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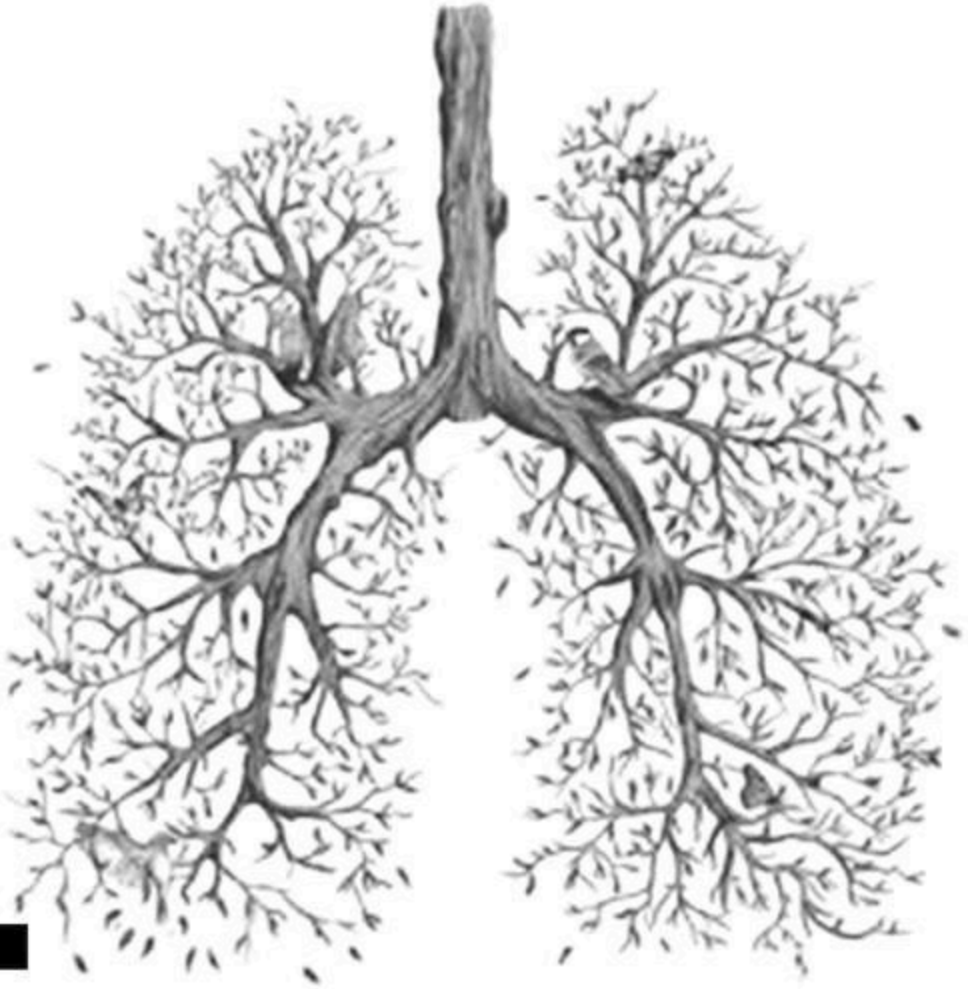
Community Medicine



Slides ■
Sheet □

Lecture # 4 Doctor: Samr Al sharif
Date:

Child Morbidity

Acute Respiratory Infection

- Acute respiratory infections cause four and a half million deaths among children every year, the overwhelming majority occurring in developing countries.

- Pneumonia unassociated with measles causes 70% of these deaths; post-measles pneumonia, 15%; pertussis, 10%; and bronchiolitis and croup syndromes, 5%. Both bacterial and viral pathogens are responsible for these deaths.

Bacterial Causes

- The most important bacterial agents are:
- a-Streptococcus pneumoniae
- b-Haemophilus influenzae
- c-Staphylococcus aureus.

Viral Causes

a-Respiratory syncytial virus, 15%-20%;

- b-Parainfluenza viruses, 7%-10%;
- c- Influenza A and B viruses and Adenovirus, 2%-4%.
- Mixed viral and bacterial infections occur frequently.

Risk Factors

- Risk factors that increase the incidence and severity of lower respiratory infection in developing countries include:
- A- large family size,
- B-Lateness in the birth order,
- C- Crowding,

Risk Factors

- D-low birth weight,
- E- malnutrition,
- F-vitamin A deficiency,
- G-lack of breast feeding,
- H- pollution,
- E- young age.

- Effective interventions for prevention and medical case management are urgently needed to save the lives of many children predisposed to severe disease.

Diarrhea

- Diarrheal diseases are one of the leading causes of childhood morbidity and mortality in developing countries. An estimated 1,000 million episodes occur each year in children under 5 years of age. Diarrhea causes an estimated 5 million deaths in children under 5 years of age per year.

- About 80% of these deaths occur in children in the first 2 years of life. Approximately one third of deaths among children under five are caused by diarrhea.

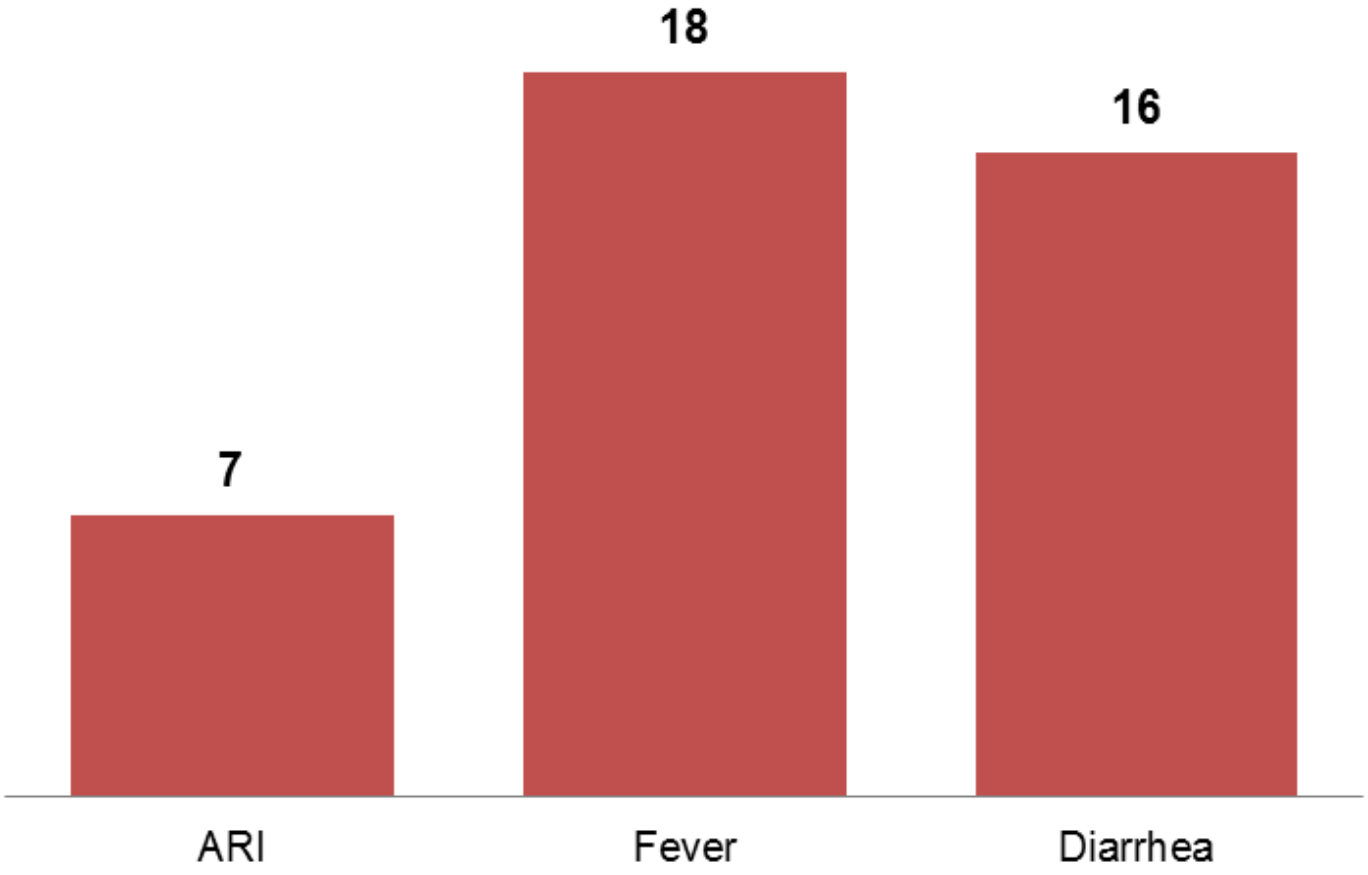
- Most diarrheal illnesses are acute, usually lasting no more than 3-5 days and are secondary to infectious causes (bacterial, viral, and parasitic). Infectious agents that cause diarrheal disease are usually spread by the fecal-oral route, specifically by a) ingestion of contaminated food or water
- b) contact with contaminated hands.

Causes

- The following are the commonest etiologic agents of diarrhea for all ages in decreasing order of prevalence obtained from pooled data worldwide:
- Rotavirus, Enterotoxigenic Escherichia coli (ETEC) Bacteria , shigella, campylobacter, *Vibrio cholerae*, and non-Typhoidal Salmonella.

- Noninfectious causes of diarrhea include drugs, surgical conditions, systemic infections and food intolerance.

Prevalence of childhood illnesses, 2012
(Percentage of children under five with illness in the 2 weeks before the survey)



Child Mortality

- Worldwide about 14 million children under the age of 5 will die each year and Majority of these deaths occur in developing countries.
- In developed countries, deaths under the age of five constitute only a very small proportion of all deaths, while in many developing countries deaths of young children constitute a large share of total deaths.
- About 40% of all deaths in developing countries are deaths of children under age 5 and nearly 30% of all deaths in the world are deaths of young children in developing countries.

- The difference in deaths of young children in developed and developing countries shows that the majority of causes of CHM are preventable. Accordingly the major causes of death are infectious, parasitic, respiratory and diarrheal diseases which
- are easily preventable in the developed world.

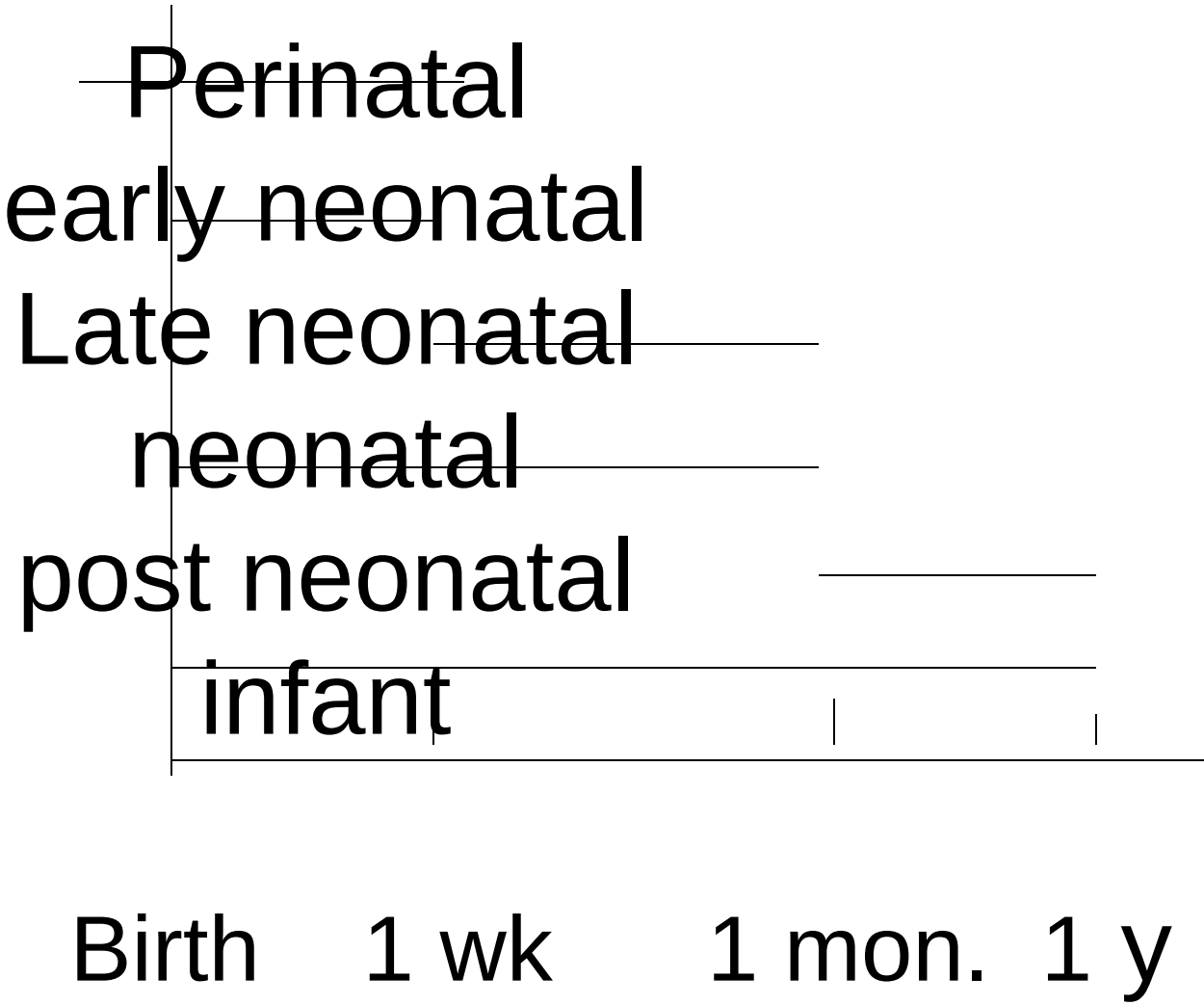
- For example, deaths from many of the most common childhood diseases are preventable through immunization. Research in many countries has consistently indicated a strong inverse relationship between female education and child mortality

The five measures of infant and child mortality

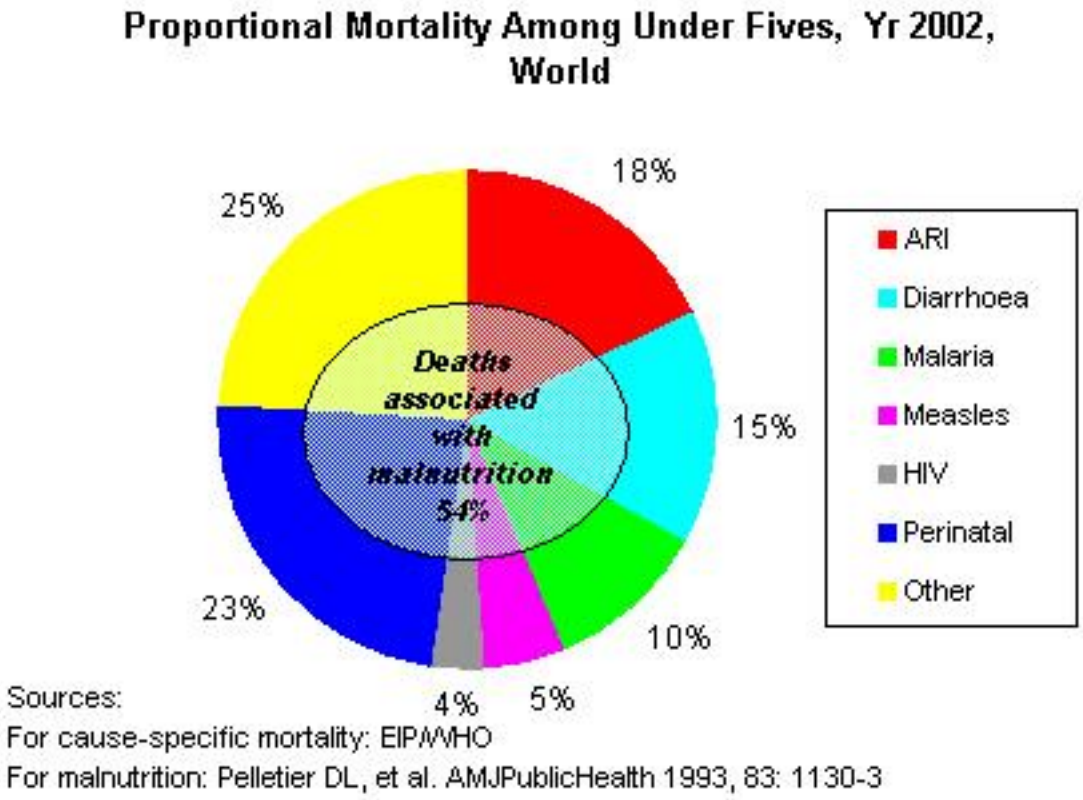
- **Neonatal mortality,** the probability of dying in the first month of life
- **Postneonatal mortality**, the probability of dying after the first month of life but before the first birthday (the difference between infant and neonatal mortality rates)
- **Infant mortality** (1q0), the probability of dying before the first birthday

- **Child mortality** (4q1), the probability of dying between the first and fifth birthday

- **Under-five mortality** (5q0), the probability of dying before the fifth birthday.
- All of these rates are calculated per 1,000 live births, except for child mortality which is calculated per 1,000 children surviving to age one.


Perinatal
early neonatal
Late neonatal
neonatal
post neonatal
infant
Birth
1 wk
1 mon.
1 y

Proportional Mortality among<5 yrs. WHO Report 2002/World Wide



Causes of Perinatal mortality include:

- • Low birth weight
- • Cord prolapse
- • Asphyxia
- • Birth injury
- • Congenital anomalies
- • Sepsis
- • Neonatal tetanus
- • Complicated labors (prolonged, obstructed, breech, transverse)
- • Mismanagement of labor

- • Anoxia due to problems such as antepartum hemorrhage
- • Maternal age
- • Maternal anaemia
- • Maternal health problems like, renal problem, diabetes, hypertensive
- disorders
- • Maternal infections
- • Parity
- • Placental insufficiency
- • Ruptured uterus
- • Mother’s utilization of health services
- • Maternal education

Infant Mortality in Jordan

- The infant mortality rate also declined from 82 per thousand in 1976 to 22 in 2002, and reached 19 per thousand in 2007, decreasing by 14 percent compared to 2002.

- Drops in mortality, particularly infant mortality, have translated into an increased life expectancy for the population: in 2002, life expectancy in Jordan was 68 years for males and 71 years for females, increasing to 72 years for males and 74 years for females in 2007.

Causes of Infant and Child Mortality in Jordan

The 3 leading causes of infant death were

1-Conditions originating in the perinatal period.

2-Congenital malformations.

3- Diseases of the respiratory system.

- The leading cause of death in the neonatal period was conditions originating in the perinatal period, while in the post-neonatal period, it was congenital malformations.
- Prematurity was the leading contributory cause of infant death.

CONCLUSION:

- This study showed that causes of infant mortality in Jordan tend to be similar to those prevailing in developed countries.
- Khoury SA, Mas'ad DF.
- Department of Family and Community Medicine, University of Jordan, Amman, Jordan. Saudi Med J. 2002 Apr;23(4):432-5.

Prematurely and low birth (differentiate)
Higher Morbidity and Mortality rates

-

1- Respiratory distress syndrome
2- Birth Trauma
3- Hemorrhages.
4-Feeding problems
5-Infections
6-Failure to thrive

Figure 8.1 Trends in Infant and Child Mortality by Five-year Periods

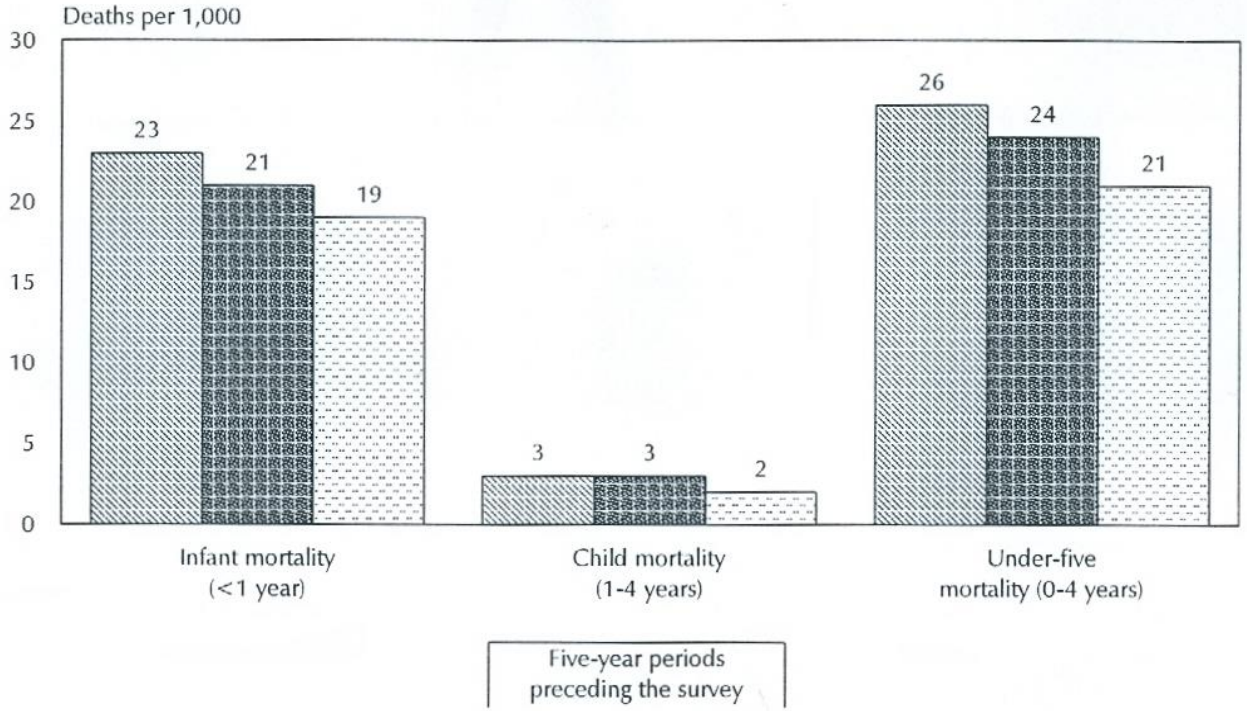
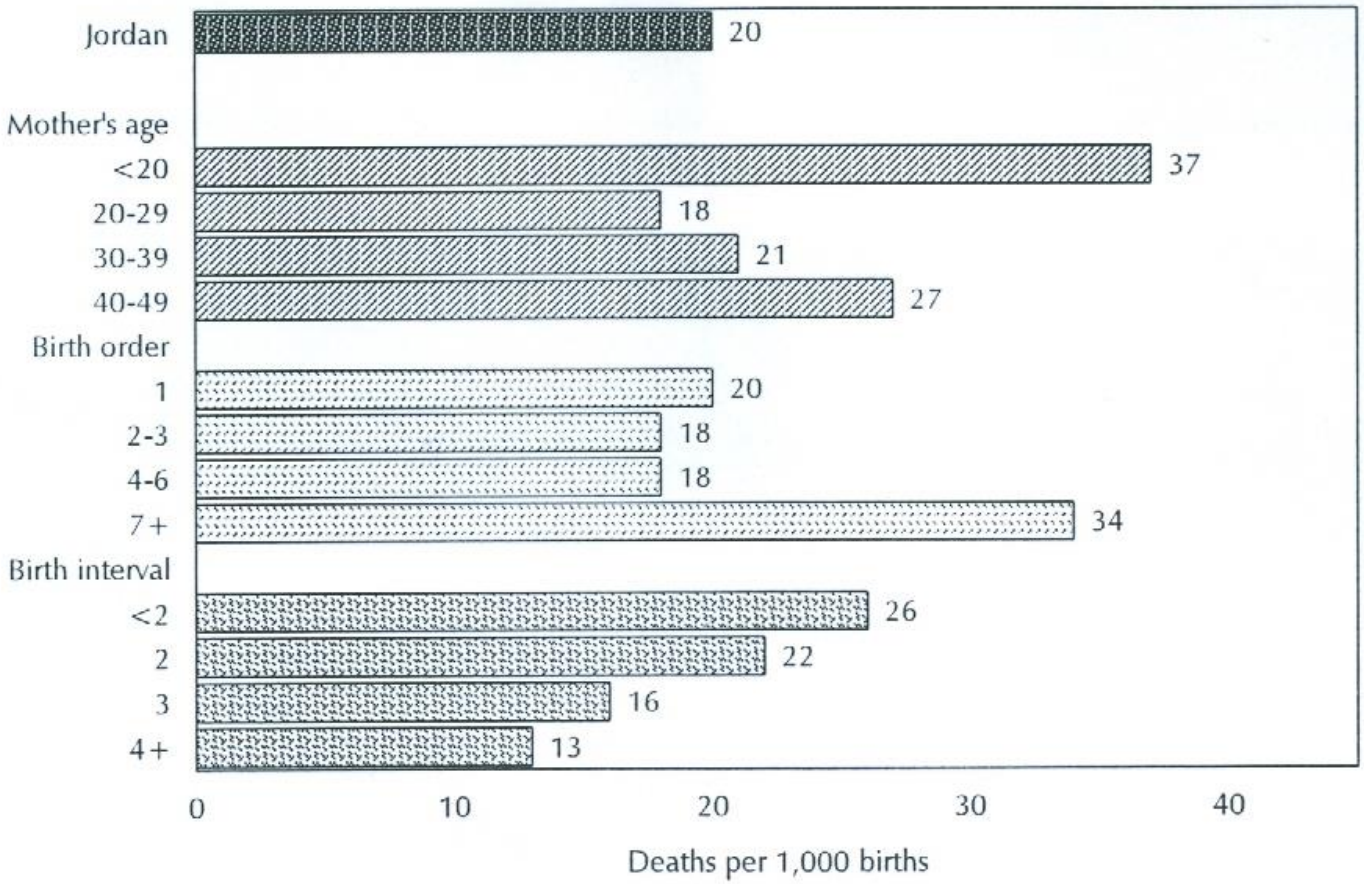
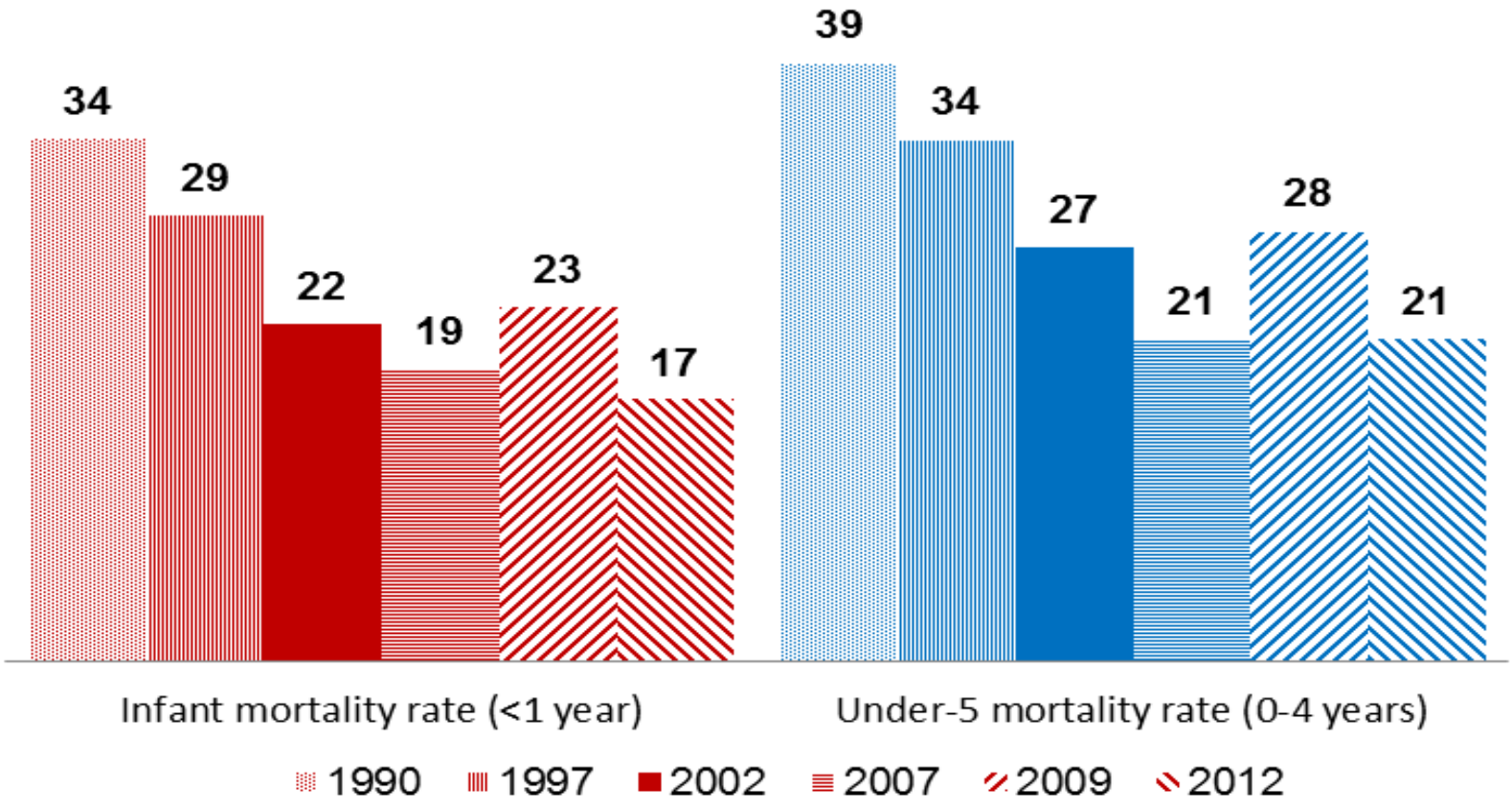


Figure 8.3 Infant Mortality by Selected Demographic Characteristics



Trends in childhood mortality rates, 1990-2012



Indicators to describe a (child's well being):

- Nutritional Causes
- Enviromental causes
- Socio-Economical causes

1-Number of low birth weight babies

2- Infant mortality rate : we calculate the number of children who die below the age of one year in relation to every 1000 live births.

- 3- Children’s death rate (children in the age group (1-14 years) calculated per 100,000 children.
- Rate of teen death (between 15-19 years) as a result of accidents and suicide

5- Teen birth rate (measured per 1000 females in the age of (15-17) teenagers pregnancy is a very important issue in the developed countries. Dealing with those girls indicates dealing with a group of infant born to very young mothers who didn’t reach the optimum nutritional and physical maturity.

- Therefore their pregnancy is at a high risk of obstructed Labour, maternal death low birth weight baby, and long term disabilities affecting the baby.

- 6-Percentage of teenager’s school drop out Maternal education is a very important factor contributing to the health of children .So high percentages of school drop out indicate poorly educated future parents.
- 7- Percent of teens not attending school nor working

- 8-Percentage of children whose parents don’t have a full year employment. If you don’t have a job you won’t provide money needed to insure all the medical, nutritional , educational needs of a child.
- 9-Percentage of children in **poverty.**
- 10-Number of families with children headed by a single parent.

11-Number of children with health insurance .If a family can’t afford paying for hospitals doctors and medication then the child will be affected.

Children in poor families lack medical insurance as well as good nutrition. we get a double negative impact.

IV. Global School –base Student Health Survey

GSHS is a school –based survey conducted primarily among students aged 13-15 years. GSHS provides data that can help countries develop priorities establish programs , and advocate for school and youth health resources.

V. School Health Index

This is a popular self- assessment and planning tool for schools is now online and addresses safety .In addition to physical activity , health eating, and tobacco prevention programs and polices.

- It measures behaviours *and protective factors* related to the leading causes of mortality and morbidity among youth and adults in *Jordan*:
- **• Alcohol and other drug use**
- **• Dietary behaviours**
- **• Hygiene**

- • Mental health
- • Physical activity
- • Protective factors
- • Sexual behaviours that contribute to HIV infection.
- • Tobacco use
- • Violence and unintentional injury

School health services that should be provided at no cost to students include:

- * Health physicals (routine, school and sports physicals)
  *Immunizations
  *Administration of prescriptions for routine medications
  *Health education
  *Care for acute illness and injury
  *Care for common adolescent physical problems
  *Follow-up as requested by physician
  *

- Nutrition counseling
  *Social, emotional ,and mental health counseling
  *Family counseling
  *Drug and alcohol counseling
  *Social service assistance
  *Pregnancy check-ups
  *Abstinence counseling and family planning information
  *Referral services

4- Chronic And Disabling Conditions:

Physical handicaps:

-Dwarfism

- Cerebral palsy/paresis

-Visual, hearing , or speech defects

- Spine bifida/ other Genetic disorders

-Facial deformity

- Marked obesity

Chronic disease

- Epilepsy

- Asthma cystic fibrosis

-Diabetes Juvenile

- Rheumatoid arthritis

- Cardiovascular disorders

- Malignancy

- Neurological infection

Intellectual Handicaps

Learning disorders

Mental retardation

RECOMMENDATIONS

1. Building a database and indicators for adolescents in the Arab and Gulf States.

2- More effort should be done to build personalities having a great deal of awareness to assist the community in dealing with such group (adolescents) and strengthening the type of relation both at home and in the school.

- 3- Integrating health education , preventive and sexual education in the educational curricula where the school is a safe environment providing sound and scientific information in these fields

4. Organization of orientation courses for parents, teachers , social counselors in the educational institutions, and societies which are interested and active in the field of adolescence health.

5. More in depth studies of early marriage , late marriage and building relations and strong links

- 6. Conduction of national as well as regional studies about adolescents with special needs.
- 7. Governmental and non- governmental agencies should sponsor such studies especially those concerned with research work directed to the Arab girls.
- 8- Counseling Via Schools or **Youth Centers.**

تم بحمد الله