



Maternal Mortality

Definition

A maternal death is defined by the World Health Organization as:

The death of a woman while pregnant or within & 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

Causes of MMR

Maternal Mortality

Direct causes:

Hemorrhage 29%

Sepsis 16%

Abortion 9%

Hypertensive disorders-8%

Obstructed labor 10%

Others- 8%

Indirect non-obstetric causes: (20%)

Anemia is the leading indirect cause which constitutes 19%.

Associated cardiac, renal, hepatic, metabolic or infectious diseases such as malaria and malignancy.

Direct obstetric causes classified as:

Antenatal such as; toxemia, ante natal hemorrhage, Placenta previa etc.

Intra-natal: such as rupture uterus, prolonged labor, obstructed labor, amniotic fluid embolism and complications of anesthesia

Post-partum: sepsis, hemorrhage and thrombophlebitis

Social causes (predisposing. factors):

Age at child birth

Parity

Family size and too close pregnancies

Poverty

literacy

Shortage of health manpower

House delivery by untrained staff

Poor communications and transport

facilities

social customs

MEASUREMENT OF MATERNAL MORTALITY:

There are three main measures of maternal mortality

- © maternal mortality ratio
- © maternal mortality rate
- © lifetime risk of maternal death

Impact of maternal deaths :

Children who lost their mothers are more likely to die within two years of maternal death ☹

10 times the chance of death for the neonate ☹

7 times the chance of death for infants older than one month ☹

3 times the chance of death for children 1 to 5 years ☹

Enrolment in school for younger children is delayed and older children often leave school to support their family.

Prevention of maternal mortality

The important steps of prevention are highlighted:

1. Early registration of pregnancy.
2. Antenatal visits: minimum of 3 antenatal checkups, the first visit during 20 weeks, 2nd visit during 32 weeks, and the 3rd visit during 36 weeks.
3. Dietary supplementation: extra calories need to be supplemented during pregnancy.
4. Anemia correction: iron and folic acid to be supplemented to pregnant women for prophylaxis, correction of anemia, depends on the level of Hb.

6. Prevention of complications: high risk approach to be adopted. Early detection of high risk cases, timely referral and intervention.

7. Treat underlying medical conditions such as hypertension, DM, TB, etc.

8. Prevention of tetanus: injection of tetanus toxoid 2 doses to non-immunized mothers and one dose to previously immunized mothers.

9. Clean delivery practice.

10. Training local staff and female health workers for early detection of complications and identification of high risk approach and proper re-referring to the hospitals.

11. Institutional (hospital deliveries) at least for high risk cases.

12. Promotion of family planning.

13. Report, register each maternal death and carrying out proper investigations for maternal death.

Summary :

Steps to reduce Maternal Mortality

1. Correction of Anemia
2. Treatment of pre-existing diseases
3. Treatment of PIH Eclampsia
4. Treatment of Diabetics
5. Thrombo prophylaxis
6. Management of Obstetric Hemorrhage
7. Management of Sepsis
8. Emergency Obstetric Care
9. Treatment of Amniotic fluid Embolism
10. Treatment of pregnancy related serious diseases

Definitions of Maternal Mortality Ratio and Rate

$$\text{MM Ratio} = \frac{\text{No. of MDs in 12 months} \times 100,000}{\text{No. of LBs in the same 12 months}}$$

$$\text{MM Rate} = \frac{\text{No. of MDs in 12 months} \times 100,000}{\text{Average No. of women in the reproductive age in the same 12 months}}$$

MDs = Maternal Deaths

LBs = Live Births