



الكلية : الطب

القسم او الفرع : طب الاسرة والمجتمع

المرحلة: الرابعة

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اسم المادة بالغة العربية : صحة الطفل

اسم المادة باللغة الإنكليزية : **Child Health**

اسم المحاضرة السادسة باللغة العربية: مؤشرات الصحة عند الاطفال

اسم المحاضرة السادسة باللغة الإنكليزية: **Child Health Indicators**

Child Health Indicators

Health is difficult to measure directly, therefore, we use **indirect indicators**, mainly: **Morbidity rates** (disease occurrence), and **Mortality rates** (death occurrence).

General formula for Rate:

Rate = $\frac{\text{Number of events in a defined period}}{\text{Population at risk during the same period}} \times \text{unit population (e.g., 1000, 10,000)}$

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Mortality Rates in Children

1. Infant Mortality Rate

- **Definition:** Number of deaths among infants (<1 year) per **1000 live births** in the same period (usually a year).
- **Importance:** Sensitive indicator of socio-economic development and health services.

Subdivisions of Deaths in Infancy

- **Stillbirth:** Death before birth (≥ 22 weeks).
- **Neonatal Deaths**
 - *Early neonatal:* 0–7 days.
 - *Late neonatal:* 8–28 days.
- **Post-neonatal Deaths:** 29 days – 1 year.
- **Infant Deaths:** Total under 1 year.
- **Perinatal Deaths:** Stillbirth + early neonatal deaths.

Causes of Infant Mortality

A. Neonatal (Endogenous causes – pregnancy & labor factors):

1. Low birth weight & prematurity.
2. Birth injury.
3. Congenital abnormalities.
4. Neonatal sepsis.
5. Neonatal tetanus (still seen in some developing countries).

B. Post-neonatal (Exogenous causes – environment & infections):

- Diarrheal diseases.
- Respiratory infections.
- Malnutrition.
- Accidents.

2. Perinatal Mortality Rate

- **Definition:** Stillbirths + deaths in the first week of life.
- **Uses:**
 1. Sensitive indicator of antenatal, intranatal, and postnatal services.
 2. Allows comparison between different localities/countries.

Causes of Perinatal Mortality

- **Antenatal causes:** Maternal diseases (hypertension, diabetes, Rh iso-immunization), pelvic/uterine anomalies, malnutrition.
- **Intranatal causes:** Birth asphyxia, prolonged labor, birth trauma.
- **Postnatal causes:** Respiratory distress syndrome, hypothermia, sepsis.
- **Other factors:** High maternal age, poor spacing, multiple pregnancies, maternal smoking, lack of family planning.

3. Childhood Mortality

- **Definition:** Mortality rates among children (beyond infancy).
- **Age-Specific Death Rate:**

Deaths in a specific age group (per year) / Mid-year population of same group $\times 10,000$

$$\frac{\text{Deaths in a specific age group (per year)}}{\text{Mid-year population of same group}} \times 10,000$$

Leading Causes

- Diarrheal diseases.
- Acute respiratory infections.
- Malnutrition.
- Accidents & injuries.
- Cancers (leukemias, increasingly important in developed countries).

Prevention Strategies

1. Infant Mortality

1. Adequate antenatal care (risk identification, management).
2. Hospital deliveries & training of traditional birth attendants.
3. Improved obstetric & neonatal care.
4. Early & exclusive breastfeeding (first 6 months).
5. Early detection & treatment of infections.
6. Management of malnutrition.
7. Better sanitation & living conditions.
8. Maternal education.
9. Family planning.
10. Community health education.

2. Perinatal Mortality

- **Antenatal:** Registration, immunization, nutrition, risk screening, referral.
- **Intranatal:** Skilled obstetric care, aseptic delivery, trained attendants.
- **Postnatal:** Neonatal resuscitation, family planning, adequate spacing.

3. Childhood Mortality

- Expansion of immunization.
- Better nutrition programs.
- Sanitation, clean water, safe housing.
- Injury prevention programs.
- Early detection of childhood cancers and chronic diseases.