Understanding causes and determinants of maternal and perinatal deaths
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”
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
## Maternal Death

<table>
<thead>
<tr>
<th>Causes</th>
<th>Determinants</th>
</tr>
</thead>
<tbody>
<tr>
<td>The immediate clinical or medical <em>reason</em> for the woman’s death, classified as a direct or indirect maternal death</td>
<td>The “causes of the causes” or factors that increased the woman’s risk of dying from a specific cause</td>
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</tbody>
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## Review of Classifications

### Direct Causes (≈75%)

Obstetric causes during pregnancy, childbirth and the post-partum period, such as:

- Haemorrhage
- Hypertensive disorders
- Infection
- Obstructed labour
- Abortion

### Indirect Causes (≈ 25%)

Medical conditions that can be aggravated through pregnancy, such as:

- HIV (including TB and pneumonia)
- Malaria
- Anaemia
- Heart conditions

Social, cultural & environmental factors across a woman’s life course affect risk for direct & indirect causes of death
Perinatal Death

Causes

The immediate clinical or medical *reason* for the fetal or neonatal death classified as a

- Ante partum,
- Intra partum,
- post partum

Determinants

The “causes of the causes” or factors that increased the fetal or neonatal death risk of dying from a specific cause
## Review of Classifications

### Causes of still Birth

**Maternal cause**
- Obstructed labour
- Ruptured Uterus
- Preeclampsia/ Eclampsia
- APH (Placenta previa or abruption)
- Obstetric Sepsis and
- Others

**Fetal causes**
- Intrapartum Asphyxia
- Cord Accident
- Congenital Anomalies and
- Other

### Causes of Neonatal Deaths

- Complications Prematurity
- Asphyxia
- Sepsis/pneumonia/meningitis
- Lethal congenital anomaly and
- Other

**Social, cultural & environmental factors across the fetal and neonate life course** affect risk for fetal and neonatal cause of death
Causes of Neonatal Death

**Ethiopia**

- Birth asphyxia & birth trauma, 34%
- Prematurity, 25%
- Sepsis and other infectious conditions, 18%
- Other conditions, 6%
- Pneumonia, 6%
- Congenital anomalies, 10%
- Tetanus, 2%
- Diarrheal diseases, 1%
- Injuries, 1%

**Global**

- Neonatal deaths (< 1 month)
  - Pneumonia 13%
  - Meningitis 2.6%
  - Perinatal 3.7%
  - Other conditions 11.4%
  - Malaria 7.3%
  - Other causes 11.4%
  - Injury 5.1%
  - Diarrhoea 9.2%
  - Other 8%
  - Thrombosis 2%

More than 80% of newborn deaths are in small babies (preterm or small for gestational age) in the highest burden settings.


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