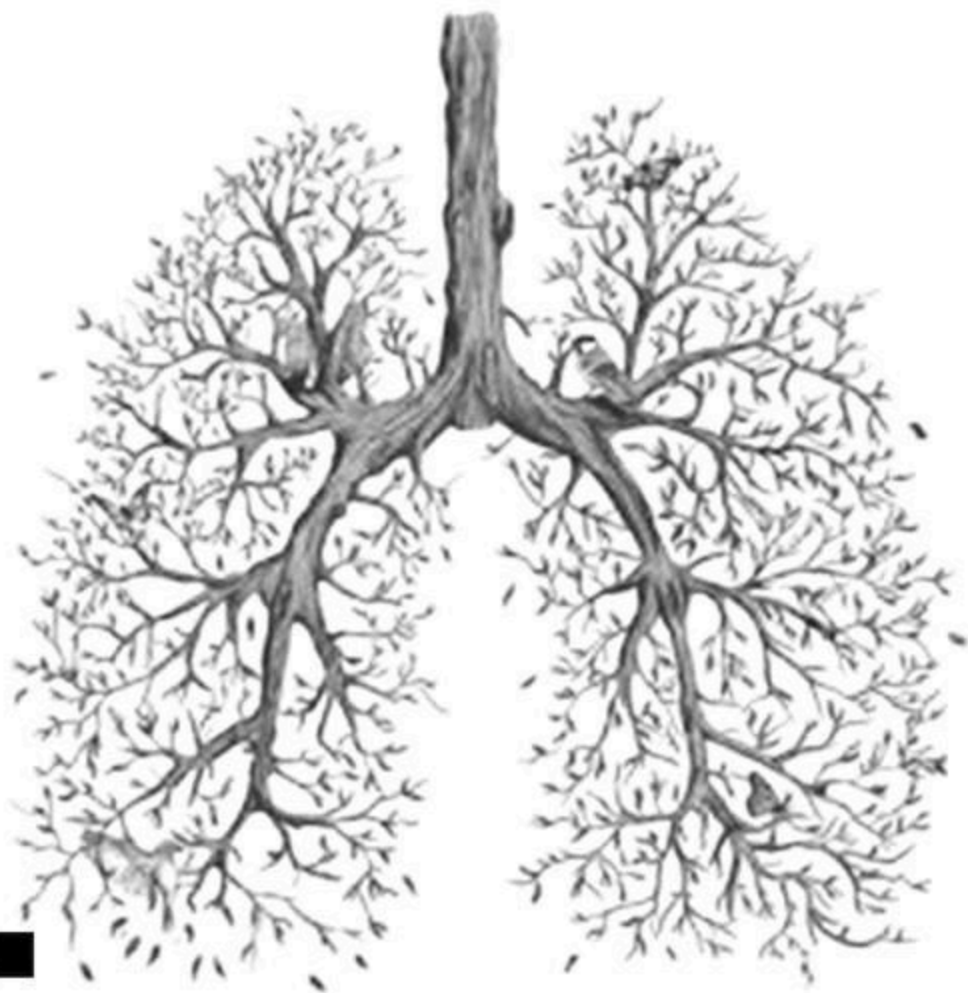


By Mohamed F. Abu Alia



Medical Committee  
The University of Jordan

# Community Medicine



Slides

Sheet

Lecture # 4

Doctor: Samr Al sharif

Date:

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

الْحَمْدُ لِلَّهِ رَبِّ الْعَالَمِينَ وَالصَّلَاةُ  
وَالسَّلَامُ عَلَى نَبِيِّنَا مُحَمَّدٍ خَاتَمِ  
الْأَنْبِيَاءِ وَسَيِّدِ الْمُرْسَلِينَ وَعَلَى آلِهِ  
وَصَحْبِهِ أَجْمَعِينَ وَبَعْدُ

# **B-Infant and Child Care:**

- 1- Prenatal Care of the infant: ( Prematurely, Congenital abnormalities, Birth injuries, and neonatal infections. Good Nurseries).

## **A-W.B.C.**

- 1- Physical Examination (Scheduled Visits)
- 2-Growth and Development
- 3- Vaccination
- 4- Nutrition
- 5- Health Education.

- B- Day Care of Children out-side the home Good child care services are a primary need.
- C- Health of the school age child (School health)
- D- Care of adolescents: Youth Clinics (Psychological problems, Contraception, Smoking, Drug addiction etc.)
- E- Handicapped Children (Physically and Mentally).



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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# Needs of the Newborn

- Improving newborn survival will dramatically reduce infant mortality worldwide.
- Of the 7.1 million infants who die each year, approximately two-thirds die in the first 28 days after birth – the neonatal period.

- Of these deaths, two-thirds take place in the first week after birth.
- Ninety-eight percent of all neonatal deaths occur in developing countries.
- There are basic needs of a newborn that can help ensure a healthy start in life.

# Basic needs of a newborn that can help ensure a healthy start in life.

- **During labour and delivery, mothers and newborns need:**
- **Skilled attendance** – provide safe management of normal delivery and timely referral for complications.
- **Support and care** – promote family support and a baby and woman-friendly environment for birth and maternal and newborn care

- **Infection control** – ensure clean delivery, including clean surface, hands, blade, and cord tie.
- **Management of complications** – identify and manage complications, including bleeding, high blood pressure, prolonged labour, and foetal distress

# Following birth, newborns need:

- **Air** - stimulate and resuscitate infants who are not breathing at birth.
- **Warmth** – dry the baby at birth. Maintain warmth through skin-to-skin contact, warm ambient temperature, and head and body covering. Promote kangaroo care for low-birth weight infants.
- **Breastfeeding** – breastfeed within the first hour after birth. Continue exclusive breastfeeding on demand day and night for six months.

- **Care** – keep the newborn close to the mother, father, or other caregiver. Keep the mother healthy.
- **Infection control** – maintain cleanliness when handling the infant. Keep the cord clean. Provide prophylactic eye care. Promote early and exclusive breastfeeding. Immunize according to schedule. Treat infections promptly.
- **Management of complications** – recognize and respond urgently to serious and life-threatening conditions.





# Well Baby Clinic

## **What is a “well baby clinic”?**

- a clinic that specializes in medical supervision and services for healthy infants.

## **Why do we need such clinics?**

- Childhood is a time of rapid growth and change. Infants will have more paediatric well-child visits when they are younger and developing the fastest.
- Even if your child is healthy, well-child visits are important because it is good time to focus on your child’s wellness. This means talking about what is being done well and how it can be improved. Preventive care is important to keep children healthy.

# expectations:

- Each visit includes a complete physical examination. At this exam, the health care provider will check the infant or child's growth and development in order to find or prevent problems.
- The health care provider will record your child's height, weight, and other important information. Hearing, vision, and other screening tests will be part of some visits.
- Expect to be given information about normal development, nutrition, sleep, safety, diseases that are "going around," and other important topics such as what to expect as your child grows up.
- Your provider will also talk about other wellness topics such as family relationship issues, school, and access to community services.

# Parents Role:

- Well-child visits are key times for communication. Make the most of these visits by writing down important questions and concerns to bring with you.
- Special attention is paid to whether the child is meeting normal developmental milestones. The height, weight, and head circumference are recorded on a [growth chart](#), which the health care provider keeps with the child's medical record. This can be a great start for a discussion about your child's health.
- Ask your doctor about the body mass index (BMI) curve, which is the most important tool for identifying and preventing obesity and detecting under-weight.





# Schedules:

- There are several schedules for routine well-child visits. One schedule, recommended by the American Academy of Paediatrics, is the “PREVENTIVE HEALTH CARE SCHEDULE”. Which specifies each visit’s age, starting even before the baby is born and continuing until 21 years of age.

- **After that, it is recommended that visits occur at the following ages (your provider may have you add or skip visits depending on your child's health or your parenting experience):**
- **By 1 month, 2 months, 4 months, 6 months, 9 months, 1 year, 15 months, 18 months, 2 years, 2 1/2 years, 3 years, 4 years, 5 years, 6 years, 8 years, 10 years, Each year after that until age 21**
- **In addition to these visits, call and visit a health care provider any time your baby or child seems ill or whenever you are worried about your baby's health or development.**



# Fields of concern:

Physical examination, Immunizations, Growth and development, and Nutrition.

Nutrition will be under the microscope, and it includes:

- Appropriate diet for age - balanced diet
- Breast feeding
- Diet and intellectual development
- Fluoride in diet
- Infant formulas
- Obesity in children





# Developed Countries.

During the last 50 years, well baby clinics and their services have developed and improved greatly in developed countries, nowadays all countries in our world have a common dream about achieving great services such those are delivered in developed countries

**The major services provided by such clinics in developed world:**

- 1) Baby's measurements.**
- 2) Head-to-toe physical exam.**
- 3) Your baby's development.**
- 4) Your baby's vaccines**
- 5) Time to talk and ask questions concerning your baby.**



- **In Jordan**, there are prevalances of 8%,13%,2%,7% for stunting, low birth weight, wasting, and overweight respectively. (1)
- The prevalence of exclusive breastfeeding(<6 months ) is about 22% , that of early initiation of breastfeeding is 39%, and that of breastfeeding at age 2 years is 11%.(2)

(1,2) THE STATE OF THE WORLD'S CHILDREN 2013

# Prevention and control of Communicable Diseases

- Communicable diseases are diseases that can be transmitted from a person to another through different means ( direct contact, droplet infection, sexual contact, or mother fetus infection.)

# Steps followed to accomplish control of communicable diseases:

- 1- Reporting
- 2- Observing of the coming foreigners and tourist who are going to stay in the country for more than one month and testing them for certain disease e.g AIDS, Malaria etc..
- 3-Sending teams in cases of outbreaks and epidemics.
- 4-Coordination with other ministries (Ministry of agriculture and Brucellosis)
- 5-Vaccination





# *CHILDHOOD DISEASES*



# **How Some Childhood Infectious Diseases Are Spread**

- **Direct Contact with infected person's skin or body fluid**
- **Respiratory Transmission (passing from the lungs, throat, or nose of one person to another person through the air)**
- **Fecal-Oral Transmission (touching feces or objects contaminated with feces then touching your mouth)**

# Direct Contact with infected Person's skin or body fluid

- Chickenpox\*
- Cold Sores
- Conjunctivitis
- Head Lice
- Ringworm
- Scabies



# ***Respiratory Transmission***

- ***Chickenpox***
- ***Common Cold***
- ***Diphtheria***
- ***Bacterial meningitis***
- ***Influenza***
- ***Measles***
- ***Mumps***
- ***Pertussis***
- ***Pneumonia***
- ***Rubella\****



# Fecal-Oral Transmission

- *E. Coli*
- *Enterovirus*
- *Giardia*
- *Hepatitis A*
- *Infectious Diarrhea*
- *Pinworms*
- *Polio*
- *Salmonella*
- *Shigella*



# ***Vaccination***

- ***Protecting Your Newborn From Disease***
- ***How do vaccines work?***
- ***Are vaccines safe?***
- ***Keeping an immunization record***

# Immunity

- It is the defense mechanism of the body against the invasion of pathological microorganisms.

- **General immunity**

General defensive mechanisms available from birth . eg skin, mucosal barriers, tears, blood substances that inhibit motility or multiplication of

# Immunity ( contd)

- **Specific Immunity**

This type develops against specific microorganisms. It can be acquired in 2 ways:

- ***Active immunity***. acquired by coming in contact with the pathogen either by contracting the disease itself or by vaccination.



## ***Passive immunity***

- Acquired by receiving antibodies from an actively immunized person or animal.
- It is quickly acquired
- Short lived in comparison to actively acquired immunity.
- Can be acquired in two ways:

# *Passive Immunity*

- **Natural** : Antibodies passing from mother to newborn via placenta start falling during the first weeks and disappear within the first 6 months.
- **Artificial**: acquired by injection of specific or standard ( non-specific gamma globulins).e.g. Specific immunoglobulins are available for hepatitis B, tetanus, mumps..etc.

## Live Vaccines

- Long lasting
- Sometimes given by intra-nasal spray
- Highly effective
- Ex : BCG, measles, MMR, and polio



## Inactivated Vaccines

- Multiple doses are required
- Given by injection
- Ex : Pertussis , polio



# How serious is the situation?



# Rationale for Immunization

Every year, out of 100 children in the world:

- 3 die from measles
- 2 from pertussis
- 1 from tetanus

For every 200 children who are infected with polio virus, one will be crippled for life.

- Diphtheria kills 1 of 10 people infected with it and can cause serious complications such as suffocation, paralysis, heart failure, coma and death within 6-10 days.
- Tetanus kills most babies who get it, according to a study made in 2002 : 6.7 thousand deaths in Afghanistan only due to tetanus.



- In about 1% of cases of polio, the virus enters the CNS, preferentially infecting and destroying motor neurons, leading to muscle weakness and acute flaccid paralysis.



- Universal immunization of children from six vaccine-preventable diseases ( TB, Diphtheria, Whooping cough, Tetanus, Polio and Measles) is a crucial component in any strategy.
  
- Differences in vaccination coverage among subgroups of the population are of great assistance for program planning and targeting resources to areas most in need.



# Expanded Program on Immunization

- Started world-wide 1974 ,in Jordan 1979
- Jordan has been free from polio since 2005

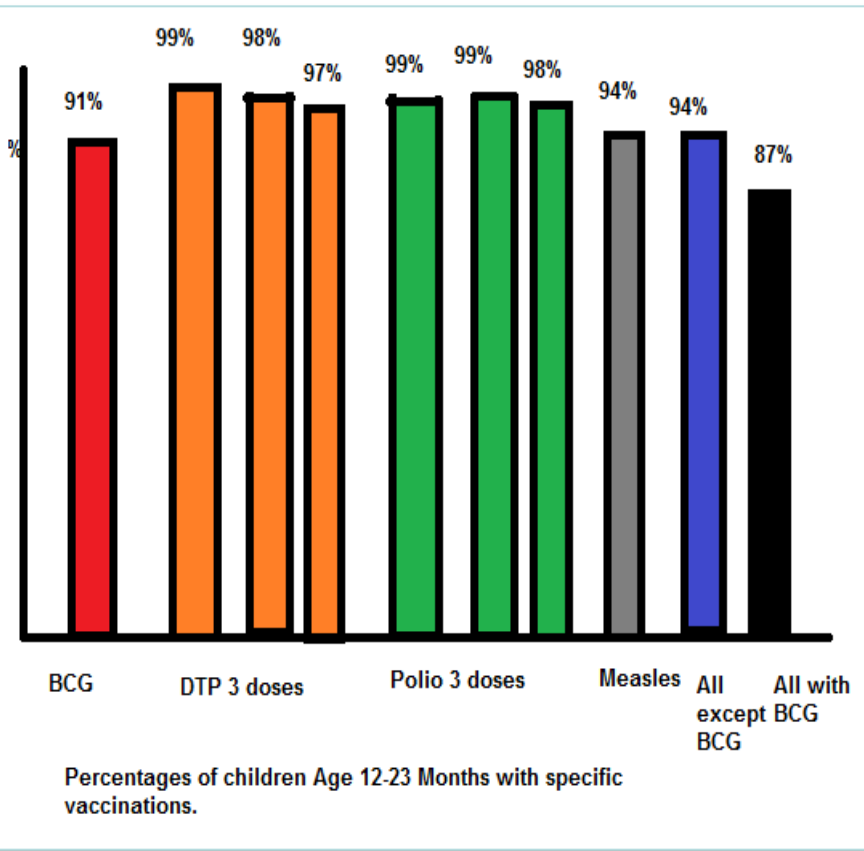


□ (*JPFHS, "2007"*)

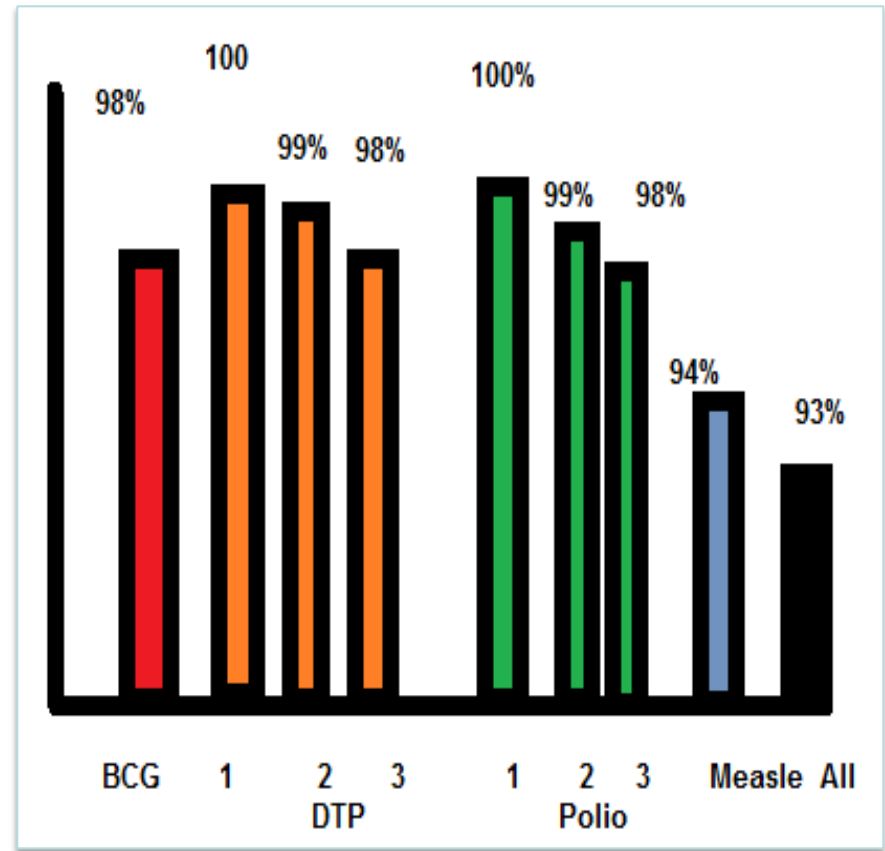
- According to the **World Health Organization** (WHO), children are considered fully vaccinated when they have received a vaccination against:
  - TB
  - Three doses of DTP
  - Three doses of Polio vaccine
  - One dose of measles vaccination
- by age 12 months .

# Percentage of children age 12-23 months with specific vaccination

2007



2012



Slight Variations can be seen including:

- **1. Gender:** 86% of boys were fully vaccinated compared to 88% girls. (JPFHS)
- **2. URBAN (89%) and RURAL(77%).** (JPFHS, “2007”)
- **3. There was a significant variation according to the level of education of the mother,**
  - **“Those with no education show relatively low vaccination coverage for their children, (particularly that of BCG), 59% of children compared to 89% for those children of educated mothers.”**

- Before 2002, children in Jordan did not always receive the BCG vaccine, it was included as part of the National Vaccination Program only following the 2002 JPFHS survey.



# Control, Elimination, and Eradication of Vaccine-Preventable Diseases

- **Control** of a vaccine-preventable disease:
  - **Reduces illness outcomes**
  - **Limits the disruptive impacts associated with outbreaks of disease in communities, schools, and institutions.**



□ **Elimination** of a disease requires the reduction to zero of cases in a defined geographic.



□ **Eradication** of a disease is achieved when its **elimination can be sustained** without ongoing interventions. The only vaccine-preventable disease that has been globally eradicated thus far is smallpox.



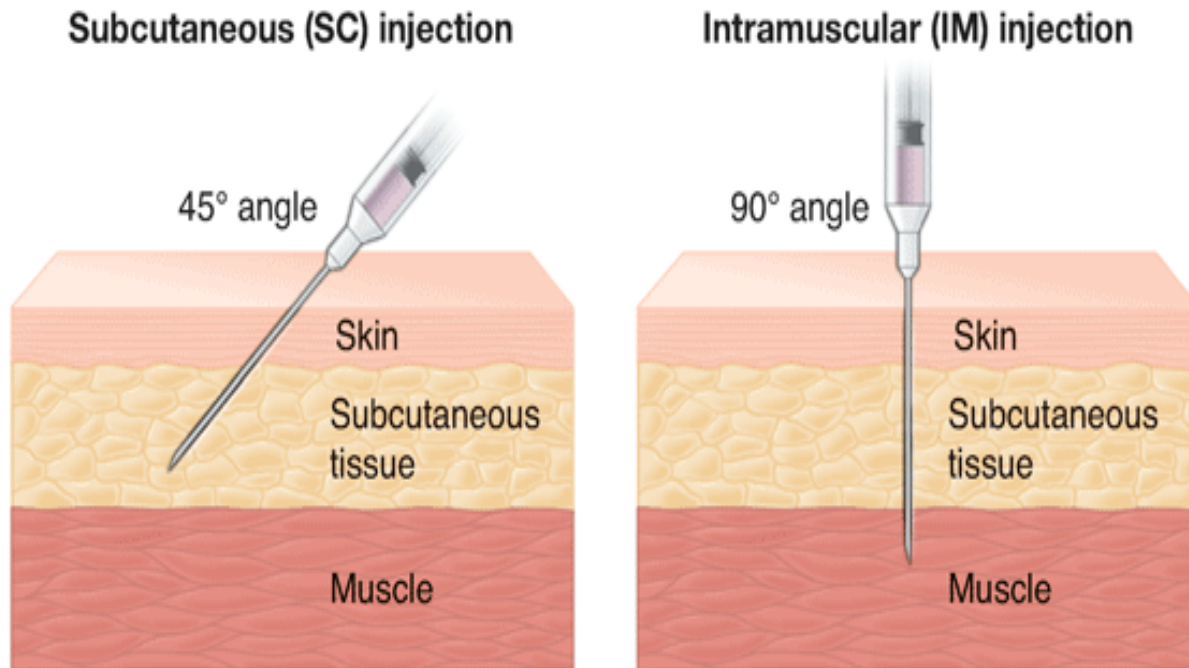


# Storage and Handling

- Injectable vaccines are packaged in multi-dose vials, single-dose vials, or manufacturer-filled single-dose syringes.
- The live attenuated nasal-spray influenza vaccine is packaged in single-dose sprayers.
- Vaccines are stored either at refrigerator temperature (2–8°C) or freezer temperature (–15°C or lower).



# Administration of Vaccines



# Importance of vaccination

- Diseases that are common, can kill or cause disability,  
Can be prevented.

## **The main diseases are:**

- Measeles,
- TB,
- Pertusis ,
- Diphteria ,
- Poliomyelitis,
- Tetnus.