▪	▪		▪

▪ 9	▪ Summary of management at hospital ▪		▪ ▪ ▪ ▪
▪ 10	▪ Qualification of the most senior attending health professional(s)		▪
▪ 11	▪ Primary cause of death		▪
▪ 12	▪ Is this preventable death?		▪
▪ 13	▪ If preventable maternal death, specify factors	▪ Delay in seeking care	▪ ▪ ▪ ▪

	according to the three delay model	▪ Delay in reaching at right facility	▪ ▪ ▪ ▪
		▪ Delay within the facility (diagnostic and therapeutic)	▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪

- **<u>INSTRUCTIONS</u>**: This form should be stored with a copy of the relevant Verbal Autopsy Summary form (Annex 3) and Annex 4 in a secured location (e.g. locked cupboard in HC manager’s office)

- ***Annex 3: Summary Form for Verbal Autopsy***
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Summary Form for Verbal Autopsy

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- June, 2013
- Addis Ababa, Ethiopia

▪ *Annex 3: Summary form for Verbal Autopsy*

▪ 1. ID. Number _____ (This should be the number from the verbal autopsy)
▪ 2. Age_____
▪ 3. Address: Region:_____ Zone:_____ Woreda:_____Kebele:____ HouseNo:_____
▪ 4. Marital status: single:___ Married:____ widowed:_____ other(specify):_____
▪ 5. Religion:_____
▪ 6. Ethnicity:_____
▪ 7. Occupation:_____
▪ 8. Level of education:_____
▪ 9. Income:_____
▪ 10. Gravidity:_____
▪ 11. Parity:_____
▪ 12. Abortions:_____
▪ 13. Place of death:_____
▪ 14. Date of death _____
▪ 15. Death occurrence in relation to pregnancy/labour/ postpartum:_____
▪ 16. Likely cause of death: _____
▪
▪ 17. **Contributory causes**:

▪ **Delays**	▪ **Contributory factors**	▪ **Tick if Relevant**
▪ Delay 1	▪ Harmful traditional practices	▪
	▪ Family poverty	▪
	▪ Failure of recognition of the problem	▪
	▪ Lack of decision to go to health facility	▪
	▪ Delayed referral from home	▪
▪ Delay 2	▪ Delayed arrival to referred facility	▪
	▪ Lack of roads	▪
	▪ Lack of transportation	▪
	▪ No facility within reasonable distance	▪
▪ Delay 3	▪ Delayed arrival to next facility from referral from another facility	▪
	▪ Delayed management after admission	▪
	▪ Delayed or lacking supplies and equipment(specify)	▪

	▪ Human error or mismanagement	▪

▪

▪ **18. Is this preventable death: Yes_____ No_____**

▪ **if yes, describe preventable factors:**

▪

▪

▪

- ***Annex 4: Action Plan Template Following Facility and Health Centre Review Committee Meetings***
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- **Action Plan Template**

(To be completed by Review Committees at Facility and Health Centre Levels)

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- June, 2013
- Addis Ababa, Ethiopia

▪ *Annex 4: Action plan template following a facility committee meeting*

- Case ID (Medical Record Number):
- Date of meeting:
- Date of Death:
- Death preventable yes no
- **What actions will you take as a result of this case?**

▪ Avoidable Factor	▪ Action to be taken as a result of the case	▪ Person responsible for the action to be take	▪ Timescale	▪ Comment and challenges to completeness of	▪ Action completed-date	▪ Remark

		n		a c ti o n		
▪	▪	▪	▪	▪	▪	▪
▪	▪	▪	▪	▪	▪	▪
▪	▪	▪	▪	▪	▪	▪
▪	▪	▪	▪	▪	▪	▪
▪	▪	▪	▪	▪	▪	▪

- Three copies of this form should be made , one is kept at the facility, one at the woreda and one at the zone.

- Name of the reviewer:_____ sign:_____ date:_____

- ***Annex 5: Reporting Template from Health Facility to Next Level***

Health Facility Reporting Template
(To be sent to zonal or regional MDSR review committee)

- June, 2013
- Addis Ababa, Ethiopia

- ***Annex 5: Reporting template from Health facility to next level***

- **(fill it in duplicates)**

1. Date of reporting:_____
2. 2. Name of the facility:_____
3. Next level:_____
4. ID No of deceased: _____
5. Place of death _____
6. Date of death _____
7. Age:_____
8. Marital status:_____
9. Religion:_____
10. Ethnicity:_____ _
11. Address: Urban___ Rural ____
12. Level of education _____
13. Gravidity _____
14. Parity _____
15. Cause of death _____
16. Death in relation to pregnancy/ L& D/puerperium: _____

17. Contributory factors/non-medical- tick all that apply

18. Delays	19. Contributory factors	20. Tick *ALL* that apply
21. Delay 1	22. Harmful traditional practices	23.
	25. Family poverty	26.
	28. Failure of recognition of the problem	29.
	31. Lack of decision to go to health facility	32.
	34. Delayed referral from home	35.
36. Delay 2	37. Delayed arrival to referred facility	38.
	40. Lack of roads	41.
	43. Lack of transportation	44.
	46. No facility within reasonable distance	47.
48. Delay 3	49. Delayed arrival to next facility from referral from another facility	50.
	52. Delayed management after admission	53.
	55. Delayed or lacking supplies and equipments(specify)	56.
	58. Human error or mismanagement	59.

60.

61. Preventable death (yes or no):

62. Attach Appendix 4 to discuss agreed actions

63. **INSTRUCTION**: Copy kept at facility with Annex 2 and Annex 4; Copy sent to next level

64. Annex 6: Monthly Reporting Template from Woreda to Zone or Region

65.

66.

67.

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70. **Woreda Level Reporting Template**
(To be sent to zonal or regional MDSR review committee monthly)

71.

72.

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77.

78. June, 2013

79. Addis Ababa, Ethiopia

80. # Annex 6: Reporting format from Woreda to region

THIS FORM SHOULD BE SUBMITTED BY THE END OF THE FIRST WEEK OF EACH MONTH (USING DATA FROM PREVIOUS MONTH)

81. Date of reporting:_____ Reporting woreda:_____

82. **Parameter**		83. **Death 1**	84. **Death 2**	85. **Death 3**	86. **Death 4**	87. **Death 5**
88. ID Number (from verbal autopsy and summary forms)		89.	90.	91.	92.	93.
94. Date of Death		95.	96.	97.	98.	99.
100. Place of Death (Home, Health Post, Health Centre, Hospital, In Transit)		101.	102.	103.	104.	105.
106. Age		107.	108.	109.	110.	111.
112. Marital status		113.	114.	115.	116.	117.
118. Parity		119.	120.	121.	122.	123.
124. Educational status		125.	126.	127.	128.	129.
130. Timing in relation to pregnancy (antepartum, intrapartum, postpartum)		131.	132.	133.	134.	135.
136. Likely cause of death		137.	138.	139.	140.	141.
142. Contributory factors to death 143. Delay 1	144. Harmful traditional practices	145.	146.	147.	148.	149.
	151. Family poverty	152.	153.	154.	155.	156.
	158. Failure of recognition of the problem	159.	160.	161.	162.	163.
	165. Lack of decision to go to health facility	166.	167.	168.	169.	170.
	172. Delayed referral	173.	174.	175.	176.	177.

	from home					
178. Delay 2	179. Delayed arrival to referred facility	180.	181.	182.	183.	184.
	186. Lack of roads	187.	188.	189.	190.	191.
	193. Lack of transportation	194.	195.	196.	197.	198.
	200. No facility within reasonable distance	201.	202.	203.	204.	205.
206. Delay 3	207. Delayed arrival to next facility from referral from another facility	208.	209.	210.	211.	212.
	214. Delayed management after admission	215.	216.	217.	218.	219.
	221. Delayed or lacking supplies and equipment(specify)	222.	223.	224.	225.	226.
	228. Human error or mismanagement	229.	230.	231.	232.	233.

234. Reported by:
signature:

235. Seal:

236.

237. **INSTRUCTION**: If there are more than 5 deaths, add the another copy of the same form and re-number from 6.

238.

239. **Annex 7: Reporting Template from Regional to National MDSR Committee**

240.

241.

242.

243.

244.

245. **Regional Level Reporting Template (To be sent to National MDSR Task Force)**

246.

247.

248.

249.

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251.

252.

253. June, 2013

254. Addis Ababa, Ethiopia

255.

256. Annex 7: Reporting format from Region to National Levels

257.

258. Date of reporting:_____ Reporting Region:_____

259. **Parameter**	260. **Quantity/Number**	261. **Remark**
262. Age (number) 263. ≤19 years 264. 20-29 years 30.39 ears 265. ≥40 years	266. 267. _____ 268. _____ 269. _____ 270. _____	271.
272. Marital status 273. Single 274. Married 275. Others	276. 277. _____ 278. _____ 279. _____	280.
281. Address 282. Rural 283. urban	284. 285. _____ 286. _____	287.
288. Educational status 289. None 290. Primary school 291. Secondary school 292. University/college 293. Don’t Know	294. 295. _____ 296. _____ 297. _____ 298. _____ 299. _____	300.

301. Parity 302. I 303. II-IV 304. ≥V	305. 306. _____ 307. _____ 308. _____	309.
310. Location of Death (tick ONE) 311. Home 312. Health post 313. Health Centre 314. Hospital 315. In Transit	316. 317. _____ 318. _____ 319. _____ 320. _____ 321. _____	322.
323. Timing of death in relation to pregnancy, delivery or puerperium 324. Antepartum, Intrapartum, Postpartum	325. 326. 327. _____	328.
329. Cause of maternal death 330. *Direct obstetric causes* 331. PPH Uterine Rupture Obstructed labour Eclampsia Sepsis Abortion Others 332. *Indirect obstetric causes* Others	333. _____ _____ _____ _____ _____ _____ _____ 334. _____ _____	335. 336. 337. 338. 339. 340. 341. Specify Indirect or Other causes:
342. Contributory factors 343. Delay I	346. 347. _____	350.

344. Delay II 345. Delay III	348. _____ 349. _____	
351. Preventable death: 352. Yes 353. No	354. 355. _____ 356. _____	357.
358. Number deaths reviewed by regional SMTWG/RH task force in last one month	359. 360. _____	361.

362.

363. Reported by: _____ signature: _____ seal

364.

365. Annex 8: Facility Based Near Miss Summary Form

366.

367.

368.

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371.

372.

373. **Facility Based Near Miss summary form**

374.

375. June 2013

376. Addis Ababa

377.

378. Annex 8: Facility Based Near-Miss Abstraction Form

379. **I. Abstractor related**

6. Name of the abstractor:_____
7. Qualification of the Abstractor_____
8. Telephone number of the abstractor:_____
9. Date of abstraction:_____
10. Was the abstractor involved in the management of the case? 1. Yes 2. No

380.

381. **II. Identification/ Back ground information**

1. No	2. Question	3. Response
4. 1	5. Name of patient	6.
7. 2	8. Age of patient	9. (years)
10. 3	11. Patient ID	12.
13. 4	14. Ethnicity	15.
16. 5	17. Place of usual residence	18. Woreda/subcity_____ Kebele_____ 19. Got_____ House number_____ 20.
21. 7	22. Educational status	23. 1.Illiterate 24. 2.No education, but can read and write 25. 3. Grade completed _____ 26. 4. Don't know
27. 8	28. Marital status	29. 1. Single 2.Married 3. Divorced 30. 4. Widowed 5. Others (specify)
31. 9	32. Level of education of the husband	33. 1.Illiterate 34. 2.No education, but can read and write 35. 3. Grade completed _____ 36. 4. Don't know
37. 10	38. Occupation of the woman	39. 1. Farmer 40. 2. Merchant/tradesperson 41. 3. Public employee 42. 4. Daily labourer 43. 5. Unemployed 44. 6. Others (e.g. housewife) _____
45. 11	46. Occupation of the husband	47. 1. Farmer 48. 2. Merchant/tradesperson 49. 3. Public employee 50. 4. Daily labourer 51. 5. Unemployed 52. 6. Others (specify) _____

VII. **Obstetric characteristics**

383. No	384. Question	385. Response
386. 1	387. Gravidity	388.
389. 2	390. Parity	391.
392. 3	393. Number of living children	394.
395. 4	396. Attended ANC?	4. Yes 5. No
397. 5	398. If yes, where is the ANC?	5. Health post 6. Health centre 7. Hospital 8. Other (specify) 399.
400. 6	401. If yes, number of visits	402. 403.
404. 7	405. Problems or risk factors in the current pregnancy: (Tick ALL that apply) 1. **Pre existing problems** 406. Hypertension 407. Anaemia 408. Diabetes 409. HIV positive 410. Cardiac problem 411. Malaria 412. Tuberculosis 413. Hepatitis 414. Other (specify)_____ 2. **Antenatal/ intranatal problems/risks** 415. Pre-eclampsia/eclampsia 416. Placenta praevia 417. Previous Caesarean Section 418. Multiple gestation 419. Abnormal lie/presentation 420. Anaemia 421. Malaria 422. UTI/pyelonephritis 423. Unintended pregnancy 424. Other (specify)_____	425. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
426.	427. State of pregnancy at the time	6. Antepartum

8	of the near miss	7. Intrapartum 8. Postpartum 9. Postabortion 10. Ectopic
428. 9	429. If delivered, what is the outcome?	3. Live birth 4. Stillbirth
430. 10	431. Date and place of delivery 432. 433.	434. Date: _____ 435. Place of delivery:_____
436. 11	437. Gestation age at the time of 'near miss' in antepartum and or intrapartum events (specify weeks and months)	438.
439. 12	440. If the event was post partum or postabortion, after how many days has the event occurred? Specify number of days	441.

442.

443. **Facility Episode**

444. No	445. Question	446. Response
447. 1	448. Date of admission	449.
450. 2	451. Day of admission	452. 1. Working days 2. Weekends 453. 3. Holiday
454. 3	455. Time of admission	456. 1. Working hours 2. Non working hours
457. 4	458. Date of discharge	459.
460. 5	461. Main reason/symptom for admission	462.
463. 6	464. Condition on arrival	465. Pulse BP
466. 6	467. Is it a referred case?	468. 1. Yes 2. No
469. If "No" to question number 6 go to number 10		

470. 7	471. Referred from (Name of health facility)	472.
473. 8	474. Which best describes when the patient became a “near miss”?	1. Patient admitted as near miss 2. Referred from outside as near miss 3. Admitted with no disorder, became near miss 4. Admitted with disorder, became near miss
475. 9	476. If referred from outside , prior visit to how many centres?	477. Total _____ 478. 479. Public_____ Private_____
480. 10	481. If referred , treatment in referral centre 482. Appropriate?	1. Yes 2. No
483. 11	484. Qualification of the most senior attending health professional(s) at hospital	485.
486. 12	487. Primary underlying disorder: 488. Circle *ALL* that apply 489. Hypertensive disorder 490. 491. Haemorrhage 492. 493. 494. 495. 496. Sepsis 497. 498. 499. Labour related disorders 500. 501. 502. Medical disorders 503. 504. 505.	507. 508. 509. Severe pre eclampsia eclampsia 510. 511. Abortion ectopic GTD APH Pl. praevia Pl. abruption 512. Scar dehis. Uterine rupture 513. Atonic PPH Traumatic PPH 514. Mixed PPH 515. Antepartum intrapartum 516. Post partum post abortion 517. 518. Prolonged/obstructed 519. Inverted uterus

	506. Accidental/incidental conditions		retained placenta 520. 521. Anaemia hepatitis diabetes heart disease malaria pneumonia 522. 523. 524. Specify _____
525. 13	526. Summary of facility management		527. 528. 529. 530. 531. 532. 533.
534. 14	535. Condition at discharge?		536. Complete recovery yes / no 537. Residual disability yes / no 538. Unclear as yet
539. 15	540. If preventable maternal complication, specify factors that contributed to the severity according to the three delay model	541. Delay in seeking care	542. 543. 544.
		547. Delay in reaching right facility	548. 549. 550.
		553. Delay within the facility (diagnostic and therapeuti	554. 555. 556. 557. 558. 559.

		c)	560.

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563. Annex 9: Verbal Autopsy Informed Consent Form

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572. **Verbal Autopsy Informed Consent Form**

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574. June 2013

575. Addis Ababa

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Annex 9

Informed Consent Form for Verbal Autopsy

Instructions to Interviewer: Please ask the respondent to acknowledge her/his consent to be interviewed by checking the response below. The interviewer should sign and put date below. If the respondent does not consent to the interview, thank her/him for their time and terminate the conversation.

Purpose of the interview: We are talking to people in the community to learn why some women die while they are pregnant or during or soon after giving birth..

What will happen during the interview: I will ask you questions about your relative/neighbor/friend who recently died. I will ask about her background, her pregnancy history and events during her most recent pregnancy. I may also some questions about her baby from this pregnancy. Some questions have a choice of possible answers and others are open-ended.

Time required: Your interview will take approximately one hour.

Risks: It is possible that some questions could make you feel uncomfortable by talking about bad experiences.

Benefits: There are no direct benefits, however, your participation will help up improve maternal and newborn care for women and babies.

Confidentiality: All information you provide will be kept confidential. Your responses will be assigned a code number and your name will not be used in any way.

Participation: Your participation is strictly voluntary. Refusal to participate will not affect whether or not you receive subsequent services. You may discontinue participation at any time.

Do you agree to participate in this interview? YES NO

_____ _____

Interviewer Name Interviewer Signature

_____

607. Date
608.
609.
610. _____ ----------
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611. Respondent’s name
Respondents relationship to woman

612.

613. Annex 10: Disclaimer for MDSR Committee

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622. **Disclaimer for MDSR Committee**

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624. June 2013

625. Addis Ababa

626.

Annex 10

Disclaimer for MDSR Committee (Non-disclosure confidentiality agreement- to be completed prior to each meeting by all attendees)

We, the members of the ---- ----------review committee, agree to maintain anonymity and confidentiality for all the cases discussed at this meeting, held on [DATE]. We pledge not to talk to anyone outside this meeting about details of the events analysed here, and will not disclose the names of any individuals involved, including family members or health care providers.

Date of meeting

.....

Name **signature**