



Maternal and child health(MCH)



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What is Maternal and Child Health (MCH)??



Maternal and Child Health (MCH) is a comprehensive package of health care services that promotes the well-being of mothers (15–49 years) and children (0–5 years), addressing their preventive, curative, and rehabilitative needs before, during, and after childbirth.

The dramatic improvement in maternal and child health is one of the most significant achievements of 20th-century public health, reflecting advances in care for mothers and young children.

Key Objectives of MCH:



- Provide **basic maternal and child health care** for all.
- Promote and protect maternal and child health through *antenatal care, fertility regulation, and postnatal support*.
- Reduce *maternal and child mortality and morbidity*.
- Prevent malnutrition.
- To reduce the incidence and prevalence of sexually transmitted infections (STIs), in order to reduce the transmission of HIV infection and reduce cervical cancer.

Key Objectives of MCH:



- **Regulate fertility:** Reduce unwanted pregnancies and promote healthy childbirth through sex education and effective contraceptive use.
- Ensure **the birth of a healthy child**
- Promote **healthy growth and development** of children.
- **Female Genital Mutilation (FGM):** Reduce FGM and provide care for affected females.
- **Reduce domestic and sexual violence** and ensure proper care for victims.

Why Are Special Services Needed for Women and Children?

- **Critical Population:** Mothers and children make up over two-thirds of the world's population, making their health crucial for global well-being.
- **High-Risk Groups:** Maternal, perinatal conditions, and childhood diseases significantly contribute to the global disease burden.
- **Interrelated Health:** The health of mothers and children is closely connected. Problems in one often affect the other, requiring integrated care.
- **Opportunities for Prevention:** Special interventions such as antenatal care, nutritional supplements during pregnancy, and vaccinations protect both mother and child from disease and complications.



Every 7 seconds,
a woman or newborn dies, or a baby is lost to stillbirth

Most of these deaths are preventable with quality healthcare before, during and after childbirth

World Health Organization 75 HEALTH FOR ALL

Why Are Special Services Needed for Women and Children?

- **Early Diagnosis & Care:** Early detection and treatment of complications in mothers and children are essential to preventing mortality and serious health issues.
- **Skilled Care at Delivery:** Having skilled healthcare professionals during childbirth ensures the safety of both mother and child, particularly in high-risk situations.
- **Operational Convenience:** Family health services that integrate care for both mother and child ensure continuous and comprehensive support from pregnancy through childhood.
- **Human Rights:** Improving maternal, reproductive, and child health is part of the fundamental human right to health, and progress depends on improvements both inside (e.g., skilled care, immunization) and outside (e.g., education, poverty reduction, participation in workforce, Maternity leave) the healthcare sector.

Health Status of Mother and Child are Prime Indicator of Assessing Health Situation of a Country

Inequalities across borders and within countries threaten newborn health



The highest rates of maternal and newborn deaths and stillbirths are found in Africa and Asia



Global Burden of Maternal and Child Health Issues:

- In developing countries, complications during pregnancy and childbirth are the leading causes of death among women of reproductive age.
- Over 40% of pregnancies in developing countries result in complications, illnesses, or disabilities for mothers or children.
- Around 80% of maternal deaths are due to obstetric complications.



From MDGs to SDGs



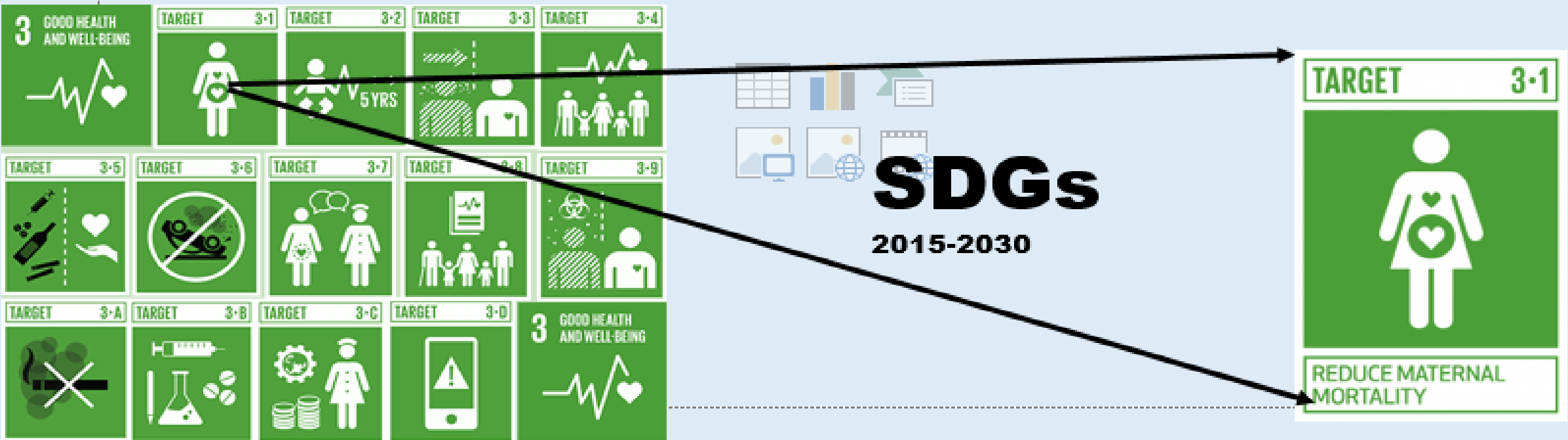
MDGs

2000-2015



- **Target 5.A:** Reduce the maternal mortality ratio by 75% between 1990 and 2015.
- **Target 5.B:** Achieve universal access to reproductive health by 2015.

The global effort to reduce maternal mortality continues with SDG 3.1.



Target 3.1 Reduce maternal mortality to less than 70 per 100,000 live births by 2030.



Components of MCH
services :

- **Maternal Health**
- **Child Health**
- **Family Planning**

MATERNAL HEALTH:




Maternal health care includes care for women during pregnancy, childbirth, and the postpartum period. It also covers treatment for childless couples.

What is a maternal death?

- A maternal death is the 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, regardless of the pregnancy's site or duration.
- Globally, an estimated **500,000 women** die each year due to pregnancy-related causes.
- Maternal deaths are categorized as either **direct or indirect** obstetric deaths.

Direct Obstetric Deaths:

- Direct obstetric deaths result from complications during pregnancy, labor, or the postpartum period.
- There *are five major causes* of maternal mortality, especially in the developing countries. These are :

1. • Haemorrhage (Usually occurring postpartum) 
2. • Infection (Sepsis)
3. • Hypertensive disorders of pregnancy (Eclampsia)
4. • Obstructed labour
5. • Unsafe Induced Abortion

as well as interventions, omissions, incorrect treatment, or events resulting from any of these.

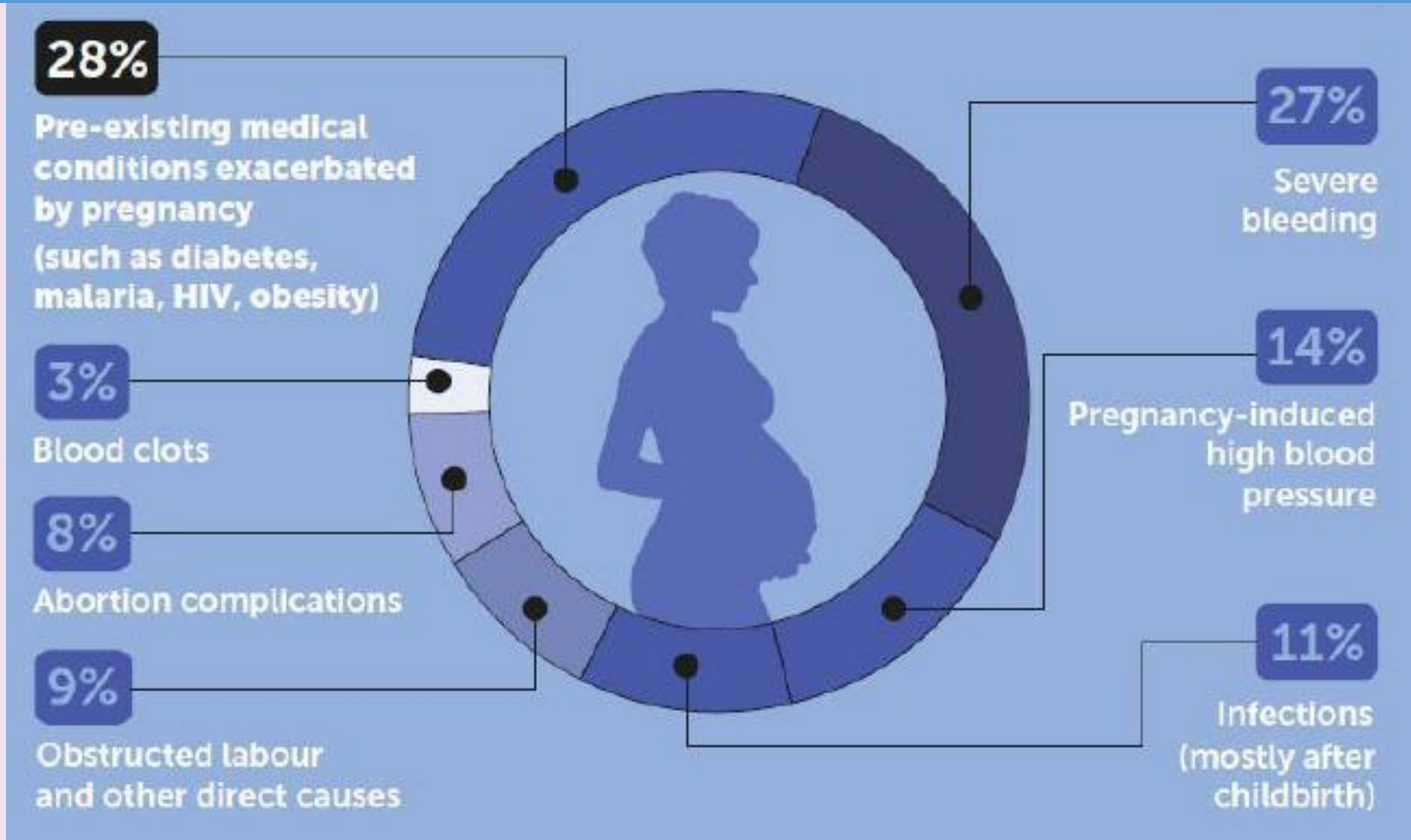


Indirect obstetric deaths:

Indirect obstetric deaths result from pre-existing diseases or diseases arising during pregnancy that are **not directly caused by pregnancy** but are aggravated by the physiological effects of pregnancy. Common examples include malaria, anemia, HIV/AIDS, and cardiovascular disease.



Main Causes of Global Maternal Deaths



Risk factors for Maternal mortality and morbidity:

Biological Factors:

Maternal age: ≤ 19 years or ≥ 35 years

Height: < 145 cm (small or inadequate pelvis)

BMI: > 30 (obesity) or < 18 (underweight)

Parity: > 4

Multiple gestation

Birth spacing: < 2 years

Health and Medical History:

Previous complications: history of miscarriages, abortions, ante-partum or post-partum hemorrhages, delivery of low-birth-weight infants

Malnutrition and anemia

Chronic health conditions: cardiovascular disease, obesity, diabetes, UTI, epilepsy, asthma, drug use, or a compromised immune system

Socioeconomic and Lifestyle Factors:

Lower education levels and socioeconomic status

Lifestyle factors: current or former smoker

Other social causes: intimate violence, social roles, etc

Measurement of Maternal Mortality

1) Maternal mortality ratio:

The annual number of deaths to women due to pregnancy and childbirth related complications per 100 000 live births =

$$\frac{\text{Total maternal deaths occurring in one year}}{\text{Number of live births occurring in same year}} \times 100\,000$$

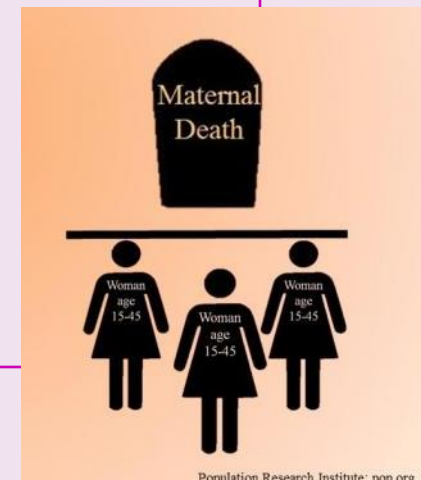


2) Maternal mortality rate:

The number of maternal deaths per 100,000 women of the reproductive age (15- 49 years)

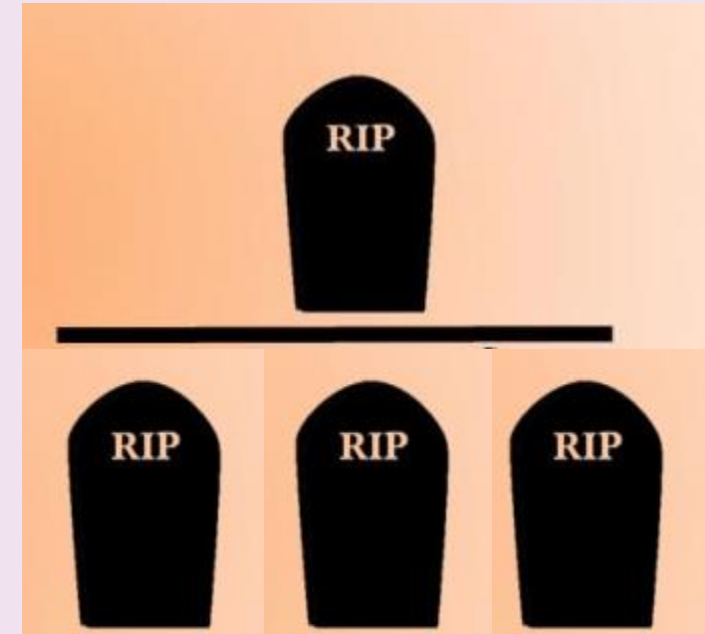
$$\frac{\text{Total maternal deaths occurring in one year}}{\text{Number of women 15-49 y in same year}} \times 100\,000$$

High fertility rates increase the risk that a woman will die from maternal causes



3) Proportionate mortality rate:

Proportionate mortality rate (PMR), also known as the cause-specific mortality rate, is a measure used to describe the proportion of deaths in a specific population attributed to a particular cause or condition over a defined period. It is typically expressed as a percentage.



$$\text{PMR} = \left(\frac{\text{Maternal deaths from a specific cause in a period}}{\text{Deaths of women of reproductive age in the same period}} \right) \times 100$$

Example: If 50 maternal deaths are due to hemorrhage, and there are 500 total deaths among women of reproductive age in that period:

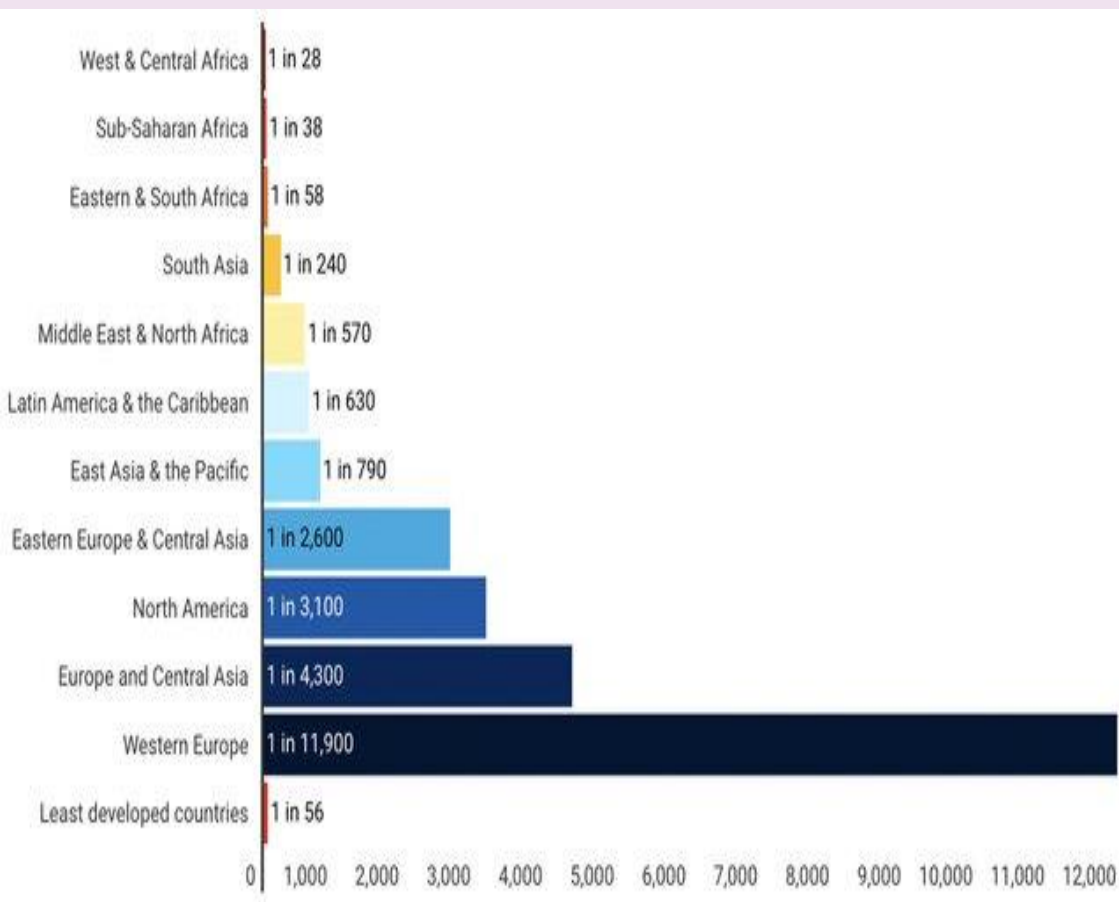
$$\text{PMR} = (50/500) \times 100 = 10\%$$

4) Peri-natal mortality rate

- The number of stillbirths and early neonatal deaths (within the first 7 days of life) per 1,000 total births in a specific year and location.
- **Still birth** is complete expulsion of a product of conception after the age of fetal viability (20-28 weeks gestation) that shows no signs of life (no breathing, heartbeats, or voluntary muscle movement).

$$\text{Peri-natal mortality rate} = \frac{\text{No. of stillbirths} + \text{early neonatal deaths in a certain year and location}}{\text{Total births (still and live births) in the same year and location}} \times 1000$$

- **Example:** If there were 10 stillbirths and 5 early neonatal deaths among 5,000 births in one year: Peri-natal mortality rate = $10 + 5 / 5000 \times 1000 = 3$ deaths per 1000 births
- ✓ Reflects the quality of prenatal care and healthcare access
- ✓ Measures the health status of pregnant women and newborns
- ✓ Assesses the effectiveness of interventions to reduce stillbirths and neonatal deaths



• 5. Lifetime risk of maternal death

- Lifetime risk of maternal death considers over a woman's reproductive years. both the probability of becoming pregnant and the risk of dying from pregnancy-related causes
- **1 in X. Example: The lifetime risk of maternal death ranges from 1 in 5,400 in high income countries to 1 in 45 in low income countries**
- Helps identify regions with high maternal mortality risk.
- It takes into account both the maternal mortality ratio and the total fertility rate (average number of births per woman during her reproductive years under current age-specific fertility rates).
- In high-fertility settings, women face the risk of maternal death multiple times, increasing their lifetime risk. In low-fertility settings, the risk is lower due to fewer pregnancies.

How Do These Women Die?

Three Delays Model

• **Delay in decision to seek care:**

- Women's low social status.
- Poor understanding of complications and risk factors in pregnancy and when to seek medical help
- Negative past experiences with health care
- Cultural or familial acceptance of maternal risks.
- Financial barriers

○ **Delay in reaching care:**

- Distance to health centres and hospitals
- Lack of affordable transportation.
- Poor roads and infrastructure
- Geographic barriers (mountains, rivers)

○ **Delay in receiving care:**

- Poor facilities and lack of medical supplies
- Understaffed and untrained health workers
- Inadequate referral systems



Components of Maternal care

Antenatal care
services
(ANC)



(Natal) Delivery
care services



Postnatal care
services
(PNC)





• Thank you