

# Maternal Mortality

## Scope of the problem

- The global maternal mortality rate in 2015 was 300/100 000 live births. This means that every day, approximately 830 women die from causes related to pregnancy and childbirth
- About 99 % of the deaths are in developing countries
- Maternal mortality ratio in Egypt in 2015 is 33/100 000 live birth

## Definitions

- Maternal death: Death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from coincidental causes
- Maternal mortality **rate**: the number of maternal deaths per 100 000 **women** of reproductive age
- Maternal mortality **ratio**: the number of maternal deaths per 100 000 **live births**

## Causes of maternal mortality

- I. **Direct causes**: diseases in which pregnancy is the main or the only cause
- II. **Indirect causes**: diseases in which pregnancy is aggravating factor
- III. **Coincidental causes**: causes unrelated to pregnancy

Table 5-7: causes of maternal mortality

Direct causes		Indirect causes		Coincidental causes	
1	Thromboembolism	1	Cardiac disease	1	Road traffic
2	Pre-eclampsia/eclampsia	2	Psychiatric disease		accident
3	Haemorrhage: APH, PPH	3	Neurologic disease:	2	Murder
4	Puerperal sepsis		stroke, Epilepsy	3	Addiction
5	Amniotic fluid embolism	4	Cancer	4	Burns
6	Early pregnancy deaths	5	Infection: HIV		
7	Anaesthetic				

## Risk factors

1. Substandard care
2. Poor or no antenatal care
3. Lack of proper medical knowledge for the lay person
4. Lack of facilities including referral system, transportation, well-equipped hospitals, blood transfusion
5. Lack of ICU bed
6. Poor nutrition: "anemia prepare women for death"
7. Obesity
8. Increased rate of caesarean section
9. Grand-multiparty > 5

## 10. Extremes of maternal age < 15 & > 40

### Prevention

#### I. General strategies:

- Health care **providers**: Proper education & training
  - Undergraduate courses must stress on prevention & treatment of causes
  - Structured training for postgraduate
  - Continuous medical education for practicing doctors
- **Client**: Health education for women
- Health care **system**: improve ambulance service, primary care centers, Blood banks, and Hospital service

#### II. Specific strategies:

##### Haemorrhage:

- Correction of anemia
- Active management of second stage: routine use of oxytocin
- Early detection of PPH
- Early call for help: involvement of seniors
- Proper resuscitation
- Early resort to hysterectomy in PPH not responding to management

##### Preeclampsia/Eclampsia

- Antenatal care: measure BP for all women
- Calcium & Aspirin for prevention
- Early identification of indication for TOP
- Admission for women for investigation & treatment
- ICU management for severe cases

##### Puerperal Sepsis

- Antibiotic prophylaxis for all women during delivery
- Decrease the number of vaginal examination during labour
- PV is contraindicated in presence of PROM
- Early detection of Puerperal sepsis
- Hospitalization for all cases of Puerperal sepsis

##### Venous thrombo-embolism

- Assessment of risk for all pregnant women
- Thrombo-prophylaxis
- Early identification of deep venous thrombosis (DVT)
- Admission for women with suspected pulmonary embolism (PE)