



Community Medicine

# Summary

Important numbers

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## Summary of Numbers

**Sorry to inform you that all numbers mentioned here are required ,  
Good luck ☺**

### **Adolescent Health:**

-Adolescence: **10-19 yrs**

-Early Adolescence: **10-13 yrs**

-Middle Adolescence: **14-16 yrs**

-Late Adolescence: **17-19 yrs**

-Youth: **15-24 yrs**

-Young People: **10-24 yrs**

-**52%** of the Jordanian population is **below the age of 20**.

-The generation *aged 10-19*: **25%** of the population.

-Almost half of the Jordan's population was *below 19 yrs* of age:

**26.9%** in the *age group 0-9*

**24.8%** between *10 and 19*.

-Adolescents comprise  $1/5^{th}$  of every population → **1.2 billion** people worldwide.

-Adolescents in the Arab world in 2000: **31 million**.

-Adolescents in the Arab world in 2020 (expected): **41 million**.

-**22%** of adolescent girls and boys smoke or have tried smoking.  
(Jordan)

-**14%** of adolescent girls and boys used tranquillisers at least once.  
(Jordan)

-**28.6%** of Jordanian college students smoke, **17%** of which reported smoking before the age of 15 yrs.

-Prevalence of non-suicidal self-injury in Jordan: **22.6%; n=215**

Males: **26.98%; n=129**

Females: **18.14%; n=86**

-About **750 000 girls/ young women** (*ages 15 to 19*) become pregnant every year.

-Nearly **half** of all lifetime diagnosable mental health problems appear by age 14.

### **Family Planning:**

-During breast feeding, risk of pregnancy is **1.8%** at the end of **6 months** after delivery in women who **exclusively breast-feed** and who have **not yet started to menstruate**.

-Oral contraceptives: combined pills:

In early 1960s→

Oestrogen: 100-200 micrograms

Progesterone: 10 mg

Nowadays→

Oestrogen: 30-35 microgram

Progesterone: 0.05-0.15 mg

Taken from **5<sup>th</sup> to 25<sup>th</sup> day** of menstrual cycle, followed by a break of 7 days (withdrawal bleeding)

Failure rate: 0.1

-Hypertension occurs in 5% of users of oral contraceptives.

-Oral contraceptives are contraindicated in patients:

With hypertension (HTN) with SBP (systolic blood pressure spontaneous bacterial peritonitis) >160

DBP (diastolic blood pressure spontaneous bacterial peritonitis) >99

Hyperlipidaemia LDL >160

-Progesterone only pills:

Composition: Low dosage of progesterone mainly Norgestrel= 0.075mg

Dosage: 1 tab daily during menstrual cycle

Efficacy= 96-98%

Failure rate: 0.5/HWY (Hundred Women Years)

Prevents pregnancy without preventing ovulation, as ovulation occurs in 20-30% of women.

-Failure rate of injectable contraceptives: 0.3/HWY

-Norplant (Subdermal implant): Has **6 capsules** containing **35mg** each of norgestrel.

-Contraception through subdermal implant is achieved in **24hrs** and lasts for **5-6 yrs**

-Failure rate of subdermal implant: 0.1/HWY

-Failure rate of terminal methods: 0.15/HWY

-Mechanical methods efficacy rate: 1/100 women/year

- Failure rate of condoms: 2-3%
- Fertility rate in Jordan (1976): 7.4 children per woman
- Fertility rate in Jordan (2012): 3.5 children per woman
- Jordan population: 6.3 million
- Population growth rate in Jordan (2012): 2.2%
- Population growth averaged:
  - 4.8 % during the period 1961-1979
  - 4.4 % between 1979 and 1994
  - 2.6 % between 1994 and 2004
  - 2.2 % between 2004 and 2012
- Contraception prevalence among married women in Jordan (2012):  
**61% →**
  - 42% are using modern methods
  - 19% are using traditional methods
- The IUD (intrauterine contraceptive device) is the most widely adopted modern method (**21 %**), followed by the pill and male condom (8% each), female sterilization (**2%**), and LAM [Lactational Amenorrhea Method] and injectable (**1% each**).
- Less than 1 % of women rely on other modern methods.
- Withdrawal (14%) and rhythm (4%) are the most common traditional methods.

- Private sources for modern methods of contraception serve almost three-fifth **(56%)** of current users (2012).
- The share of the public sector decreased to **44%** in 2012 from **46%** in 2009.
- Pharmacies are the primary source for users of methods that require resupply, including the pill **(35 %)** and condoms **(39 %)**.
- IUDS sources→
  - Private hospitals and clinics: 22%
  - Government health centers: 19%
  - JAFPP (Jordanian Association of Family Planning and Protection): 19%
- Sources of female sterilizations→
  - Government hospitals: 54%
  - Royal Medical Services: 24%
  - Private hospitals: 20%
- Sources of injectable→
  - Government health centres: 63%
  - Government maternal and child health (MCH) centres: 18%

### **Infant and Child Care:**

- 7.1 million** infants die annually→ 2/3 of which die in the first **28 days** after birth (neonatal period)→ 2/3 of those who die in the first 28 days die in the first week.
- 98%** of all neonatal deaths occur in developing countries.
- Well baby clinic is for children from 6 weeks to 5 yrs old.

-Ages at which the baby should be seen by a health care provider:

**4 months , 6 months , 9 months , 15 months , 18 months , 2 years , 3 years , 4 years , 5 years**

-Rate of fetal mortality is **35%** greater than average in women who use tobacco during pregnancy.

-Rate of fetal mortality is **77%** higher in women who use alcohol during pregnancy.

-Information about **4 million** neonatal deaths worldwide is limited, even less information is available for stillbirths (babies born dead in the last **12 weeks** of pregnancy) and there are no systematic global estimates.

-Perinatal mortality rate→

1) Deaths of live-born infants through the **first 7 days** of life

2) Fetal deaths after **28 weeks of gestation**.

-**13 million** deaths of children under 5 yrs old occur each year (in developing world)→ **3 million** of which occur in the first week of delivery.

-**4 million** stillbirths or late fetal deaths occur each year.

-Perinatal mortality is the number of late foetal deaths (also called still births) and early neonatal deaths [before **day 7 (168 hours)**] per 1000 births.

-**25 million** low-birth-weight babies born each year worldwide (**24 million** of which are in the developing world where **80%** of global births occur).

- The perinatal mortality rate ranges from **40 to 60 per 1000 live births** in most developing countries.
- Perinatal mortality rate ranges between **6 and 10 per 1000 live births** in industrial countries.
- 3 million severely underweight babies are born to women who suffer from malaria in sub-Saharan Africa.
- A woman with HIV has a **25 to 40 %** chance of passing the infection on to her fetus in the womb or at birth.
- 25%** of children born with HIV will be diagnosed with AIDS in the **first year**.
- 80%** of children born with HIV will be diagnosed with AIDS by **the fourth year**.
- 20%** of neonatal deaths are caused by preterm birth and low birth weight.
- Most neonatal deaths usually occur in the **first 24 hours** of life.
- Three quarters of neonatal deaths occur in the first week after birth.
- Neonatal Death: Death of an infant **less than 28 days** after birth (**<28 days**).
- Postneonatal Death: Death of an infant between **28 days and one year after birth (28-364 days)**.
- Low Birthweight (LBW): Birth weight **less than 2,500 grams** and **VLBW 1500**.



-Infant Mortality Rate (IMR): number of infant deaths per 1000 live births in a population.

-Infant mortality rate→

1) Neonatal mortality: death in **the first 28 days** of life

2) Postneonatal mortality: death from the **infants' 29<sup>th</sup> day** but within the first year.

-**1.5 million** (**38%** of all newborn deaths→4 million) occur in **4** countries of South Asia.

-Up to **50%** of neonatal deaths are in the first **24** hours.

-**75%** of neonatal deaths are in the first week→**3 million** deaths.

-**10 million** children under age of 5 die annually.

-**6.6 million child deaths** can be prevented each year if affordable health interventions are made.

-**More than 200 million** children under five yrs old live in absolute poverty (less than one dollar per day).

-**At least 200 million** children under 5 yrs old are malnourished.

-**80 percent of deaths** of children under 5 yrs old are due to several causes→ pneumonia, diarrhea, malaria, neonatal pneumonia or sepsis, pre-term delivery, asphyxia at birth, measles, and HIV/AIDS.

-*Two thirds* of all neonatal deaths are in low birth weight (LBW) infants.

- Millennium Development Goal (MDG) 4 aims to reduce child deaths by ***two-thirds between 1990 and 2015***.
- Millennium Development Goal 5 has the target of reducing maternal deaths by ***three-quarters*** over the same period.
- A recent review of MDG progress, show that the world has only **32%** of the way to achieving the child health goal and less than **10%** of the way to achieving the goal for maternal health.
- 800 women die** daily from preventable causes related to pregnancy and childbirth→ **99%** occur in developing countries.
- Maternal mortality worldwide dropped by **almost 50% between 1990 and 2010**.
- 8000** new born babies die daily from preventable causes.
- 99%** of all neonatal deaths occur in low and middle income countries.
- 70%** of global deaths among new born babies happen in Africa and South East Asia.

**IMPORTANT : as for the next numbers (epidemiology & management ) , an Email was sent to Dr. Serein al khaldi and the numbers and years required are indicated in RED & BOLD YES**

### **Introduction to Epidemiology:**

-Definitions of epidemiology→

1) Frost, **1927**: The science of the mass phenomena of infectious diseases or the natural history of infectious diseases.....**NO**

2) Stallbrass, **1931**: The science of infective diseases, their prime causes, propagation and prevention. ....**NO**

3) J.M. Last, **1988**: The study of the frequency, distribution and determinants of health-related states or events in specified populations and the application of the study to the control of health problems.

.....**NO**

-London Smog disaster: **1952**→ .....**Yes**

Death rate in London in the week before the disaster occurred was around **2062 deaths**→ In the week the smog occurred, **4 703 died**.

**(you need to know that death rate has doubled)**

-1955→ Dr. Thomas Francis announced that the Salk vaccine against polio was up to 90% effective.....**Yes**

-History of epidemiology: (**Here you should realize the chronological sequence of events in these Historical events, you should realize the century in which it happened, not the certain year**)

1)Hippocrates (**460 BC**)→ Environment and human behaviour affects health.

2)John Graunt (**1662**)→ Quantified births, deaths, and diseases.

3)Lind (**1747**)→ Scurvy could be treated with fresh fruit.

4)William Farr (**1839**): Established application of vital statistics for the evaluation of health problems.

5)John Snow (**1854**): tested a hypothesis on the origin of epidemic of cholera.....**YES Yes Yes**

6)Alexander Louis (**1872**): Systematized application of numerical thinking (quantitative reasoning).

7)Bradford Hill (**1937**): Suggested criteria for establishing causation.  
Yes

- Epidemiological thought emerged in **460 BC**.
- Epidemiology flourished as a discipline in **1940s**.
- John Snow (**1813-1858**): **No**

In **1854**, he used scientific methods to identify the cause of the epidemic of cholera in London.

**Formulas:** **Yes....formulas required with calculation**

- 1- Cumulative Incidence= Number of new cases of a disease during a specified period ÷ Population at risk in the same period of time
- 2- Point prevalence rate= All persons with a disease at a point in time ÷ Total population
- 3-  $P = I * D$ ; P= prevalence rate, I=Incidence rate, D= Duration of the disease

### **Introduction to management:**

**-1776→ YES**

Adam Smith published "The Wealth of Nations" [Advocated the division of labor (job specialization) to increase the productivity of workers.]

**-In 1800**, the factory system appeared. **Yes**

**-1911→** Scientific management by Fredrick Winslow Taylor. **Yes**

**-Frank and Lilian Gilbreth (1 868-1924).** **Yes**

**-Max Weber (1864-1920)** **YEs**

**-1924-1932→** The Hawthorne Factory had conducted a study to see if their worker would become more productive in higher or lower levels of lights **NO**.

-Douglas McGregor Theory X & Y (1906-1964)....**No**

### Health Care Systems:

-Health Care Expenditure as Percent Of GDP: **9.52%**

-Percent of Government of Jordan Budget Allocated to Health: **10.52**

-Sources of Health Care Financing (Percent Distribution)→

Public: **65.75%**

-Distribution of Health Expenditure→

Public: **69.17%**

-Pharmaceutical Expenditure as Percent of Total Health Expenditure:  
**27.91%**

-The following table is to be memorised:

**Table 6.4: Population Formal Coverage (%) by Source (2006-2010)**

Source of Coverage	2006 (3)	2008(4)	2010
Civil Insurance	26.4	34	35
RMS Insurance	25	26	27
University hospitals	2.4	2.3	2.3
Private firms and corporations	9.2	9	10
UNRWA	9	8.5	8
<b>Total % insured/covered</b>	<b>72</b>	<b>78.8</b>	<b>82.3</b>
<b>Uninsured/uncovered</b>	<b>28</b>	<b>21.2</b>	<b>17.7</b>
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Sources: -Public Health Expenditure Study, 2004.

-General Directorate of Health Insurance, MOH.

-High Health Council. Jordan Health Strategy 2008-2012.

-Jordan News Agency, 9/8/2011:[http://www.petra.gov.jo/Public\\_News/Nws](http://www.petra.gov.jo/Public_News/Nws)

- RMS Annual report 2010

**GOOD LUCK !**