Ethiopia MPDSR Training Manual

November, 2017
Addis Ababa, Ethiopia

Table of Contents

Introduction

Ethiopia has made remarkable achievements in reducing maternal and child mortality by more than two thirds from its baseline during the MDG era. Despite significant progress, the magnitude of maternal and perinatal mortality in Ethiopia remains high and these high numbers serve as a call to action for the elimination of preventable maternal and perinatal deaths. This is one of the top priorities of the health sector transformation plan (2016-2020) and the national reproductive health and national newborn and child survival strategies for the same period.

Maternal and Perinatal Death Surveillance and Response (MPDSR) is one of the strategies to address the avoidable causes of maternal and perinatal deaths at multiple levels of the health service. A functioning MPDSR system should ensure accurate identification and timely reporting of maternal and perinatal deaths, systematic review of contributing factors, and implementation of evidence-based responses to prevent future deaths. MPDSR requires action at all levels of the health system from community and facility to regional and national levels. MPDSR should form an integral part of broader quality improvement processes and accountability mechanisms.

MPDSR is a system that tracks and measures all maternal and perinatal deaths in real time. This enables understanding of underlying causes and contributing factors of the deaths, and can stimulate further action to prevent similar deaths in future. Furthermore, it provides information on the number of deaths, their place and timing, and whether or not they were preventable.

In 2017, the Ethiopian Federal Ministry of Health (FMoH) is integrating perinatal death surveillance and response (PDSR) in the national MDSR program, which has been implemented since 2013. Following the development of the MPDSR Technical Guidance this training material was developed to improve the competencies of health care providers and program managers working in the maternal and neonatal health sector. This document contains training materials to prepare trainees to implement fully integrated maternal and perinatal death surveillance and response (MPDSR).

The training manual provides an overview of the system's structure, and introduces the newly published National MPDSR Technical Guidance, including its data collection and reporting tools. Training will be conducted by a multi-sectoral team drawn from the National MPDSR technical working group.

In the first instance, a national MPDSR Training of Trainers (ToT) will take place, followed by regional cascading to relevant participants in all Regional Health Bureau (RHB) and city administrations in the country. This MPDSR training is estimated to take 3 days.

This manual is designed to help trainers work through the presentations and participatory group activities that make up the training workshop. It is accompanied by the following materials:

- Sample pre- and post-tests
- Power point presentations
- Sample agenda of the training
- 1 video in mp4 format (also freely available in the following link.

  http://www.who.int/maternal_child_adolescent/multimedia/en/ or

  http://mdsr-action.net/other-resources/whydidmrsxdie/

The training package is designed to be interactive, with the inclusion of practice-based individual and group activities to familiarize participants with the tools and processes of the Ethiopian MPDSR system. Participants will be actively engaged to consider how the MPDSR will build on their existing expertise and knowledge. The emphasis throughout the training should be on the use of MPDSR as a basis for action.

The importance of multi-professional team collaboration will be emphasized throughout the training, as this has been shown to benefit the MPDSR system by strengthening communication between multi professional groups (surveillance officers, clinicians, midwives, data managers, community representatives, etc.). Where possible, training at each level should be delivered by a multi-professional training team, following the model of the national workshop.

Overall Goal of the Training Package

To deliver a practical introduction to the Ethiopia MPDSR and support establishment of a functional, effective and action-oriented MPDSR system across Ethiopia

Specific Aims

1. Introduce MPDSR concepts and rationale, with presentation of international evidence for its effectiveness and best practice
2. Provide a detailed overview of the Ethiopia MPDSR model and vision for how it will operate at each level of the national health system
3. Ensure staff are equipped with the requisite knowledge and competence-based skills for each component of the MPDSR process
4. Provide an opportunity for participants to become familiar with the use of the *National MPDSR Guidance* and tools for data collection and reporting.
5. Ensure the health system is responding to each maternal and perinatal death and accountability is established.

Target Audience & Objectives

Nine training modules have been developed. Some may be more relevant to different audiences/ groups of trainees. Depending on the level of the health system that participants come from, there may need to be a slightly different emphasis to ensure the following objectives of the training:

• National and Regional leads	Building political commitment, orientation
• Referral/District Hospitals	Conducting facility based data collection
• Zones and Woreda	Managing data flow, identifying actions & reporting upwards
• Health centers	Collecting, reporting & reviewing community and health center deaths

By the end of each training workshop, participants should:

- Understand how MPDSR can reduce maternal and perinatal mortality
- Know the structure of the Ethiopian MPDSR, including roles and responsibilities
- Be familiar with the contents of the *National MPDSR Technical Guidance*
- Recognize and know how to use the national tools
- Demonstrate ability to recommend appropriate actions

- Appreciate the importance of MPDSR processes, particularly the need for smooth bi-directional flow of information between different levels of the system
- Understand the role of monitoring actions to ensure the "response cycle" is completed

Preparation for the training

Good preparation is required for all training to ensure everything runs smoothly. Below are a few tips for maximizing successful implementation of the MPDSR training package.

- **Number of Participants:** Given the participatory nature of this training package, it is likely to work best for groups of 25-35. A larger group is more difficult to manage, particularly during the small group work and discussion sessions.
- **Number of Trainers:** Although presentations can be delivered by a single trainer, it is useful to have 3-4 facilitators or training assistants to help during the practical exercises. Facilitators can rotate among groups to answer questions or help lead them in the right direction. Roughly 1 facilitator/ training assistant per 8-10 participants is best. For example, a group of 30 trainees is ideally facilitated by 3 experts, including the trainers.

  To provide diversity of experience, perspectives, and training styles, the workshops should draw on several trainers to lead the modules, based on expertise. A multi-professional team will ensure that the views of different health disciplines are incorporated in the training.
- **Venue:** The training requires a room large enough for all participants to fit in comfortably, with an unobstructed view of the power point projector (particularly during the video). Enough space is also required for small groups to sit together during the activities, ideally around a table, although chairs can be moved into circles throughout the room. Alternatively, separate spaces can be made available for groups to work in.
- **Materials:** Prior to starting the training, it is important to ensure there are enough copies of the National MPDSR Technical Guidance, the pre (and post) test, the Workbook, the Answer book, and anonymous clinical cases (to be returned after the training). Note that Answer books should not be distributed until the *end*

of the training! Flipcharts and marker pens should also be available for group discussions and noting down responses/issues from the activities.

- **Equipment:** A power point projector, screen and computer are critical for showing the presentations. A microphone is useful in large venues and is required for the video shown during the training (unless computer speakers are separately available).
- **Timing:** The sample workshop agenda provided in this manual suggests a 3 day training, which should provide enough time for the presentation of scheduled content and completion of practical exercises. Some adaptation may be made depending on the target audience for the training, to reflect priority areas. For example, additional time may need to be allocated for specific modules, such as Community Based Data Capture (for health centers which will manage the Verbal Autopsy process) or Facility Level Reviews (for hospital and health center staff).

Pre and Post test

The pre- and post- test is provided below (the second version has answers to help trainers score the tests. Answers are also provided in the answer book). Tests should be scored out of 100% as indicated. The test reflects specific MPDSR system roles and responsibilities at each level of the health system and is aligned to the learning objectives suited to participants at each of these.

The tests are also available as separate documents as part of this training package (without the scores marked on the questions). This exercise should be completed by participants prior to the start of the training to set a "benchmark" of current understanding of the principles of MDSR and how the system will be implemented. The test can be administered again after training to help participants identify their progress and to alert the trainer(s) to any remaining gaps in knowledge.

MPDSR Training Pre and Post Test

For each question, please circle the correct answer:

1. MPDSR stands for...?

- **A.** Maternal and Perinatal Death System and Response
- **B.** Maternal and Perinatal Death Surveillance and Review
- **C.** Maternal and Perinatal Death Surveillance and Response
- **D.** Maternal and Perinatal Death Systematic Register

2. What is the most important part of the MPDSR process in order to reduce maternal and perinatal mortality?

- **A.** Identification
- **B.** The review of the case
- **C.** The analysis of the case
- **D.** The actions

3. Notification. Which of the following deaths should be reported by HEW and surveillance staff? (2 pts for each correct answer)

- **A.** 14-year-old girl who died giving birth true/ false
- **B.** Baby delivered dead at home after 6 months of pregnancy true/ false
- **C.** 3-week old baby who died of pneumonia true/ false
- **D.** 52-year-old woman who died in an accident true/ false
- **E.** 21-year-old woman who died after a vaginal hemorrhage true/ false

4. Screening. Which of these might be a maternal death? (2 pts for each correct answer)

- **A.** 45-year-old woman collapsed and died suddenly. She had missed two periods. true/ false
- **B.** A woman with a 35-day old baby had a fever for 3 days before she died. true/false
- **C.** A 16-year-old girl took some medicine two days after her first sexual intercourse because she thought she might be pregnant. true/false
- **D.** A woman, known to be HIV positive, died of pneumonia. Her family did not know the date of her last period. true/ false
- **E.** A married 26-year old woman miscarriage her pregnancy after 4 months. A week later she developed a fever and was sick in bed for about 5 weeks and died in her sleep. true/ false

5. Reporting maternal or perinatal **deaths. (2 pts for each correct answer)**

- **A.** Community members can inform HEW about the death of any woman of reproductive age true/ false
- **B.** A stillbirth at a health center should be reported on the weekly surveillance form true/ false
- **C.** Only deaths that occur in the labor ward need to be reported by the hospital as part of MPDSR true/ false
- **D.** The verbal autopsy should be carried out by a doctor true/ false

E. All maternal deaths, regardless of where they occur, should have a verbal autopsy completed in the community true/ false

6. Reviewing deaths (2 pts for each correct answer)

A. MPDSR review should be conducted by existing Rapid Response Teams (RRT) at every level, with the addition of MNCH experts true/ false

B. The case based reporting form is completed during the review process in order to summarize causes and determinants of the death true/ false

C. All action plans will be developed at Regional level and disseminated downwards true/ false

D. Determining preventability of a death is one of the review's aims. true/ false

E. Only clinicians should attend MPDSR review meetings true/ false

7. Community level factors affecting maternal and perinatal deaths (5 pts for each correct answer)

A. High fertility rates contribute to complications for both pregnant women and their babies true/ false

B. If community members correctly recognize danger signs, they can urge the family to seek medical attention quickly true/ false

8. Quality of Care factors affecting maternal and perinatal deaths. (5 points each)

A. Oxytocic drugs are not essential to provide quality care in the third stage of labor true /false

B. The quality of referral systems, admission procedures, and care during recovery should all be considered during MPDSR data analysis true /false

9. Reporting and Data Flow in an MDSR: (5 points each)

A. Community deaths will be reviewed by a Health Centre RRT committee and data will be summarized and sent to EPHI and the woreda and regional health offices: true / false

B. It is not necessary for a review committee to meet or submit a report during a month when NO maternal and perinatal deaths have occurred: true / false

10. Which of the following are appropriate actions that might be taken by a Health center review committee? (2 pts. each)

A. Request BEmONC training for untrained staff true / false

B. Work with Community leaders and woreda administrator to get electricity supply true/false

C. Punish the SBA who was on duty during the last death true / false

D. Ensure iron is available for all antenatal patients true / false

E. Change the staffing schedules to ensure midwives available at all time True/false

ANSWERS to Training Pre and Post Test

For each question, please circle the correct answer:

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D. Ensure iron is available for all antenatal patients **true** / false

E. Change the staffing schedules to ensure midwives available at all time **true**/false

Sample MPDSR training agenda

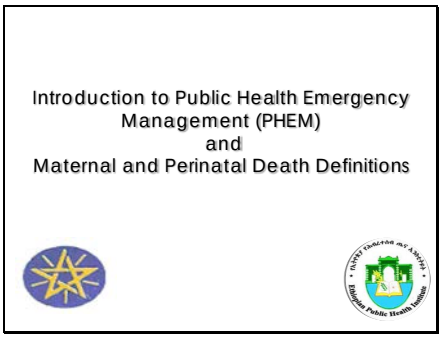
Date	Time	Session title
		1st day
Day 1	8:30 - 9:00 am	Registration of participants
	9:00 --9:15 am	Opening Remark
	9:15 - 9:30 am	Participants Introduction
	9:30 -10:00 am	Pre-test
	10:00 -10:30 am	Module 1 : Introduction to PHEM and Definitions of Maternal Perinatal deaths
	10:30 -10:45 am	Tea Break
	10:45-12:00 pm	Module 1 : Why did Mrs. X die? + exercise Module 1 : Overview of MPDSR
	12:00-1:00 pm	Module 2: Determinants and causes of maternal and perinatal deaths including practical exercise
	1:00 - 2:00 pm	Lunch
	2:00 - 4:30 pm	Module3 : Identification and Notification of maternal and perinatal death including practical exercises for both maternal and perinatal, Identification exercise Notification exercise
	4.30-4.45	Tea Break
	4:45 -5.30 pm	Module 4 : Investigation and verification of maternal and perinatal death Exercise on Coding of maternal and perinatal deaths
		2nd day
Day 2	8:30 - 900 am	Day 1 Recap
	9:00-10:30 am	Module 4 : Investigation and verification of maternal and perinatal death Community investigation with verbal autopsy including role play

	10:30 -10:45 am	Tea Break
	10:45 – 12.30	Module 4 : Investigation and verification of maternal and perinatal death Including practical exercise of Facility based abstraction
	12:30 - 1:30 pm	Lunch Break
	1:30 – 3.30 pm	Module 5 : Maternal and perinatal death review including practical exercise with MDRF and PDRF
	3:30 - 3:45 pm	Tea Break
	3:45 - 5:30 pm	Module 6 Data Analysis and aggregation including practical exercise with data aggregation
		3rd day
Day 3	8:30 - 3:00 am	Day 2 Recap
	9.00-10:30 am	Module 7: Maternal and perinatal death response at ALL level including practical exercise
	10:30 -10:45 am	Tea Break
	10:45 - 11:15 pm	Module 8 :Roles and responsibilities for MPDSR
	11:15 - 12:00 pm	Module 9 :Monitoring and evaluation for MPDSR
	12.00-12.30	Post test
	12:30 - 1:30 pm	Lunch Break
	1:30 - 2:00 pm	Discussion on Administrative issues
	2:00 - 2:30 pm	Feedback and outlying questions
	2;30-3:00pm	Wrap up

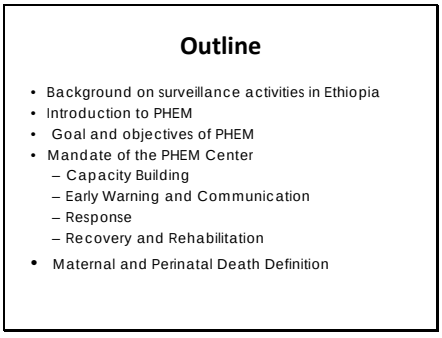
Module 1: Overview of MPDSR and PHEM

Introduction to PHEM:

Slide 1



Slide 2



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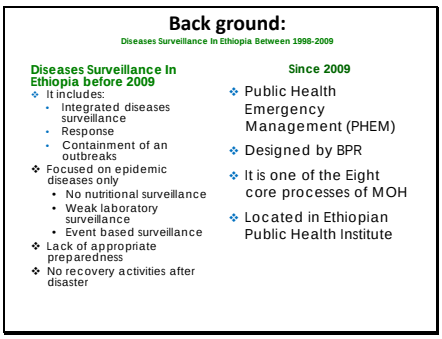
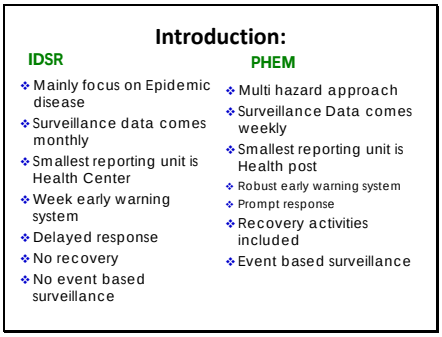


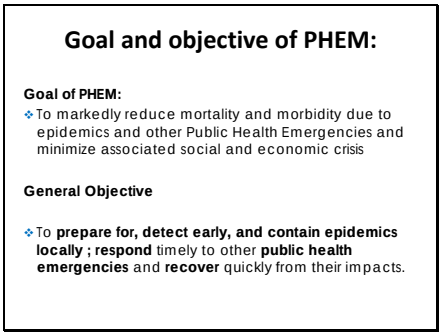
Do not spend too much time on this slide, as it is just to provide some context on the health surveillance system into which MPDSR is integrated.

Slide 4



Most participants will already be familiar with this information – you can ask for questions of clarification and then move on.

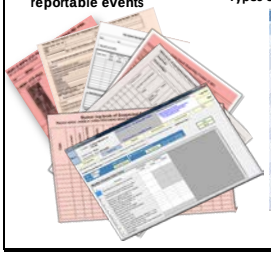
Slide 5



Slide 6

Capacity Building:

Reporting formats for all reportable events



Types of Reporting Formats

NO	Types of Reporting Formats
1	Weekly Reporting format
2	Weekly Reporting format for HEWs
3	Daily Epidemic Report format for Woredа
4	Daily Epidemic Report format for Region
5	Case based Report format
6	Case Based Laboratory reporting format
7	Line list
8	Case Investigation Form for Guinea Worm Disease
9	Case based reporting format for AFP
10	Influenza case based reporting format
11	Case based reporting format for NNT

Slide 7

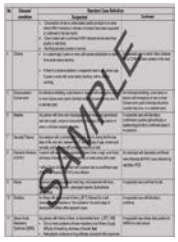
Capacity Building:

1. **Community case definitions**
   - Sensitive
   - Used at the community level

Slide 8

Capacity Building:

2. **Standard case Definitions**
   - Customized from WHO case definitions
   - Printed and distributed to all health facility
   - Used at health center and above



Mention that the case definitions for maternal and perinatal deaths will be provided in this training.

Slide 9

Capacity Building:

3. Guidelines already printed and distributed
   - PHEM guideline
   - Cholera guideline
   - Measles guideline
   - Malaria guideline
   - Influenza Surveillance implementation guideline
   - Meningitis Guideline
   - AFP Guideline
   - NNT Guideline
   - MPDSR Technical Guidance
- Guideline under Preparation
   - Yellow Fever
   - Rabies
   - Anthrax
   - Dengue fever

Slide 10

Indicator based surveillance:

Immediately Reportable

1. Acute Flaccid Paralysis
2. Anthrax
3. Avian Human Influenza
4. Cholera
5. Dracunculiasis/Guinea worm
6. Measles
7. Neonatal tetanus
8. Pandemic Influenza A(H1N1)
9. Rabies
10. Small pox
11. SARS
12. Viral Hemorrhagic Fever(VHF)
13. Yellow Fever
14. **Maternal Death**
15. **Perinatal Death**

Weekly Reportable

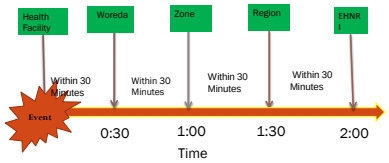
1. Dysentery
2. Malaria
3. Meningitis
4. Relapsing
5. Typhoid Fever
6. Typhus
7. Severe Acute Malnutrition

Criteria for identification

1. Diseases under eradication and elimination
2. Disease of public health importance
3. Diseases of international concern

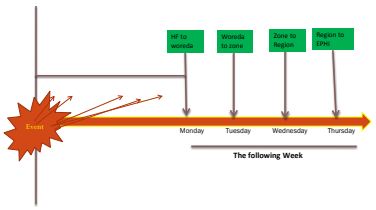
Slide 11

Timeline for immediately Reportable Diseases:



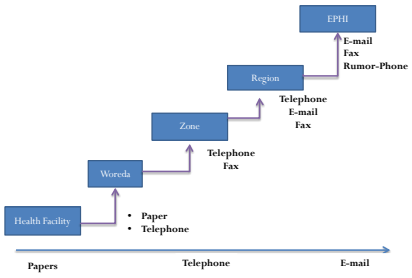
Slide 12

Timeline for Weekly Reportable Diseases:



Slide 13

Reporting Channel:



Slide 14

CASE DEFINITION

❖ **Classification of case definitions**:

1. **COMMUNITY CASE DEFINITION**

1.a. *Probable death*:

- Broad, sensitive, needs further screening, used by the general community

1.b. *Possible (suspected) death*:

- Filtered after screening verbally
- Gets coded and used for investigation

2. **STANDARD (CONFIRMED) CASE DEFINITION**

– No need for verification

Slide 15

COMMUNITY CASE DEFINITION

PROBABLE MATERNAL DEATHS	***PROBABLE PERINATAL DEATHS***
• Death of a woman of **reproductive age group: (15-49 years of age)**	• The **birth of a dead foetus** or **death of a new born**

These are key definitions for the MPDSR system.

Slide 16

COMMUNITY CASE DEFINITION

Suspected maternal death	***Suspected perinatal death***
"Probable maternal death" plus at least one of the following (Screen): ➢ ***Died while pregnant,*** ➢ ***Died within 42 days of termination of pregnancy or*** ➢ ***missed her menses before she died***	"**Probable perinatal death**" plus (screen): – ***Birth after 7 month of pregnancy and*** – ***New born dead at the time of birth OR*** – ***Death within 28 days of delivery***

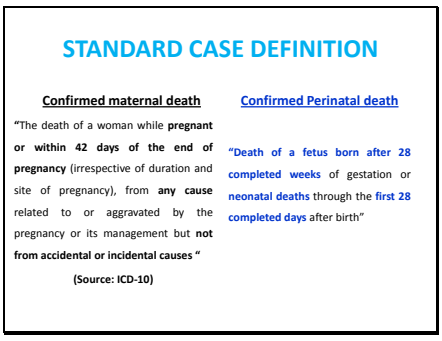
Screening questions can be answered by family members or health providers who were familiar with the mother and/or baby prior to the death.

Slide 17

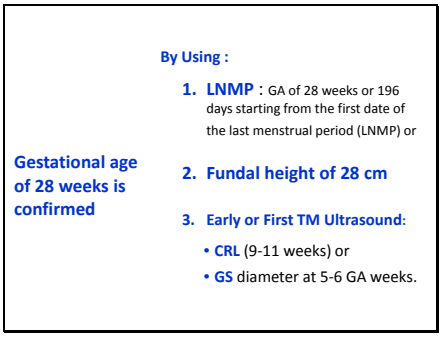
Screen if there was seven months of pregnancy using:

1. ***Any one who knows her duration of pregnancy or***
2. ***GA of 28 weeks or 196 days starting from the first date of the last normal menstrual period (LNMP)***

Slide 18

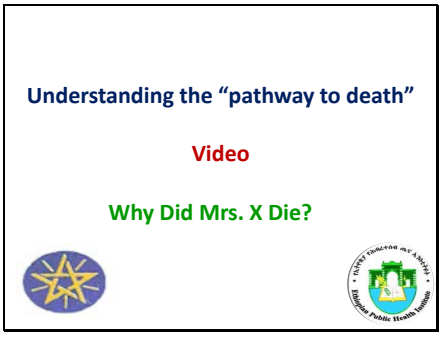


Slide 19



Practical 1: WHY Did Mrs X die?

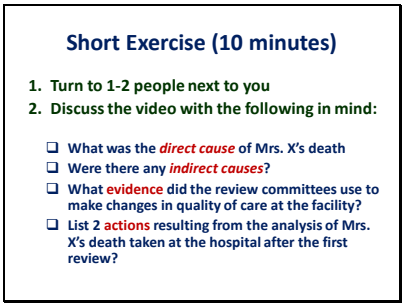
Slide 1



Make sure you test the video in the training venue prior to the actual training, so you can be sure it works. In particular, make sure participants can *hear* everything in the video. If the sound is not optimal, then provide a summary narrative.

To save time, play the video from **01:22 minutes** UNTIL the end of the animation at **11.22 minutes**

Slide 2



The video itself includes superfluous material, including an interview with a famous Obstetrician who has been instrumental in intensifying efforts to reduce maternal mortality.

After 10-15 minutes of participants working in pairs, bring everyone back together for a *group discussion*. Ensure that participants understand the difference between the *direct* cause of Mrs. X's death (antepartum haemorrhage), its *indirect* cause (anaemia) and any *contributing social factors* (low status of women, poor nutrition, lack of awareness of ANC, transport costs)

Practical 1: Why did Mrs X die? ANSWERS

Q1: What was the direct cause of Mrs Xs death?
Antepartum Haemorrhage

Q2: Were there any indirect causes?
Anaemia

Q3: What evidence did the review committees use to make changes in quality of care at the facility?
Staff MDR Review:
Conducted a retrospective audit of files, including Mrs. X's, and also interviewed her family members in the community

International Review (National Enquiry): *Reviewed aggregated data from across facilities, including social and cultural issues related to access to family planning and gender roles and responsibilities*.

Q4: List 2 actions taken at Hospital level after the first review?
- *Improved blood supply*
- *Increased availability of emergency services e.g. Caesarean Section*
- *More trained midwives both for ANC and Delivery*

Ethiopia MPDSR overview:

Slide 1

Photo from VHSD 2016 Annual Review

Maternal & Perinatal Death Surveillance and Response (MPDSR):

Overview and Introduction to National Guidance

Slide 2

Learning objectives

By the end of this session, participants will :

- **Understand the purpose of MPDSR**
- **Be familiar with key concepts and definitions**
- **Know the structure of the Ethiopian MPDSR system**
- **Identify how data flows through the system**
- **Be aware of the MPDSR National Guidance**

Slide 3

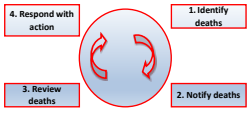
What is MPDSR?

Maternal and Perinatal Death Surveillance and Response **is a key component of the health system that incorporates identification, notification, analysis, and determination of causes and avoidability of maternal and perinatal deaths, with the goal of acting to prevent these in future.**

Slide 4

What is MPDSR?

Community Based & Facility Based
Continuous Cycle



Slide 5

Adding the P to MPDSR

- Ethiopia's MDSR system was established in E.C. 2006
- Public Health Emergency Management (PHEM) has been responsible for MDSR data collection since E.C. 2007
- Now that the MDSR system is established across the country, *perinatal* deaths can be integrated into the process

Slide 6

Justification for MPDSR

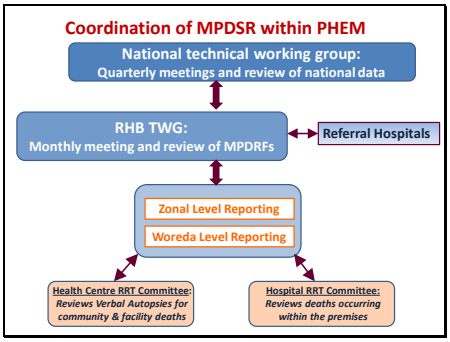
- MCH remains a key national health priority
- Ethiopia's *maternal mortality rate* is estimated to be 412/100,000 live births = 11,000 deaths per year
- The perinatal mortality rates is estimated to be 46/1000 births = 87,000 neonatal deaths & 97,000 still births per year
- MPDSR is part of the HSTP as a strategy to reduce avoidable deaths

Slide 7

PHEM – MCH Integration

- PHEM leads Ethiopia's *surveillance*
- Maternal deaths are one of the *weekly reportable conditions*
- Following reporting and review, case based data are *aggregated and analysed within regional and national databases*
- The MCH directorate receives analysed data and works to *identify appropriate responses at every level of the health system*.
- *Perinatal deaths* will be added to this existing data management platform

Slide 8



This is the basic structure of the Ethiopian MPDSR review committees at each level of the health system

Slide 9

Goal and Objectives of Guidance

Goal:

To guide effective implementation and scale up of MPDSR in a systematic, standardized and integrated manner

Slide 10

Purpose of the MPDSR Guidance

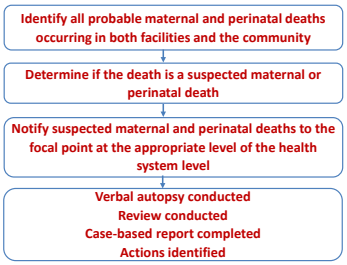
To facilitate effective functioning of Ethiopia's MPDSR for:

- Surveillance focal persons
- health care managers and providers
- policy makers who take action based on MPDSR findings

To ensure use of emerging information in improving maternal & perinatal health care quality and outcomes

Slide 11

Basics of MPDSR Data Flow



Slide 12

Principles of MPDSR

The following ethical principles are central to MPDSR implementation:

- Confidentiality
- Anonymity
- Respect
- No Name, Not Blame and No Shame!

Slide 13

Confidentiality: a Code of conduct

- Local data collectors and involved health care workers are the only staff who see the names of deceased women and babies
- Staff who gather data for MPDSR must commit to never sharing the information
- Review committee members at all levels must sign a non-disclosure confidentiality agreement (kept on record)
- Data cannot be spoken about outside the formal review process

Slide 14

Draft Disclaimer

(Non-disclosure confidentiality agreement)

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.

A disclaimer like this should be signed at the start of every review meeting, at all levels of the health system (in facility based committees as well as Rapid Response Teams)

Slide 15

Anonymity

- Notes and reports protect the patient, friends, family and staff members involved
- Names obscured on case notes used in review
- No names recorded on abstraction forms
- Family informed of the purpose of the investigation and how data will be used

Slide 16

Essentials of no blame

- Acknowledgment throughout system that mistakes do happen
- Constructive approach to learning from every death
- Identifying preventive measures for the future remains the priority
- Results of MDSR to be used as a learning experience and not for any legal process

It is rare for a death to be caused by just one mistake or one person. Most commonly, a *series of events* together lead up to a perinatal or maternal death. Therefore, it is more useful to identify *a range of factors* that might have prevented the death at each step.

Slide 17

The purpose of reviewing a maternal or perinatal death is to give value to that life and collectively learn from the experience NOT to blame individuals or institutions

_____
_____
_____
_____
_____
_____
_____

Slide 18

Culture of no blame

The man in the boat needs help managing his appetite, a reminder of good nutrition, and assistance to stop sinking, but NOT a lecture on his poor eating habits!

- Healthcare providers are vulnerable to self blame, which does not improve care
- Support and training are better solutions for preventing future deaths
- "No blame" is NOT "no accountability"

This man is at risk of drowning....

How can he be helped *without* blaming him for his behaviour?

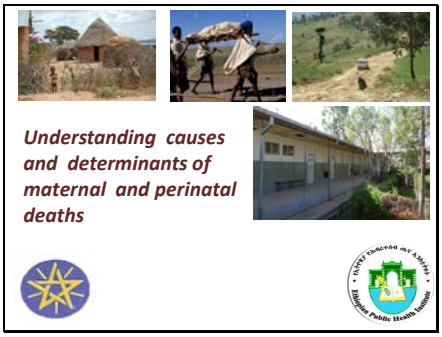
Slide 19

Summary

- MPDSR system captures *maternal* and *perinatal* deaths in *communities* and *facilities*
- MPDSR surveillance is managed by *PHEM* but *MCH* is involved in review and response
- The ultimate aim of MPDSR is to *identify feasible action* to prevent avoidable maternal and perinatal deaths
- MPDSR follows key principles of *confidentiality*, *anonymity* and *no blame*

Module 2: Understanding determinants and causes of maternal and perinatal death

Slide 1



Slide 2

Learning objectives

By the end of this session, participants will be able to:

- **Explain the difference between causes and determinants of maternal and perinatal deaths**
- **Recognize common cause of maternal and perianal deaths**
- **Classify determinants using the "3 delays"**

Slide 3

Brainstorming Exercise

In the next 5 minutes:

- **List 3-5 main causes of maternal deaths during or immediately after childbirth in Ethiopia**
- **List 3-5 main causes of perinatal deaths (still births and neonatal deaths) in Ethiopia**
- **For each of these, note down what *social factors* you think contribute to them**

Practical 2: Brainstorming causes and determinants

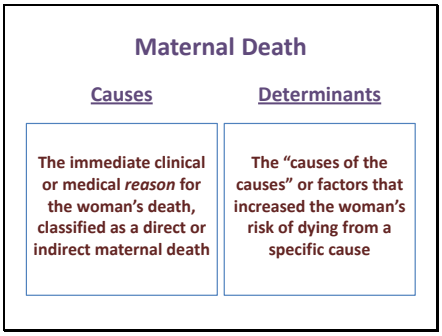
On your <u>own</u>, in the next 5 minutes ....

1. **List 2 main causes of maternal death during or immediately after childbirth in Ethiopia**
2. **List 2 main causes of perinatal death in Ethiopia**
3. **For each of these, what <u>social factors</u> contribute to them?**

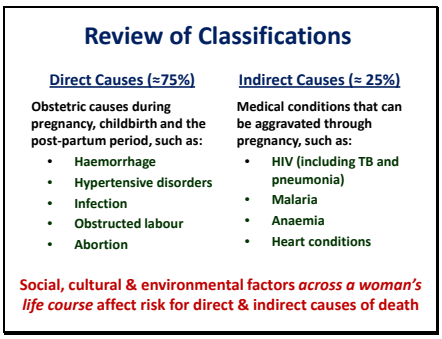
Possible main causes of maternal death	Contributing social factors
Haemorrhage	Poor nutritional status
Ruptured Uterus/ Obstructed Labour	Insufficient access to family planning Too many closely spaced pregnancies
Sepsis	Lack of clean delivery and clean water Unwanted pregnancy, followed by induced abortion

Possible main causes of Perintal death	Contributing social factors
Birth Asphexia	Laboring long at home Lack of transport Poor quality care in the health facility
Prematurity/ LBW	Poor maternal nutrition Infection Poverty Lack of education High work load
Infections	Maternal infection Lack of clean delivery and clean water Poor infection prevention practice health facility

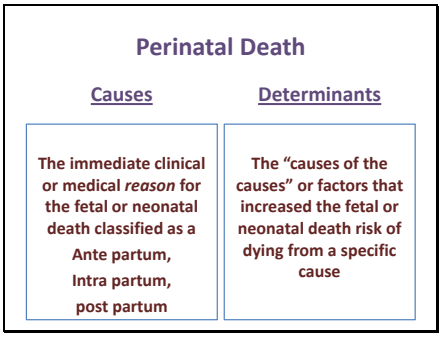
Slide 4



Slide 5



Slide 6

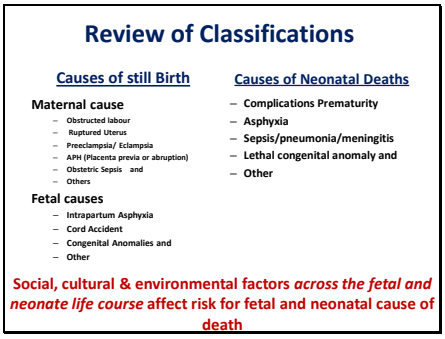


Discuss the time of death

Timing of Death may be unknown

Use other clinical clues (Macerated or freshly dead) to identify timing in case of death.

Slide 7

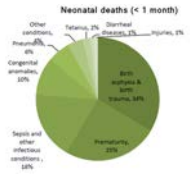


Think of medical causes directly related with the Maternal, Fetal and Neonatal deaths

Slide 8

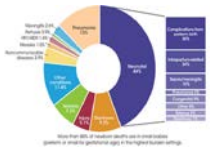
Causes of Neonatal Death

Ethiopia



Source: CHERG/WHO/UNICEF for distribution of causes of neonatal and under-five deaths (published in Liu et al, Lancet 2014).

Global



Source: WHO Global Health Observatory, 2014 (19). Estimates are rounded, and therefore may not sum to 100%.

Complication from Birth like: asphyxia,

Prematurity and

Sepsis and other infections are common causes of neonatal deaths

Slide 9

Contributing Factors

- A contributing factor is something that may have prevented the death if a different circumstance/ effort/action/rout had been taken.
- Although at first glance a death may appear to be due to a single biological cause, further analysis usually reveals a number of contributing factors or underlying causes.
- Often by exploring the event and gaining a better understanding of the root causes, solutions and strategies become more apparent.
- Contributing factors involve missed opportunities within the different levels of health system (individual, household, community and health facility level).
- The following terms can be used interchangeably with contributing factors
  - "Avoidable factors"
  - "Elements of substandard care"
  - "Modifiable factors"
- The method uses to identify contributing factors is the well-known "Three delays" model

Think of the following factors

contributing factors

Avoidable factors

Elements of substandard care

Modifiable factor

Slide 10

The "3 Delays" Model

- **Generally refers to events following an obstetric emergency, so very specific**
- **Related to *seeking* and *obtaining* clinical care**
- **Divides the process of accessing care into 3 phases:**
  - **Recognising** an emergency & need for treatment
  - **Reaching** a health facility where care is available
  - **Receiving** the care that is needed

Think of

individual or personal factors

community factors health facility factors

Slide 11

Delay 1: Delay in seeking care

- Were the mother, father or other family members unaware of the need for skilled care for the mother during pregnancy and birth, and for mother and baby in the neonatal period?
- Were they unaware of the warning signs of problems during pregnancy or in newborn infants, or were they reliant on harmful traditional medicine and practices?
- Were there any other sociocultural factors or barriers?

Think of Individual or personal factors

Slide 12

Delay 1: Common contributing factors of Maternal and perinatal death

- Family poverty
- Did not recognize the danger signs of newborn infants
- Unaware of the warning signs of problems during pregnancy
- Did not know where to go
- Had no one to take care of other children
- Lack of decision to go to the health facility
- Traditional beliefs/cultural norms(belief newborns shouldn't be taken outside home or seen by certain people


Slide 13

Delay 2: Delay in reaching to a health care facility

- The necessary maternal and/or neonatal health services did not exist, or
- were inaccessible for other reasons.
- Was distance or cost a factor?
- If there was a delay in travelling to the health-care facility after a problem was identified,
- what were the reasons for this?

Think of community factors between Home and Health Facility

Slide 14

Delay 2: Common contributing factors of Maternal and perinatal death

- Transport was not available
- Transport was too expensive
- No facility within reasonable distance
- Security concerns

Slide 15

Delay 3: Delay in receiving care in a health facility

- The care the mother and baby received at the health-care facility was not timely or was of poor quality.
- Was this due to provider error, lack of supplies or equipment, or
- Poor management?

Think of Health facility factors affecting maternal health outcome like death.

Slide 16

Delay 3: Common contributing factors of Maternal and perinatal death

- Delayed arrival to next facility from another referring facility
- Family lacked money for health care
- Delayed management after admission
- Fear to be scolded or shouted at by the staff
- Human error or mismanagement and
- Delayed or lacking supplies or equipment

Slide 17

GROUP WORK

- **Divide into small groups of 5-6 people**
- **Group will be assigned one of the 3 delays**
- **Discuss what factors in Ethiopia are most likely to lead to that delay**
- **Identify at least 3 strategies or activities that targets the factors you identified and might help reduce the delay**

Group of 3(D-1,D-2,D-3) each with 5-6 members and grouped will develop a strategy for solving the factors identified in the delays

Slide 18

Summary Points

- Most of maternal and perinatal deaths are preventable
- Social determinants are the "causes of the causes" of maternal and perinatal deaths, and depend on many social levels
- Addressing maternal and perinatal deaths thus requires action at every level, not just medical or health services
- MPDSR identifies determinants related to the 3-delays from individual to the community and to health facility level.

Most maternal and perinatal deaths are preventable if life-saving preventive and therapeutic interventions are provided at the right time

The majority of stillbirths, particularly those that occur in the intrapartum period, and 75% of neonatal deaths are actually preventable.

Module 3: Identification and Notification

Slide 1

MATERNAL & PERINATAL DEATH SURVEILLANCE:

IDENTIFICATION & NOTIFICATION

Slide 2

LEARNING OBJECTIVES

1. Identify the ***sources of information*** for maternal and perinatal death identification
2. know the ***notification process*** of maternal and perinatal deaths
3. Identify the ***responsible bodies*** in the notification process
4. Learn ***how to give code*** for each maternal and perinatal deaths
5. Learn how to use the ***identification and notification tools*** of maternal and perinatal death surveillance

Slide 3

MATERNAL AND PERINATAL DEATH SURVEILLANCE

- **A single maternal or perinatal death is treated as an outbreak**
- **A single maternal or perinatal death review informs a lot to prevent many similar deaths in the future**

Slide 4

SOURCES OF INFORMATION FOR MATERNAL DEATH & PERINATAL DEATH IDENTIFICATION

COMMUNITY REPORT

- **What**: All ***probable*** maternal and perinatal deaths
- **WHO**: Any member of the community will report to their respective H.P or H.C
- **Source**: Any ***rumors*** in the community
- **How**:
  - ***Formally or informally rumors*** should be notified ***within 30 min*** to the next level by any means of communication
  - **Formally**: ID & N ***within 24 hrs***. using ***paper based tools*** from ***H.P to H.C***

HEALTH FACILITIES' REPORT

- **What:** ***All confirmed*** maternal and perinatal deaths
- **WHO**: Any Health care provider should report to his/her respective facility surveillance focal person
- **Source**:
  - health care providers in the facility
  - Attendants
  - client charts,
  - registers, death logs and
  - other records from the previous 24 hours
- **How**: ***formally*** within ***24 hours*** of identification using ***paper based I.D & N tools***

Slide 5

EARLY SURVEILLANCE ACTIVITIES BEFORE REVIEW

SUSPECTED MATERNAL DEATH

- At community
- Identify and notify immediately (within 30 min) to PHEM focal person
- Report using weekly PHEM (HEW, HC and above)
- Investigate with VA

CONFIRMED MATERNAL DEATH

- In **Health facility**
- **Identify and notify** immediately (within 30 min) to **PHEM focal person**
- Report using weekly PHEM (HC/Hosp/clinic and district/zone/region & above)
- Investigate with FBMDA

Slide 6

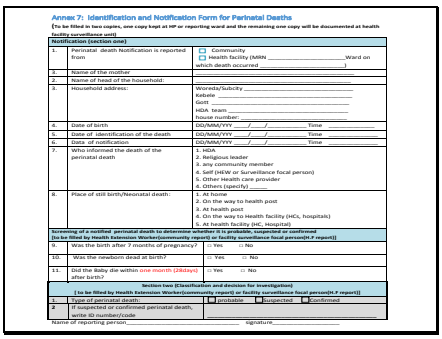
Annex 1: Identification and Notification form for maternal death

(To be filled in two copies, one copy kept at HP or reporting ward and the remaining one copy will be documented at health facility surveillance unit)

Section one (Notification)		
1.	Maternal death Notification is reported from	Community Health facility (MRN_____) Ward on which death occurred _____)
2.	Name of the deceased	_____
3.	Age of the deceased woman (in completed years)	_____
4.	Name of head of the household	_____
5.	Household address	Woreda/Sub-city _____ Kebele _____ Gott _____ HDA team: _____ house number: _____
6.	Date and time of the woman's death	DD/MM/YYY ____/____/_____ Time _____
7.	Who informed the death of the woman?	1. HDA 2. Religious leader 3. any community member 4. Self (HEW or surveillance focal person) 5. Other health care provider 6. Others (specify) _____
8.	Date of Notification:	DD/MM/YYY ____/____/____
9.	Place of death:	1. At Home 2. At Health Post 3. At Clinic 4. At Health Center 5. At Hospital 6. On transit from home to health facility 7. On transit from health facility to health facility
Screening of notified Maternal deaths (to be filled by Health Extension Worker[Community report] or facility surveillance focal person[H.P report])		
8	Did she die while pregnant?	Yes No
9	Did she die with 42 days of termination of pregnancy?	Yes No
10	Has she missed her menses before she died?	Yes No Unknown
Section two (Classification and decision for investigation) (To be filled by Facility Surveillance focal Person)[for both H.P report and community based report)]		
1.	Type of maternal death:	☐Probable ☐Suspected ☐Confirmed
2	If suspected or confirmed maternal death, write ID number/code	_____ _

Name of reporting person_____ signature_____

Slide 7



Annex 7: Identification and Notification Form for Perinatal Deaths

(To be filled in two copies, one copy kept at HP or reporting ward and the remaining one copy will be documented at health facility surveillance unit)

Notification (section one)		
1.	Perinatal death Notification is reported from	☐ Community ☐ Health facility (MRN _____Ward on which death occurred _____)
2.	Name of the mother	_____
3.	Name of head of the household:	_____
4.	Household address:	Woreda/Subcity _____ Kebele _____ Gott _____ HDA team _____ house number: _____
4.	Date of birth	DD/MM/YYY ___/___/_____ Time _____
5.	Date of identification of the death	DD/MM/YYY ___/___/_____ Time _____
6.	Data of notification	DD/MM/YYY ___/___/_____ Time _____
7.	Who informed the death of the perinatal death	1. HDA 2. Religious leader 3. any community member 4. Self (HEW or Surveillance focal person) 5. Other Health care provider 6. Others (specify) _____
8.	Place of still birth/Neonatal death:	1. At home 2. On the way to health post 3. At health post 4. On the way to Health facility (HCs, hospitals) 5. At health facility (HC, Hospital)
Screening of a notified perinatal death to determine whether it is probable, suspected or confirmed [to be filled by Health Extension Worker(community report) or facility surveillance focal person(H.F report)]		
9.	Was the birth after 7 months of pregnancy?	☐ Yes ☐ No
10.	Was the newborn dead at birth?	☐ Yes ☐ No
11.	Did the Baby die within one month (28days) after birth?	☐ Yes ☐ No
Section two (Classification and decision for investigation) [to be filled by Health Extension Worker(community report) or facility surveillance focal person(H.F report)]		
1.	Type of perinatal death:	☐ probable ☐ Suspected ☐ confirmed
2	If suspected or confirmed perinatal death, write ID number/code	_____

Name of reporting person_____ signature_____

Slide 8

CODING OF MATERNAL AND PERINATAL DEATH

SUSPECTED MATERNAL DEATH

- 3 letters from the Region (E.g Oromia: **ORO**)
- 3 letters for the zone (E.g East welega: **EWE**)
- 3 letters for the woreda (E.g Kiramu: **KIR**)
- 3 letters for the health centre (E.g Kokofe: **KOK**)
- 2 letters from Year in Ethiopian calendar that the death occurred (E.g 2007: **07**)
- 2 letters from Month number in the Ethiopian calendar that the death occurred (E.g Hidar: **03**)
- Serial number for the death in the health centre in the month of investigation (second maternal death: **02**)

➢ **Maternal death Code:**

ORO-EWE-KIR-KOK-07-03-02

SUSPECTED PERINATAL DEATH

- 3 letters from the Region (E.g Oromia: **ORO**)
- 3 letters for the zone (E.g East welega: **EWE**)
- 3 letters for the woreda (E.g Kiramu: **KIR**)
- 3 letters for the health centre (E.g Kokofe: **KOK**)
- 2 letters from Year in Ethiopian calendar that the death occurred (E.g 2007: **07**)
- 2 letters from Month number in the Ethiopian calendar that the death occurred (E.g Hidar: **03**)
- Serial number for the death in the health centre in the month of investigation (second perinatal death: **02**)

➢ **Perinatal death Code:**

ORO-EWE-KIR-KOK-07-03- P02

Slide 9

Exercise

Coding of Maternal And Perinatal Deaths

Practical 3: Assigning ID codes

Assigning an ID Code: This is an individual activity.

Using the reference table above, write down the ID code that would be used for a woman who died on the 5th of the month of Yekatit last year in her home. Assume she lived in the kebele, woreda and zone where YOU live (and select a local health centre accordingly). She was the first maternal death that month (7 *minutes*)

WRITE the code here:_____

Now write down the ID code for a baby who died in Feleg Hiwot hospital in Bahir Dar on 15th day of Sene this year. This baby was the 4th perinatal death reported this month. (7 *minutes)*

WRITE the code here:_____

CHECKING YOUR CODES: Now turn to the person who are sitting next to and discuss your ID codes and the ones they have written. You should both *check each other's work* and discuss any disagreements about how you allocated the codes. Remember that you will both have different correct answers for the first one, as you probably live in different places!

Answer

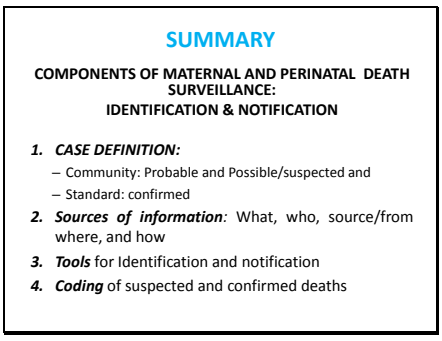
ASSIGNING AN ID CODE: Answers will depend on the location of each participant's home, but in regional trainings, the REGIONAL component of the code is likely to be the same for most correct answers, and the DATE should be the same of everyone. Therefore, the first code should END :

-08-06-01

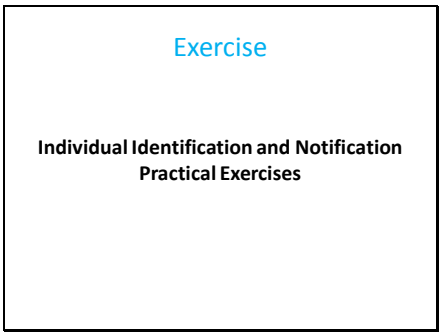
The second answer is : AMH-HOS-FEL-09-10-P04

NOTE: The Technical Guidance and the trainees' Workbook have updated full lists of codes.

Slide 10



Slide 11



It is better to *err on the side of caution* – meaning that if there is doubt, better to notify the death so that it can be further investigated.

The Scenarios are also listed in the Workbook. **Provide answers only after discussion.**

Participants should work through each case on their own. There are 6 potential maternal death scenarios, and 6 potential perinatal death scenarios. This activity should take about 45 minutes.

Then it is important to lead a discussion with the whole group to go through each case and explain the answers. There may be some disagreements or ambiguities – not all cases are easy to classify!

Remember that the purpose is to assess whether the death is *likely* to be a maternal or perinatal death and thus require a verbal autopsy. Participants should NOT try to diagnose the condition described or assign a cause of death.

Try to prevent participants' getting too preoccupied with specific examples or asking about scenarios that are likely to be extremely rare. As long as standardized classification are applied to most deaths, the system will function.

Practical 4: Identification Exercise
(ANSWERS provided after each scenario)

Maternal Death Identification:

This is an *individual* exercise. Consider the examples described below and for each, determine *if* it is a maternal death; if so, *which* type of maternal death and *whether* it should be reported.

Example 1

A 24 year old woman delivered a large healthy baby at home. Two hours after delivery she was bleeding heavily with a fast pulse and low blood pressure. She died four hours after delivery.

CIRCLE AS APPROPRIATE:

Q1.	**Is this a maternal death ?**	**Yes / No / don't know**
Q2.	**If yes, can it be classified as**	**Direct / Indirect**
Q3	**Should it be reported to the MDSR committee?**	**Yes / No**

ANSWER

- Yes, maternal death,
- direct (haemorrhage),
- should be reported

Example 2

A 36 year old woman is known to be about 6 months pregnant with her 5th pregnancy. She experiences dizziness and night sweats, shortness of breath and has been coughing blood stained sputum. The Doctor diagnosed tuberculosis and found she was HIV positive. She died at 7 months pregnancy of pneumonia .

Q1.	**Is this a maternal death ?**	**Yes / No / don't know**
Q2.	**If yes, can it be classified as**	**Direct / Indirect**
Q3	**Should it be reported to the MDSR committee?**	**Yes / No**

ANSWER

- Yes, maternal death
- Indirect (HIV/TB are affected physiologically by pregnancy)
- Should be reported

Example 3

A 31 year old woman is 38 weeks pregnant with her 4th child. She is on her way to the local town walking along the main road with her children when a bus knocks her down. She is unconscious and dies 4 hours after the accident.

Q1.	**Is this a maternal death ?**	**Yes / No / don't know**
Q2.	**If yes, can it be classified as**	**Direct / Indirect**
Q3	**Should it be reported to the MDSR committee?**	**Yes / No**

ANSWER

- No, it is not a maternal death, as the death occurred from **incidental** causes
- Should be notified as a death to a woman of reproductive age, but no Verbal Autopsy is required

Example 4

A woman dies very soon after arriving at a health facility. She dies without having delivered, but health personnel at the facility were able to feel fetal parts on vaginal examination. The person accompanying her to the facility reported that she had pains for a day and a half, but could provide no further details.

Q1.	**Is this a maternal death ?**	**Yes / No / don't know**
Q2.	**If yes, can it be classified as**	**Direct / Indirect**
Q3	**Should it be reported to the MDSR committee?**	**Yes / No**

ANSWER

- Yes, it is a maternal death
- Direct (obstructed labour)
- Should be reported

Example 5

A teenage girl is raped and worries she may be pregnant. Two days after the rape she tells a friend, who gets her some herbal medicine. Four hours after swallowing it she collapses and dies.

Q1.	**Is this a maternal death ?**	**Yes / No / don't know**
Q2.	**If yes, can it be classified as**	**Direct / Indirect**
Q3	**Should it be reported to the MDSR committee?**	**Yes / No**

ANSWER

- No/ don't know, it is not a maternal death- the most likely cause of death is poisoning.
- Should be notified as a death to a woman of reproductive age, but not Verbal Autopsy is required

Example 6

A teenage girl has unprotected sex and misses her next period. Her boyfriend gives her some herbal medicine to cause an abortion. Two days later she starts to bleed and 5 days after taking the medicine she becomes feverish and has a very offensive-smelling vaginal discharge. After another 2 days she collapses and dies.

Q1.	**Is this a maternal death ?**	**Yes / No / don't know**
Q2.	**If yes, can it be classified as**	**Direct / Indirect**
Q3	**Should it be reported to the MDSR committee?**	**Yes / No**

ANSWER

- yes this is a maternal death
- It is direct probably due to septic shock
- Should be reported

Perinatal death Identification

Example 1

A 24 year old woman, delivered a dead baby at home. She had felt no fetal movements for 5 days. The baby weighed 3kg and there were no signs of life. One week earlier she had had an ANC appointment when her fundal height had measured 34 cm.

Q1.	**Is this a perinatal death ?**	**Yes / No**
Q2.	**If yes, is it**	**probable / suspected/ confirmed**
Q3.	**Should it be reported to the MPDSR committee?**	**Yes / No**

ANSWER

- yes this is a perinatal death. It is a *confirmed* death
- This is a *stillbirth probably antepartum*
- Should be reported

Example 2

A 35yr old , known to be at full term, with a history of 4 stillbirths and 2 live births delivers a baby weighing 3.4 kg at the hospital. The baby takes a breath at birth but is floppy and makes no further attempt at breathing. Resuscitation is unsuccessful.

Q1.	**Is this a perinatal death ?**	**Yes / No**
Q2.	**If yes, is it**	**probable / suspected/ confirmed**
Q3.	**Should it be reported to the MPDSR committee?**	**Yes / No**

ANSWER

- yes this is a perinatal death. It is a *suspected* death
- This is a *early neonatal death*
- Should be reported

Example 3

A 28 year old farmer goes to the health centre with bleeding . She can't remember her last period. She is admitted to labour ward and passes a baby that is 15cm long

Q1.	**Is this a perinatal death ?**	**Yes / No**
Q2.	**If yes, is it**	**probable / suspected/ confirmed**
Q3.	**Should it be reported to the MPDSR committee?**	**Yes / No**

ANSWER

- No, this is not a perinatal death.
- The fetus is too small and the history does not support a pregnancy of more than 7 months gestation.
- Should not be reported

Example 4

A baby that was born uneventfully at home becomes unwell at 23 days of age. He is lethargic and vomits for 2 days before dying at home.

Q1.	**Is this a perinatal death ?**	**Yes / No**
Q2.	**If yes, is it**	**probable / suspected/ confirmed**
Q3.	**Should it be reported to the MPDSR committee?**	**Yes / No**

ANSWER

- yes this is a perinatal death. It is a *probable* death as there is no information on gestational age
- This is a *late neonatal death*
- Should be reported

Example 5

A baby was born by Emergency Caesarean Section and shows no signs of life. The CS was done for fetal distress. The mother had pushing down pains and was 7cm dilated. The baby was covered with meconium.

Before the woman went into the Operating Room the fetal heart was heard at 100bpm.

Q1. Is this a perinatal death ? Yes / No
Q2. If yes, is it probable / suspected/ confirmed
Q3. Should it be reported to the MPDSR committee? Yes / No

ANSWER

- yes this is a perinatal probable death as there is no gestational age documented
- This is an *intrapartum stillbirth*
- Should be reported

Example 6

A woman delivers a baby weighing 3kg at a health centre and goes home. The baby develops breathing problems and despite receiving treatment dies after 32 days.

Q1. Is this a perinatal death ? Yes / No
Q2. If yes, is it probable / suspected/ confirmed
Q3. Should it be reported to the MPDSR committee? Yes / No

ANSWER

- No this is not a perinatal death, as it took place after 28 days.
- Should NOT be reported

Practice on Using the Identification & Notification Forms

Practical 5: Notifications

Maternal death notification

INDIVIDUAL WORK: Notification of the death of a woman reported by her Husband

Tigist Abebe had no periods for over 3 months. She was 40 years old and already had 6 children. She had been using an injectible contraceptive. She had been vomiting and bleeding for 6 days and died in her sleep last night.

Participants should pretend they are the local health extension worker, who has heard about this woman's death. They should out Annex 1 (in the Workbook) using the information provided. (They can make up the deceased woman's residential address).

Perinatal death notification form

INDIVIDUAL WORK: Notification of a perinatal death reported by the local priest

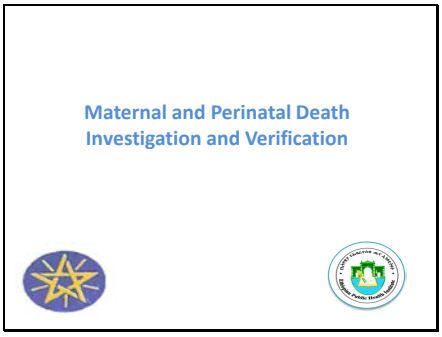
A local couple went to the health centre when the woman, who was roughly 6 months pregnant, started bleeding. After several hours of labour, she delivered a live baby girl who died during the night and was buried the next morning.

Participants should pretend they are the local health extension worker, who has heard about this woman's death. They should fill out Annex 7 (in the Workbook) using the information provided. (They can make up the deceased baby's residential address).

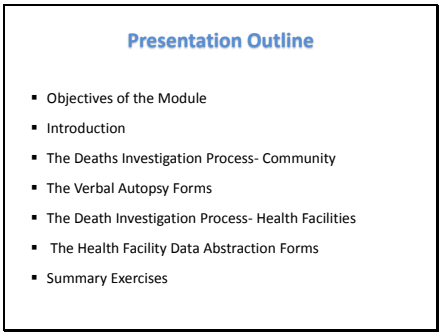
No answers available for the identification forms as the information will depend on each individual's made-up information

Module 4: Maternal and perinatal death investigation

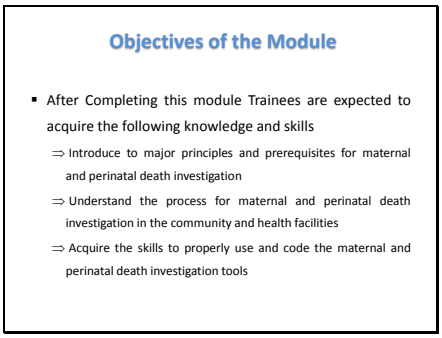
Slide 1



Slide 2



Slide 3



Slide 4

Introduction

- The objectives of maternal and perinatal death investigation are;
  - Verify the suspected death
  - Collect information on possible causes and contributing factors
- Effective investigation of maternal and perinatal death requires;
  - Mapping and using all appropriate information sources
  - Approach information sources ethically and sympathetically
  - Using and recording the death investigation tools accurately

Slide 5

Introduction CONT . . .

- All deaths fulfilling the suspected or standard case definition should be investigated

Community- Perinatal
The birth of a dead foetus or death of a new born after 7 month of pregnancy **+** New born dead at the time of birth **OR** within 28 days of delivery

Health Facility- Perinatal
A death of a fetus born after 28 completed weeks of gestation or neonatal deaths through the first 28 completed days after birth

Community- Maternal
Death of a woman of reproductive age group (between 15-49 years of age) **+** Died while pregnant or within 42 days of termination of pregnancy or missed her menses before she died

Health Facility- Maternal
The death of a woman while pregnant or within 42 days of the end of pregnancy (irrespective of duration and site of pregnancy), from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes

Slide 6

Deaths Investigation Process-Community

- All suspected maternal and perinatal deaths should be investigated by the health extension worker
- The community death investigation should be conducted within two weeks in order to;
  - Give adequate mourning period for families
  - Reduce the recall biases

Slide 7

Community Deaths Investigation CONT . .

- The health extension worker uses the standard verbal autopsy tool to verify and investigate maternal and perinatal deaths in the community
- Information sources to complete verbal autopsy includes,
  - Families of the deceased mother /neonate who were around the during the death circumstance
  - Traditional birth attendants- if applicable
  - Any community member who were around the deceased during the death circumstance

Slide 8

Community Deaths Investigation CONT . .

- Before start of interview proper oral consent should be taken and the consent information needs to contain
  - Introduce your self
  - The objectives of the investigation
  - The confidentiality of the information provide
- Before and during the interview process respectful, sympathetic and culturally right approaches should be followed

Slide 9

Verbal Autopsy

- The objective of verbal autopsy is to verify the suspected deaths in the community and collect basic information to identify possible causes and contributing factors
- Verbal autopsy is used by health extension workers only for maternal and perinatal death which fulfill the community suspected cased definition
- There is a separate verbal autopsy forms for maternal deaths and perinatal deaths

Slide 10

Verbal Autopsy CONT . . .

- The verbal autopsy form for maternal death contains five sections to be completed for all suspected maternal deaths in the community
- The verbal autopsy form for perinatal death contains nine parts and to be completed for all suspected perinatal deaths in the community
- When both the mother and the neonate are deceased maternal and perinatal verbal autopsy forms should be completed

Slide 11

Community Level Data Capture
(verbal Autopsy)

Slide 12

Verbal Autopsies

- Collect data from family members, friends, neighbors, and potentially HEW on circumstances around death
- Help construct the "pathway to death" including background factors
- Investigates
  - the woman's or the babies health issues,
  - decisions about care,
  - services received, and
  - community factors (e.g. Transportation)

Slide 13

Community Data Collection - process

Any community member can alert HEW about deaths of women 15-49

- HEW identify deaths, report them as part of PHEM, screen for maternal causes, and notify HC
- Data from VA presented at the HC review committee

Slide 14

Logistical Issues

- Timing is important – VA should be conducted after the mourning period, but before key details are forgotten (roughly 2 weeks after the death)
- Important to find respondents familiar with the case and events leading up to it
- Families may have separated or moved

Slide 15

Ethical Issues

- Maternal and Perinatal deaths are emotional events
- Grief of the family must be respected
- Information provided must be voluntary
- There should be no repercussions for family members' actions
- The VA process can raise sensitive issues requiring support (disagreements, abortion, lack of available care)

Slide 16

Informed Consent

- Formally establishes voluntary participation
- Reassures family members
- Can offer legal protection to communities
- Builds rapport and trust before starting data collection

Slide 17

Informed Consent:

When obtaining Informed Consent, remember to mention …

- Purpose of the VA interview
- What will happen during the interview
- Risks involved (feeling uncomfortable, sad)
- Benefits (avoiding future deaths)
- Confidentiality
- Voluntary participation

Slide 18

Steps in Conducting VA:

- Planning a community visit
- Approaching the household
- Selecting the best respondent(s)
- Obtaining Informed Consent
- Conducting the VA interview
- Recording the information accurately
- Submitting the filled format to the Health Centre

Slide 19

Best Practices for Verbal Autopsy (1)

- Friendly approach – Explain the purpose of your visit in positive terms
- Ensure privacy – Interviews will go more smoothly if you are undisturbed
- Speak slowly & clearly – explain anything that the respondent doesn't understand
- Probe for detailed information

Slide 20

Best Practices for Verbal Autopsy (2)

- There are NO "right answers" - let respondents tell their story in their own words
- Take notes – write down additional relevant information in the blank spaces of the VA form
- Pay attention – show that you are listening & aware of respondents' emotions

Slide 21

Deaths Investigation Process- Health Facilities

- All maternal and perinatal deaths which fulfil the standard case definitions should be investigated
- The health facility death investigation should be conducted within 1 week in order to;
  - Get all the necessary medical registers timely
  - Reduce the recall biases
  - Avail timely information for service quality improvement
- The surveillance officer uses the standard facility data abstraction form to investigate and verify maternal and perinatal deaths in the health facility

Slide 22

Deaths Investigation Process CONT . . .

- Information sources to complete data abstraction includes,
  - Medical records- client chart, registers, death logs, operation notes
  - Health care providers in the facility who involved in the provision of health care
- Before start of interview with health care providers proper consent should be taken and the consent information needs to contain
  - Introduce your self (if useful)
  - The objectives of the investigation
  - The no bale principles of the MPDSR
  - The confidentiality of the information provide

Slide 23

Health Facility Data Abstraction Form

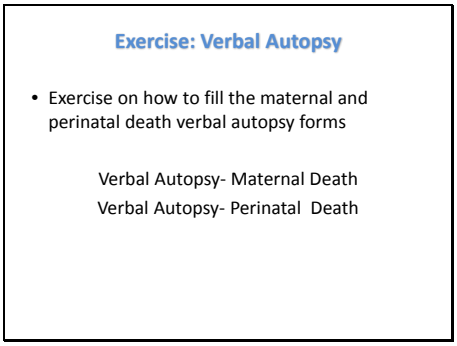
- The objective of the facility data abstraction form is to verify deaths in the health facilities and collect basic information to identify of possible causes and contributing factors
- Facility based data abstraction form is used by surveillance officer only for maternal and perinatal death which fulfill the standard cased definition
- There is a separate facility data abstraction form for maternal deaths and perinatal deaths

Slide 24

Data Abstraction CONT . . .

- The data abstraction form for maternal death contains four sections to be completed for all maternal deaths
- The data abstraction form for perinatal death contains eight parts and to be completed for all perinatal deaths within
- When both the mother and the neonate are deceased maternal and perinatal data abstraction form should be completed

Slide 26



Practical 6: *Community level investigation using Verbal Autopsy*

This is a GROUP activity. Participants should get into groups of 5-6 people, and consider the scenario below. The screening process has found that the death of Tigist *was likely to be a maternal death.* One group member should take the role of the **Verbal Autopsy interviewer**, and the others can play the role of family members with relevant knowledge (the husband, mother, sister etc). The objective is to go through the VA form together **(Annex 2)** and practice trying to fill in as much of the information as possible, using *realistic* information provided by the members of the group.

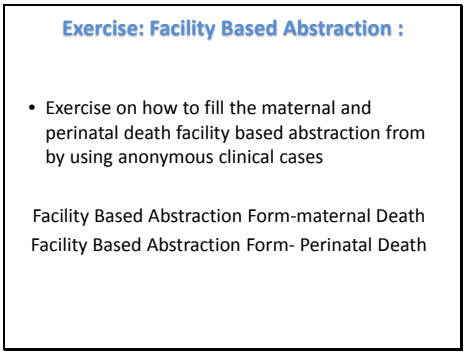
Tigist Abebe had no periods for over 3 months. She was 40 years old and already had 6 children. She had been using an injectible contraceptive. She had been vomiting and bleeding for 6 days and died in her sleep last night.

Role Play: The interviewer should go through the tool with the other family and community members and fill out the form as best as possible. The others should not make the activity too easy for the interviewer! As a group, reflect on the following:

- Which sections of the VA form are easy to fill out?
- Which are difficult?
- What might be the challenges of obtaining reliable VA information?

No answers available for verbal autopsy form as the information will depend on each group's discussion

Slide 27



Practical 7: Facility level investigation using the Facility Based Abstraction Form

N.B The Case Notes will be made available during the training but will be collected at the end of the session.

Transfer of raw data from anonymised clinical notes to the facility based abstraction Form. This is an *small group* activity (2-3 people).

1. **Using the notes provided on a perinatal death, complete as much of the facility based abstraction form as possible**
2. **Return the notes at the end of the session, as these are confidential**

The following Date was only available on the anonymised case "BA" that was provided for the national ToT. If you use a different anonymised case, new answers will need to be developed

ANSWERS:

The following Date was only available on the anonimized case "BA".

General information of the deceased:

1. Date and time of birth: 04/04/2009 EC at 9:14PM
2. Status of the newborn at birth: Alive
3. Date and time of perinatal death: 05/04/2009 EC at 300 am
4. Sex of the deceased: Male
5. Place of death: Hospital

General information of the mother:

1. Age:25 years

2. Is the mother alive: Yes

General obstetric history of the mother:

1. Number of pregnancies :1

ANC history of the mother during pregnancy:

1. ANC: Yes
2. Place of ANC: Unknown
3. Did the mother receives … ?: Iron and TT
4. Maternal disease or condition: Unknown

Intra partum history of the mother:

1. GA: 42+5
2. Partograph use : No
3. Fetal heart beat during labor: Persistent Tachycardia
4. Mode of delivery: C/S
5. Place of birth : Hospital
6. Total duration of labor :20 hours
7. Total duration of rupture of membranes: 4 hours
8. APGAR score at 1^{st} and 5^{th} minute : 7 and 8
9. Birth weight of the baby: 2800gm
10. HC: 34.5cm
11. Who assisted the delivery: Obstetrician
12. Problem experienced during labor: Obstructed Labor

Postnatal history of the perinatal death:

1. Baby receive: Vitamin K
2. Baby problem: Birth asphyxia and meconium aspiration syndrome

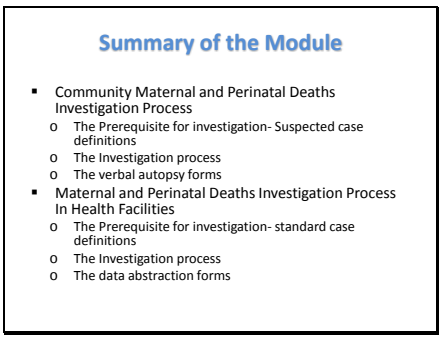
Cause and time of death

1. 1ry cause of death : Meconium aspiration syndrome with respiratory failure
2. Timing of death: Between 1^{st} and 7^{th} day

Contributing factors:

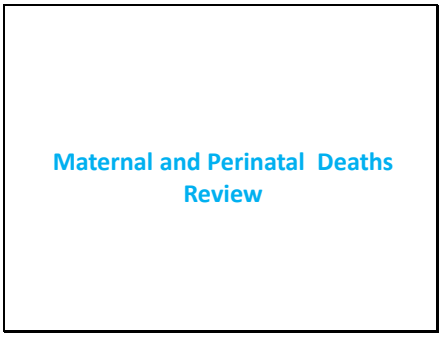
1. Delay 2: Delay referral from the health center

Slide 28



Module 5: Maternal and perinatal death review

Slide 1



Slide 2

Outline:

- Community – Review of suspected Maternal deaths
- Facility – Review of suspected Maternal deaths
- Setting up MPDSR system at facility
- Data quality improvement
  - Confidentiality: a Code of conduct
  - Disclaimer pledge
  - Committee discussion
- Summary Points
- Exercise on MDRF and PDRF

Slide 3

Community–Review of suspected Maternal and perinatal deaths:

- Each completed **verbal autopsy** should be reviewed by the **rapid response team (RRT)** of the respective **health center** within **one week after Verbal autopsy report is received**.
- The **Health Center RRT** should include **midwives, MCH nurses and other MCH related health professionals.**

Slide 4

Community–Review of suspected Maternal and perinatal deaths:

- For **every reviewed verbal autopsy** an **action plan** has to be developed for response based on the **identified modifiable factors**
- Following the review of the verbal autopsy the RRT will complete the **case based reporting format (maternal/Perinatal death reporting format (MDRF/PDRF)**

Slide 5

Facility –Review of suspected Maternal and perinatal deaths deaths:

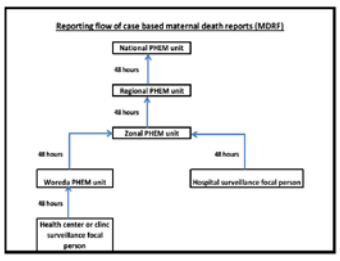
- Each completed FBAF should be **reviewed** by the **rapid response team (RRT) of the respective health facility** within **one week.**
- The health facility RRT should include **midwives, NICU Nurses, ESOs, GPs, Health officers, obstetrician, pediatrician and other related health professionals** working in obstetrics or neonatal care of that particular facility.

Slide 6

Facility –Review of suspected Maternal and perinatal deaths:

- For every reviewed **FBMDA/FBPDA** an **action plan** has to be developed for response based on the **identified modifiable factors.**
- Following the review of the FBMDA and FBPDA, the **health facility surveillance focal person** will complete the **case based reporting format (maternal/perinatal death reporting format (MDRF/PDRF)**

Slide 7



Slide 8

Setting up MPDSR system at facility:

During the "Set Up" phase, facilities should:

- Raise awareness and provide training for all staff
- Schedule regular, routine facility reviews
- Appoint a MPDSR coordinator who relates well to other staff, is supportive and respected
- Invite local experts to join committee from backgrounds other than medical/midwifery
- Engage senior staff and managers

Slide 9

Data quality improvement:

To improve the data quality for FBAF, MDSR committee members and data collectors have their great role

1. **Role of data collector**
   - Ensuring data quality
   - Maximizing data capture
   - Summarizing cases for presentation at review

2. **MPDSR Facility committee**

Roles and responsibility

- Constructive discussion and taking key decisions

Slide 10

Data quality improvement:

Data quality improves when…

- All members of staff understand the purpose of the data collection
- There is good coordination across the facility departments for collecting and synthesizing data
- Multiple sources are used (case notes, records from admission, surgery theatre, mortuary e.t.c)
- Notes are legible

Once the process of data collection becomes routine, reporting and quality often improve as staff realize their notes and records will be looked at and used!

Slide 11

Data quality improvement:

Data capture

- Include all sources of information if women/ neonate received care at multiple sites
- Every effort should be made to include information from accompanying family members
- A summary of the chain of events should be generated (description of events leading to the death)

Slide 12

Data quality improvement:

Reminder: Committee Roles

- Multi disciplinary to bring in different perspectives and ideas
- Preserves the anonymity of patients and staff (through non-disclosure pledge)
- Maintains a "No Blame" culture
- Reports objectively on cases
- Identifies actions and provides required feedback to all concerned
- Coordinates with community reviews – essential to build a complete picture

Slide 13

Confidentiality: a Code of conduct :

- Local data collectors and involved health care workers are the only staff who see the names of deceased
- Knowledge contained within review committees
- All individuals (including committee members) who access identifying data sign a non-disclosure confidentiality agreement (kept on record)

Slide 14

Disclaimer pledge :

(Non-disclosure confidentiality agreement)

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 analyzed here, and will not disclose the names of any individuals involved, including family members or health care providers.

Slide 15

Committee discussion:

Five key decisions

1. Cause of death
2. Death classification
   Direct/indirect/incidental
3. Relevant delays
4. Preventability Lessons learnt are applied to prevent further deaths
5. Actions

Slide 16

Summary Points:

- Quality of notes and records are vital to the success of facility based reviews
- Data must be obtained from all relevant sources (departments where woman treated, other health services she attended, family members)
- The whole team should review cases and contribute to taking the key 5 decisions

Slide 17

MPDSR Case based reporting(MDRFs and PDRFs)

- The Health facility RRT (including MCH experts) meets to discuss the case
- The committee agrees on the major delays involved
- The RRT decides on any local actions needed to prevent further similar deaths
- The surveillance focal person is responsible for completing the MDRF and PDRF (case based reporting format) and sending it up the system
- A UNIQUE ID is also given to MDRF/PDRFS

Attention should be given to the Completeness of MDRF and PDRFs

Completed forms should be sent timely within 48 hrs from level to level

Slide 18

Maternal death reporting form (MDRF)

Includes five sections

- Reporting Health facility information
- Deceased information
- Antenatal Care (ANC), Delivery and Postnatal care (PNC) / Post abortion care(PAC)
- Causes of death
- Contributory factors

Slide 19

Perinatal death reporting form (PDRF)

Includes six sections

- Reporting Health facility information
- Deceased information
- General information of the mother
- Obstetric History of the mother in relation to the deceased case
- Perinatal Cause of death
- Contributory factors

Slide 20

Exercise how to fill and review the MDRF or PDRF

Practical 8: Using the Case Based Reporting Form

There are 2 case based forms that will be filled out by the Rapid Response Team (RRT) / review committee. The form is filled out during the discussion about each case, based on the Verbal Autopsy or Facility Based Abstraction Form.

The maternal or perinatal death reporting form identifies the causes of the death, contributing delays, and determines whether or not the death was preventable.

This is a GROUP activity. Work in the same group as for the Verbal Autopsy practice.

Review the case from the provided medical notes on a perinatal death. This time, instead of looking at the raw notes, you should use the Facility Based Abstraction Form. Conduct a review meeting (role play) – each group member should take a role, e.g. Health facility director, Surveillance officer, midwife, quality officer, etc.

Remember to maintain confidentiality and anonymity at all times!

Answer: Annex 10 in National MPDSR Guidance: Perinatal Death Case Based Report Form (PDRF)

(To be filled in 5 copies by the Health Centre/hospital. Send the rest of copies to the next level by keeping one copy)

Reporting Facility Information			
Reporting Health Facility name type(H.C/Cl./Hosp**):_____x_____**			Woreda: **_____y_____**
Zone**:_____z_____**	Region: **_____xx_____**	Date of Reporting DD/MM/YYYY ____/____/_____	
This PDRF is extracted from:	1. VA	2. Facility based Perinatal death abstraction form	
Deceased Information			
Deceased ID(code): _____			
Residence of deceased/parents ☐Urban ☐Rural **n/k**	Region_____n/k_____ Zone_____n/k_____ Woreda_____n/k_____ Kebele _____		
Date and time of birth	DD/MM/YYYY **__04_/__04__/___09_/** Day ☐ Night ☒ (hrs/min)**__21__/__15__**		
Date and time of death (Not applicable for stillborn)	DD/MM/YYYY ____**05_/_04_____/_09_____/** Day ☐ Night ☒ Time in (hrs/min)_____**03_/_00_____**		
Sex of the deceased	**1. Male**	2. Female	
Estimated gestational age at delivery in weeks	**_____42_____** weeks		
Place of Death	1. Home/ Relatives' Home 2. Health Post	3. Health Centre **4. Hospital**	5. In Transit 6. During referral (from facility to facility)
General information of the mother			
Is the mother of the deceased perinate alive?	Yes ☒ No ☐		
Age of the mother_____**25_____(**years	Parity____**0**_____	Number of alive children ____0_____	
Religion of the mother	1. Orthodox 2. Muslim 3. Protestant 4.Catholic 5. Others (specify)- _____**n/k**_____		
Educational status Of the mother	1.No formal Education 2.No formal education, but can read and write	3.Elementary school 4. High school	5. College and above **6. Unknown**
Occupation of the mother	1.Pofessional 2.Clerical 3.Sales and Services	4.Manual Skilled 5. Manual Unskilled 6. Agriculture	7. Unemployed 8. Others (Specify) ___**n/k**_____
Obstetric History of the mother in relation to this deceased case			
Number of ANC visits in relation to the deceased case (report "0" if no ANC visits) _____**?4 ANC**_____			
Number of TT vaccine during the pregnancy of the deceased case: 1. No TT 2. One TT 3. Two and above TT **n/k**			
Mode of delivery of the deceased baby	1. SVD 2. Operative vaginal delivery 3. Forceps 4. Vacuum **5. C/S**		
Status of the baby at birth	Alive/live born ☒ Dead/Still birth ☐ if alive APGAR score at 5th minute ____**7**_____		
Where was the deceased baby born?	1. Home 2. On transit 3. H/post 4. H/center 5**. Hospital** 6.Clinic		
Maternal disease or condition identified_____**none**_____			
Perinatal Cause of death			
Neonatal Cause of death	1. Complications Prematurity 2. **Asphyxia**	3. Sepsis/pneumonia/meningitis 4. Neonatal Tetanus	5. Lethal congenital anomaly 6. Other _____
Maternal causes of death	1. **Obstructed labor** 2. Ruptured Uterus	3. Preeclampsia/ Eclampsia 4. APH (Placenta previa or abruption)	5. Obstetric Sepsis 6.Others_____
Timing of the death	**1.** Antepartum stillbirth **2.** Intrapartum stillbirth	**3.** Still birth of un known time 4. Death In the first 24 after birth	**5. Death Between 1st day and 7 day** **6.** Death Between 8 day and 28 days
Is the death preventable?	**1= Yes**	2= No	3= Unknown
Contributory factors (Thick all that apply)			
Delay 1	1. Family poverty 2. Did not recognize the danger signs of newborn infants 3. Unaware of the warning signs of problems during pregnancy	4. Did not know where to go 5. Had no one to take care of other children 6. Reliant on traditional practice/medicine **7. Lack of decision to go to the health facility**	
Delay 2	1. Transport was not available 2. Transport was too expensive	3. No facility within reasonable distance 4. Lack of road access 5. Others _____	

Delay 3	1. Delayed arrival to next facility from another referring facility 2. Family lacked money for health care **3. delayed management after admission- sent to GODP** 4. Fear to be scolded or shouted at by the staff	5. **Human error or mismanagement'** and 6. Delay in first evaluation by care giver after admission 7. **Lack of supplies or equipment, specify**___Chest XRay _____

Reported by: _____ signature: _____ seal

The probable cause of death in this case was meconium aspiration syndrome. The main issues which should be identified in this case are

- Delay in referral of mother from home and/or the health centre
- Arrival at the hospital with suboptimal documentation eg. Mothers ANC history, length of stay at the health centre and any interventions undertaken
- Delay at the Hospital as the mother was initially taken to GOPD resulting in repeated unnecessary evaluations
- Suboptimal management on NICU with
    - lack of senior supervision for a critically ill infant,
    - lack of diagnostic Chest X Ray over 29 hours
    - lack of documentation on vital signs sheet including lack of fluid balance
    - possible human error resulting in very high blood glucose levels possibly secondary to glucose administration
- Poor documentation both before and after delivery, particularly in relation to dates and times and interchange between Ethiopian and international time

Module 6: Data aggregation,analysis and interpretation and reporting

Slide 1

Maternal & Perinatal Death Surveillance and Response (MPDSR)

Data Analysis, Interpretation, Reporting

Slide 2

Learning objectives

By the end of this session, participants will :

- *Identify MPDSR reporting tools and periodicity of reporting*
- *Be familiar with MPDSR data flow and mechanisms of monitoring & ensuring data quality*
- *Perform basics of MPDSR data analysis, aggregation and interpretation*

Slide 3

Outline of the presentation

- ***Introduction***
- ***Classification of MPDSR reporting within PHEM***
- ***Weekly Maternal and Perinatal deaths reporting***
- ***MPDSR Case based reporting (MDRF&PDRF)***
- ***MPDSR Data quality***
- ***Data analysis- aggregation and interpretation***
- ***Use of aggregated MPDSR data for programmatic response***

Slide 4

Introduction

Ensuring reliable reporting of *Maternal and Perinatal death surveillance data* throughout the system is important so that program managers, surveillance officers and other health care staff can use of this information to *respond with actions that will prevent future deaths*

Slide 5

Introduction(2)

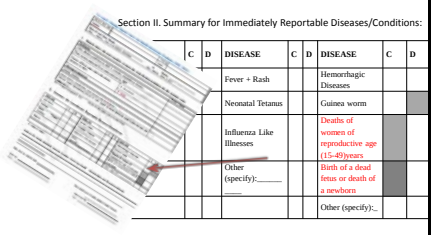
It is not enough to *collect, record and report* information about Maternal and Perinatal deaths;

The data must also be analyzed closest to the community with the appropriate analytical skills; *minimum at the district level*

Analyzing data provides the information that is used to take *relevant, timely and appropriate public health action*

Slide 6

WRF_ for HEWs



Section II. Summary for Immediately Reportable Diseases/Conditions:

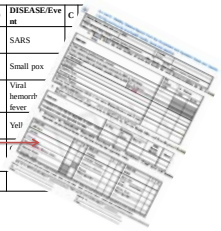
C	D	DISEASE	C	D	DISEASE	C	D
		Fever + Rash			Hemorrhagic Diseases		
		Neonatal Tetanus			Guinea worm		
		Influenza Like Illnesses			Deaths of women of reproductive age (15-49)years		
		Other (specify):_____			Birth of a dead fetus or death of a newborn		
					Other (specify):_		

Slide 7

WRF (HF & above)

Section III. Summary for Immediately Reportable Case-based Disease / Conditions

DISEASE/Event	C	D	DISEASE/Event	C	D	DISEASE/Event	C
AFP/Polio			Measles			SARS	
Anthrax			Neonatal Tetanus			Small pox	
Cholera			Pandemic Influenza			Viral hemorrh fever	
Dracunculiasis (Guinea worm)			Rabies			Yell	
Maternal Death			Other (specify) :				
Perinatal death							



Slide 8

Data quality-Weekly reporting

Progress of completeness and timeliness of Maternal and Perinatal death reporting at all levels should be monitored

- ***Actions can be taken to improve completeness and timeliness***
- ***When the surveillance system is good, the rates these two indicators should approach 100%***
- ***If no cases of death (maternal or perinatal death) have been identified during the week, a "zero" is actively reported***

Slide 9

Analysis – data aggregation and interpretation

Aim?

- **To identify causes of death,**
- **Subgroups at highest risk,**
- **To identify factors contributing to maternal deaths,**
- **To assess the emerging data patterns**
- **prioritize the most important health problems to improve the public health response**

It also helps to identify changes in reporting especially at initial stages of implementation

Slide 10

Analysis – data aggregation and interpretation

Steps

- Receive, handle and store data from reporting sites
- Data entry, quality and completeness
- Aggregating reported Weekly notifications and case based reports
- Perform standard data analysis plan
- Perform specialized complex analysis or sub analysis,
- Analyze preventable factors
- Translate data analysis for broader audience
- Respond, disseminate results and recommendations, and implement M&E

Slide 11

Analysis – data aggregation and interpretation

Basic MPDSR data analysis includes;

- Basic descriptive analysis by *person, place, and time*
- Medical cause of death,
- Contributing factors and preventability of death
- Patterns and trends , and

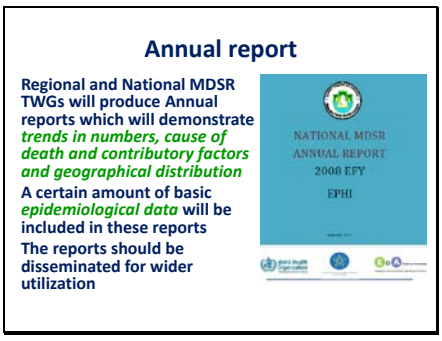
Slide 12

Analysis – data aggregation and interpretation

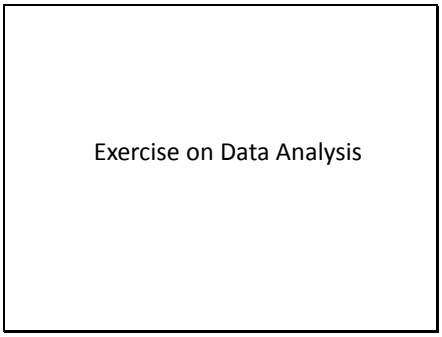
How ?

- Tabulating reports manually and filling in a summary data sheet
- Using Microsoft excel (Pivot tables , charts and running formulas)
- Running a standard computer program to generate a summary report (EPI Info 7 database /dashboard ,or other standardized databases)

Slide 13



Slide 20



Practical 9: Interpreting data

NOTE: Answers provided in **BOLD** after each question

Instructions: Please read the case study and then discuss the questions with your assigned group members.

Case study: Pretend you are the woreda-level MPDSR focal person responsible for monitoring MPDSR reporting and preparing the data for discussion and also to report upwards.

In your woreda, maternal death surveillance started at the beginning of 2009 EFY. Notification of maternal deaths and case based reports (MDRF) have been sent from catchment health facilities throughout your woreda (details below). For maternal deaths, you have received a total of 13 weekly notifications and 22 case based reports in the last 2 quarters of 2009. The total population for 2009 EFY

was 284,604 (CSA projection) with crude birth rate of 32 per 1000 populations. (MMR of 412 per 100,000 LBs)

Table 1. Maternal deaths notification reports by reporting month

Month	Year	No-of-Gov_HP expectd	No-of-Gov_HC expectd	No-of-GovHosp expectd	No-of-Other HFs expectd	No-of-Gov_HP Reportd	No-of-Gov_HCs Reported	No-of-Gov_Hosp Reportd	No-of-Others HF Report	Maternal Deaths
Tir	2009	38	12	1	2	38	11	1	2	2
Yekatit	2009	38	12	1	2	23	11	1	2	2
Megabit	2009	38	12	1	2	33	11	0	2	5
Miazia	2009	38	12	1	2	38	11	1	2	0
Ginbot	2009	38	12	1	2	36	11	0	2	3
Senie	2009	38	12	1	2	38	11	1	2	1

1. Looking at the data on reporting above, review the completeness of the maternal death weekly reports. Answer the following questions:
   - Which month had the lowest reporting rate from Health Posts? _____ ANSWER: Yekatit_(just 23 HP out of 38)___
   - How many "silent" health centres are there in your woreda (meaning they are not sending any reports)? __ANSWER: 1 (12 Health centres are expected, but just 11 report each month)
   - Which category of health facilities has the best reporting? _ANSWER: "Other" health facilities – it is 2 out of 2 for every month _

2. Now look at Table 2 (provided separately), which provides the details of all 22 maternal deaths reported through MDRF in the past 6 months. Using this data, calculate the following:
   - How many of the deaths were considered preventable? ANSWER: 17
   - What proportion of all the deaths was this? ANSWER: 77.3 % (17/22)
   - Give the percentage breakdown (% out of 100) for timing of death

     Antepartum ___ANSWER: 13.6% (3/22)

     Intrapartum __ ANSWER: 13.6% (3/22)

     Postpartum __ ANSWER : 72.7% (16/22)

- What is the commonest cause of death among reported cases? ANSWER: Haemorrhage = 63.6% (14/22)

  What is the second largest? ANSWER: We don't really know – "direct others" has the next highest number, 4 deaths _

- What is the contribution of each delay? i.e. determine the percentage of deaths to which Delay 1, Delay 2, and Delay 3 were listed as contributing factors.

  ANSWER:

  Delay 1= 14 deaths have one of the Delay 1 factors mentioned = 63.6%
  Delay 2= 8 deaths have one of the Delay 2 factors mentioned = 36.3%
  Delay 3= 5 deaths have one of the Delay 3 factors mentioned = 22.7%

- These percentages add up to more than 100%, why is this?

  Answer: For 1 maternal death, it is possible to have more than one delay contributing to it, for example if there was a delay in deciding to seek help (Delay 1) and then a delay at the health facility in receiving the correct treatment (Delay 3)

3. Based on your data interpretation, identify 3 key points to present to the Woreda RRT members for discussion?

   Possible answer include:

   - Reporting is still patchy and not 100% of facilities report every month
   - Most maternal deaths occur during the postpartum period
   - Haemorrhage is the most significant cause of death
   - Delay in seeking care occurs in the majority of maternal deaths
   - Better data are needed from the review process to try to determine the most likely cause of death to avoid such a high number reported in the "other" category.

Module 7: Response

Slide 1

MOVING TO ACTION:
***Identifying* Responses in MPDS**

Slide 2

Learning objectives

By the end of this session, participants will be able to:

- **Understand the central role of *action* in the MPDSR process**
- **Identify actions appropriate to every level of the health system**
- **Use the action tool and support its implementation**
- **List 'evidence based actions'**

Think of <u>avoidable</u> contributing causes and then SMART actions

Slide 3

Taking action to reduce avoidable maternal and perinatal deaths is the reason for conducting MPDSR

Slide 4

What are appropriate actions?

It is preferable to acheive a **few** achievable actions rather than **many** unacheivable ones

Slide 5

What are evidence based actions?

Actions for which there is over whelming evidence that maternal and/or perinatal mortality will be prevented if they are followed.

- **Often refer to clinical actions, based on trials**
- **Individual cases should be assessed to see if "best practices" were carried out or not**
- **If not, appropriate action should be taken to ensure these are implemented to prevent further deaths**
- **Ethiopian Guidelines (FMOH) for A/N and intrapartum care provide details**

Slide 6

General

- **Family planning**
- **ANC and birth preparedness plans**
- **Iron supplements**
- **Good Referrals**
- **Kangaroo care**
- **Health education & promotion**

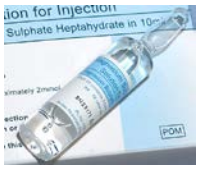
Emphasise **family planning** which has been shown to cut MMR by 25%

None of these are expensive especially quality ANC and kangaroo care

Slide 7

Eclampsia

- Diagnosis and treatment of high blood pressure
- Magnesium Sulphate
- Timely delivery



Timely delivery is the priority in treatment.

Once the placenta is removed the process of preeclampsia or eclampsia will start to reverse

Slide 8

Haemorrhage

- Active management of third stage of labour
- Misoprostil
- Blood transfusion (dependent on environment)

This is the biggest killer in Ethiopia , all health facilities **must have** oxytocics In the 2016 EmONC 17% had experienced in the last 3 months

Slide 9

Sepsis

- Clean delivery
- Antibiotics for prolonged ruptured membranes at term
- Antibiotics for C/S
- Avoid prolonged delivery

A recurring story from the first few reports of MDSR in Ethiopia is of women with long labours and prolonged ruptured membranes not getting **timely triple** antibiotics

Slide 10

Abortion

- Availability of safe abortion
- Availability of post abortion care including safe MVA or D&C and i/v antibiotics

Comprehensive Abortion Care

Death from abortion has decreased in Ethiopia in the last decade but care is still required , especially around timely antibiotics and safe practice

Slide 11

Obstructed labour

- Facility delivery after 12 hours of labour
- Use of partograph
- Availability of C/S

2016 EmONC showed a **good** increase in the use of the partograph but **poor** use of the alert and action lines EmONC.

Slide 12

Prematurity

- Ultrasound use
- Antenatal steroid injections
- Kangaroo mother care
- Immediate and frequent breastfeeding
- Available antibiotics

Antenatal steroids were given in just 5% of premature deliveries according to 2016 EmONC survey

Kangaroo mother care was used in just 46% of premature deliveries in Ethiopia according to EmONC

Slide 13

Non clinical actions

- Not all problems identified during the review and analysis have clinical solutions
- Actions in the community e.g. Changing health-seeking behaviour, addressing transportation, reducing costs of accessing care, also play a role.
- Community participation can help identify barriers and feasible solutions.

Slide 14

Criteria for Actions

Responses to MPDSR data need to meet the following criteria at every level (Be SMART!)

- **Specific:** state exactly what needs to happen
- **Measurable:** it must be possible to check whether the action has been implemented
- **Achievable:** choose responses that you can complete given available resources
- **Realistic:** each action must be feasible in the local context
- **Timely:** set a deadline for completing actions

Slide 15

Prioritising!

It is vital to prioritse actions .

Only one or two of these donkeys will get enough to eat !

Slide 16

How do you select responses?

During the review process:

- "Brainstorm" possible actions
- Identify those most likely to have a large impact
- Check that they meet the SMART criteria
- Try to address all 3 "delays"
- Think of prevention as well as solutions!

If someone has died of haemorrhage and anaemia an appropriate action with more impact will be to ensure all women get iron antenatally than blood transfusion is made available at health centre level.

The action of blood transfusion at health centre level is unachievable .

Slide 17

Timing of Responses

Some actions are immediate but others take time

Slide 18

Immediate Actions

- Almost every maternal or perinatal death can lead to immediate actions to prevent similar deaths from occurring
- There is no need to wait for aggregated data to begin implementing action
- Common examples include
  - *Increasing availability of skilled providers*
  - *Changing the system for access to the drug cupboard*
  - *Training in management of emergencies*
  - *Moving the area for critically ill patients*

Slide 19

Immediate action example

- At a hospital 2 women died within a few weeks following surgery for a ruptured uterus.
- Both women died within a few hours of surgery.
- Review of the recovery area showed staff shortages and lack of guidelines.
- Actions
  - Recovery area placed close to nurses' desk
  - New guidelines and care plans put in place
  - Staffing prioritised for the new recovery area
- All carried out within 5 days of the second death!

Slide 20

Periodic actions

- Periodic reviews may show patterns of problems or "hot spots" with excess maternal deaths
- Findings should lead to addressing problems comprehensively across multiple facilities or communities.
- In areas at higher risk, discussion with local communities are crucial to identify solutions.

Slide 21

Example of periodic actions

- A referral hospital was noted to have a high proportion of newborn deaths.
- An audit of all cases of newborn deaths was conducted.
- Two catchment area woredas were found to be 'hot spots'.
- Actions
  - Discussions with woredas, which found slow referrals and poor transport
  - New ambulances deployed to these woredas and midwives provided with refresher training on partograph use and timely referral

Slide 22

Periodic responses at different levels Community

- Improved community awareness of risk factors and danger signs
- Iron supplementation
- Increasing uptake of ANC and birth preparedness
- Family planning promotion
- Improvement in transport

Slide 23

Periodic Facility level response

- Strengthen referral mechanisms
- Improve 24/7 care by allocating staff across all shifts
- Make a generator available and maintain it
- Provide refresher training and support to staff
- Create a “no blame” culture

Slide 24

Long Term (Regional & National)

- Analysis of aggregated data and recommendations from maternal death reviews
- All regions incorporated in an annual report contributing to a national maternal health plan
- At national level, a longer-term strategic plan (3–5 years) is developed to focus on
  - Key priorities identified across many districts
  - Key geographic areas where more women are dying or the risk of dying is greater
  - Required changes or updates to national policies, laws or guidelines.

Slide 25

Long term response: facility

- Every hospital and HC should summarize maternal & perintal mortality findings annually.
- In larger facilities, findings should contribute to continuous quality improvement plans.

Slide 26

Example of annual response- facility

- Following the publication of a hospital's annual report it was found that the majority of maternal deaths followed PPH
- Actions
  - Introduction of *mandatory* annual training on management of PPH for all doctors and midwives, including team training.
  - System for ordering oxytocic drugs changed to ensure availability at all times

Slide 27

Woreda Long Term Response

Actions at the district level may include health-system strengthening:

- Reduce barriers to good health-seeking
- Check ambulance distribution and maintenance policies
- Equip health facilities with essential supplies

Slide 28

Regional Long Term Response

Actions at the RHB level may include health-system strengthening:

- Fill training gaps
- Identify "hot spots" and assess their resource needs
- Work across the region to address non-health sector determinants e.g. electricity supply/ road infrastructure
- Distribute manuals, guidelines, MPDSR forms
- Mobilise resources for MNCH quality improvement

Slide 29

National Response

EPHI and the FMOH should facilitate the following in response to MPDSR data:

- Monitor weekly surveillance and provide support to strengthen reporting system
- Produce necessary guidelines and protocols
- Avail essential reproductive health commodities
- Produce standards i.e. for referrals
- Facilitate intersectoral collaboration to address common maternal and newborn health problems
- Work for adequate budget allocation for MNCH

Slide 30

Response Accountability

- An individual within the review committee should take responsibility for monitoring agreed actions
- Progress should be reported on at every meeting.
- If actions are not being implemented, a discussion should determine why
- New actions can be taken or efforts intensified to complete previously selected responses
- All actions should link to existing quality improvement initiatives and institutional plans

Slide 31

Regular Feedback

- Feedback helps maintain staff motivation and sense of participation in the review process
- Appropriate and timely feedback is part of the response process
- Feedback should emphasise positive action and good practice in addition to pointing out gaps
- Feedback across the system maintains continuity and the flow of information in both directions
- Feedback can be written as well as verbal – e.g. annual facility reports circulated among staff

Slide 32

Exercise on Responses

Identifying responses

The most important part of the MPDSR review process is to ensure that realistic and effective responses are identified after every death. In the next activities, work in the same groups as you did for the RRT role play.

Practical 10: SMART responses

NOTE: This is a multiprofessional activity

A 25-year old in her second pregnancy attended ANC x 4 at the health post

In her first pregnancy she had a normal delivery at home and the baby is now 2 years of age and doing well

In the second pregnancy at 28 weeks and again at 36 weeks the midwife thought the fundus was big compared with the stated menstrual dates

The woman complained of being very uncomfortable and finding it difficult to sleep

At 36 weeks the midwife at the health centre referred the woman to the local hospital with polyhydramnios for further management

At the local hospital an Ultrasound showed a twin pregnancy with one absent Fetal heart, the presenting/leading twin had an FH of 140bpm

The obstetric resident decided to induce labour with an ARM (breaking the waters) as she was 3 cms dilated

This was carried out in the admission room and the woman was transferred to Labour Ward

On admission to labour ward there was a prolapsed cord and the fetal heart was absent

Both twins were born vaginally 2 hours later, twin 1 was a fresh stillbirth and twin 2 was a macerated stillbirth

Q1. List 3 Avoidable factors

1……..

2……..

3…….

Q2. List the 3 actions you consider to be most appropriate

1……..

2……..

3……..

Q3. Are your actions SMART?

	Action 1	**Action 2**	**Action 3**
Specific			
Measurable			
Achievable			
Realistic			
Timely			

Answers:

Q1. List 3 Avoidable factors

1… ***Delayed referral after the 28 week review***. in this review the problem of large for dates was noted, but no action was taken and the next review was a routine one at 36 weeks. An earlier review eg. at 30 weeks should have been planned to decide if an early referral was indicated. Earlier referral may have prevented the death of twin 2.

2… ***Substandard medical care. Inappropriate decision about the mode of delivery***. The ARM resulted in a prolapsed cord,causing the death of twin 1. The Resident had performed an USS. It should have been possible to assess the risk of prolapsed cord by a combination of clinical examination and USS eg. Assessment of amount of liquor and position of the fetus.. It is likely that polyhydramnios was present +/_ the position of the fetus was suboptimal for vaginal delivery.

3… ***Substandard medical care. Inappropriate venue of ARM***. It was inappropriate to perform an ARM in the admission room where access to C/S would be delayed. If an ARM is performed in this situation, it should be a controlled ARM with Anaesthetic and OR staff immediately available.

Q2. List the 3 actions you consider to be most appropriate

1. *Organise an education meeting about the quality of ANC* for all providers of ANC within 2 weeks. Include the need to identify and refer women with suspected large for dates pregnancies to identify multiple pregnancies and organise appropriate ANC follow up and hospital delivery. Attendance at the meeting should be recorded.

2. ***Organise an education meeting about multiple pregnancy*** for all medical, midwifery and anaesthetic staff to increase awareness of the complications of multiple pregnancy and the associated increase in maternal and perinatal mortality and morbidity. The meeting should take place within 2 weeks. Attendance at the meeting should be recorded.

3. ***Devise guidelines for management of Multiple pregnancy*** at the facility and ***start an annual audit*** of Multiple pregnancies to be conducted by a named Resident. Draft guidelines should be developed by a senior resident and reviewed by the Lead Obstetrician, lead midwife and medical director. The guidelines should include guidance about ANC management, intrapartum and postpartum management of multiple pregnancy . The audit should audit actual management of all cases of multiple pregnancies against the standards set in the guidelines . The guidelines should be completed and signed off at the facility by the Medical Director within 4 weeks and the audit initiated in the following week.

Q3. Are your actions SMART?

	Action 1	Action 2	Action 3
Specific	Yes, the participants are specifically mentioned and specific items to include in the meeting are mentioned.	Yes, the participants and the content of the meeting are specified.	Yes, the content of the guidelines is detailed and a specific individual given responsibility for this task.
Measurable	Yes, a register of attendance confirms not only that the meeting took place, but also what % of relevant staff attended	Yes, a register of attendance confirms not only that the meeting took place,but also what % of relevant staff attended	Yes, the availability of the guidelines and completion of the first audit are both measurable outcomes
Achievable	Yes, all facilities should hold regular education meetings to improve standards of care.	Yes, all facilities should hold regular education meetings to improve standards of care.	This will depend on the capacity of the facility to generate guidelines and adequately distribute them to staff.
Realistic	Yes, all facilities should have the capacity to hold such a meeting	Yes, all facilities should have the capacity to hold such a meeting	As above, also dependent on internet access as there are good examples of international guidelines for multiple pregnancy available at RCOG and WHO which can be adapted for local use.
Timely	Within 2 weeks	Within 2 weeks	The guidelines should be complete within 4 weeks and the audit within a year thereafter.

Action plan template

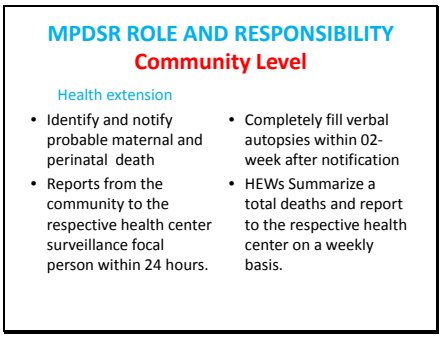
Date of meeting _____Case ID _____ Maternal Death ☐ Maternal Near miss ☐

Date of Death (date of discharge, if near miss): _____ Death preventable Yes ☐ No ☐

Avoidable Factor	Action to be taken as a result of the case	Person responsible for the action	Timeline	Date Action completed	Remark

Module 8 MPDSR Role and Responsibility

Slide 1



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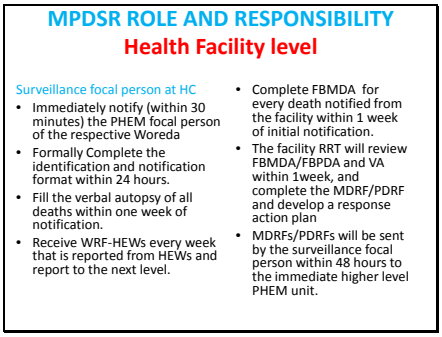

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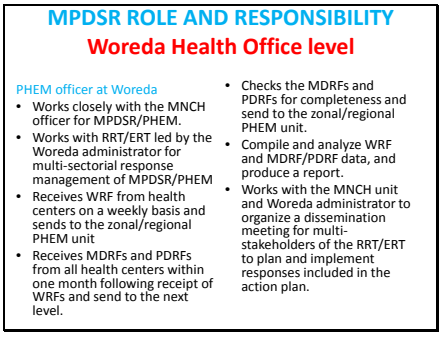


Slide 4

MPDSR ROLE AND RESPONSIBILITY

Zonal Health Office level (where applicable)

PHEM officer (zonal)

- works closely with the PHEM and MNCH officers of the RHB and Woreda health offices for MPDSR/PHEM.
- Receives WRF from Woreda health offices and hospitals on a weekly basis
- Receives MDRFs/PDRFs from all Woreda health offices and hospitals within one month of receiving WRFs of deaths.
- Checks for completeness of the MDRFs/PDRFs and send the the next level.

Slide 5

MPDSR ROLE AND RESPONSIBILITY

Regional Health Bureau level

RHB PHEM unit

- works closely with the MNCH unit of the region for MDSR/PHEM.
- Leads the Regional MPDSR/PHEM TWG in close collaboration with the MNCH unit. For response management, the regional multi-sectorial MPDSR/PHEM response.
- Receives WRF from Woreda health offices/zonal health offices and hospitals on a weekly basis and to the National PHEM unit.
- Receives MDRFs/PDRFs from all Woreda health offices/zonal health offices and hospitals within one month of receipt of WFRs of deaths.
- Checks MDRF/PDRF completeness and sends the MDRF/PDRF copies to the national PHEM unit, keeping one copy in the regional PHEM unit.
- Compile and analyze WRF and MDRF/PDRF data, and produce a report.
- Collaborates with the MNCH unit and regional administrator to organize a dissemination meeting for regional PHEM multi-sectorial stakeholders and to plan and implement responses identified in the action plans of the MPDSR TWG.
- Develops a report on monthly, quarterly, semiannual and annual plans of the regional MNCH and other units of RHB.

Slide 6

MPDSR ROLE AND RESPONSIBILITY

Central/National level

PHEM unit within EPHI

- works closely with the MNCH unit of the FMOH of Ethiopia on MPDSR/PHEM.
- Leads the MPDSR/PHEM TWG in collaboration with the MNCH unit for response management at the national level.
- Receives WRFs from regional PHEM units on a weekly basis.
- Receives MDRFs from all regional PHEM units within one month of WRF reports of the deaths.
- The national PHEM unit checks MDRF completeness.
- Compile and analyze the WRF and MDRF data and produce a report and development of an action plan by MPDSR TWG.
- Collaborates with the MNCH unit and FMOH higher officials to organize a dissemination meeting for national PHEM multi-sectorial stakeholders to plan and implement responses included in MPDSR/TWG action plans.
- Develops a monthly, quarterly, semiannual and annual plans of the national MNCH unit and other units of FMOH.

Module 9: MPDSR Monitoring and Evaluation

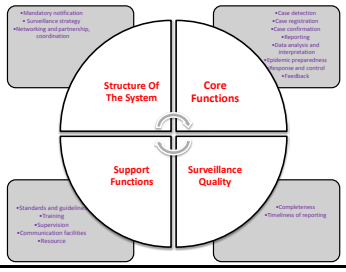
Slide 1

MPDSR MONITORING AND EVALUATION

- The purpose of M&E evaluation framework is to monitor progress of the MPDSR system.
- The framework also assesses the relevance, effectiveness and impact of activities in the light of the objectives the surveillance and response system.
- Specific indicators are identified based on the WHO surveillance M&E guidance .
- These are illustrated as components of the M&E framework in the MPDSR technical guide.

Slide 2

Components of M&E of the MPDSR System



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Components of the System:

Structure of the System:

- The structure of MPDSR system is defined by mandatory notification of maternal and perinatal deaths, the surveillance strategy for MPDSR, and networking and partnership as the elements for progress measurement using specific indicators listed under each element.

Core Functions of the System:

- The core functions measure the process and outputs of the system. It includes elements such as death detection, death registration, death confirmation, reporting, data analysis and interpretation, epidemic preparedness, response and control, and feedback.

Slide 4

Components of the System

Support Functions of the System:

- Support functions of the system facilitate implementation of the core functions and include standards and guidelines, training, supervision, communication, and resources as its elements.

Quality of the System:

- The quality of the MPDSR system is defined by attributes such as completeness and timeliness of reporting of the system.

Slide 5

M&E Approach and Method:

- The system implements robust supervision, review meetings, and regular reporting and assessment of performance as standard M&E approaches. In addition to data obtained through the routine surveillance/MPDSR reports, the system will use such techniques as key informant interviews and review of documents to gather information.
- This M&E framework uses a matrix of core and optional indicators categorized by level of their importance. These indicators are also categorized by type, e.g. input, process, output, outcome and impact. The matrix also provides definitions for the indicators, frequency of data collection, data sources and collection methods. Targets have been set for a set of core indicators to monitor key achievements over time.

(Refer the MPDSR Technical Guidance)