

# Child Health

## Lecture - 4

Prof Dr Najlaa Fawzi



## **Objectives :**

- Explain MNCH(Maternal Neonatal and Child Health (MNCH))**
- Identify objectives and elements of MNCH**
- Define IMCI**
- Recognize the elements of IMCI**
  
- Describe under-five mortality, its causes and its indices.**
- Describe maternal and child health indicators.**

# **What is the MNCH** (Maternal Neonatal and Child Health)

**A majority of the maternal and early newborn deaths can be avoided by ensuring prenatal, postnatal and newborn care and availability of EmONC services within reasonable travel distance.**

**Maternal, newborn and child health [MNCH] refers to the integrated continuum of care that delivers tools and treatments to mothers and their infants at critical points, and to children in their first five years of life**

## Why to develop a MNCH

**1-To respond to the health and nutrition needs of women, newborns and children under 5 years old.**

**2-To improve effectiveness, quality and utilization of the MNCH services**

# **What are the elements of the MNCH?**

## **During Pregnancy**

- **Tetanus toxoid immunization**
- **Nutrition (iodine, iron, balanced energy-protein supplementation)**
- **Management and prevention of maternal infections (STIs, malaria)**
- **Detection of maternal complications (eclampsia)**
- **Breast feeding counseling**

## **During Delivery**

- **Basic care for every delivery (clean, safe, emergency obstetric care)**
- **Early detection and early management of complications, including neonatal resuscitation**

## **At Early neonatal period**

- **Essential care for every newborn (drying, warming, prophylactic eye care, prevention of hypoglycemia)**
- **Early detection and treatment of complications**
- **Special care for babies with special needs**

## **In Late neonatal period**

- **Exclusive breastfeeding**
- **Appropriate hygiene**
- **Recognition of danger signs**
- **Prevention and management of illness**

## **During Childhood**

- **IMCI(Integrated Management of Childhood Illness)**
- **Prevention and management of childhood illness**
  
- **Immunization**
- **Nutrition interventions**

# WHAT IS IMCI?

**IMCI** is an integrated approach to child health that focuses on the well being of the whole child.

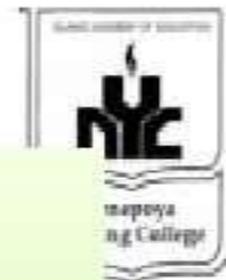
**Aims** to reduce death, illness, and disability and to improve growth and development among children under 5 years old

**IMCI** includes both preventive and curative elements that are implemented by families, communities, and health facilities

## **The IMCI strategy includes three main components:**

- **Improving case management skills of health-care staff**
- **Improving overall health systems**
- **Improving family and community health practices.**

# IMCI Strategy



**Health-worker component:**  
Improvements in the case-management skills of health staff through locally adapted guidelines.



**Health-service component:**  
Improvements in the overall health system required for effective management.



**Community component:**  
Improvements in family and community health care practices.

**In health facilities, the IMCI OBJECTIVES are :**

**1-Supports the accurate identification of childhood illnesses in outpatient settings**

**2-Ensures appropriate combined treatment of all major illnesses**

**3-Strengthens the counselling of caretakers**

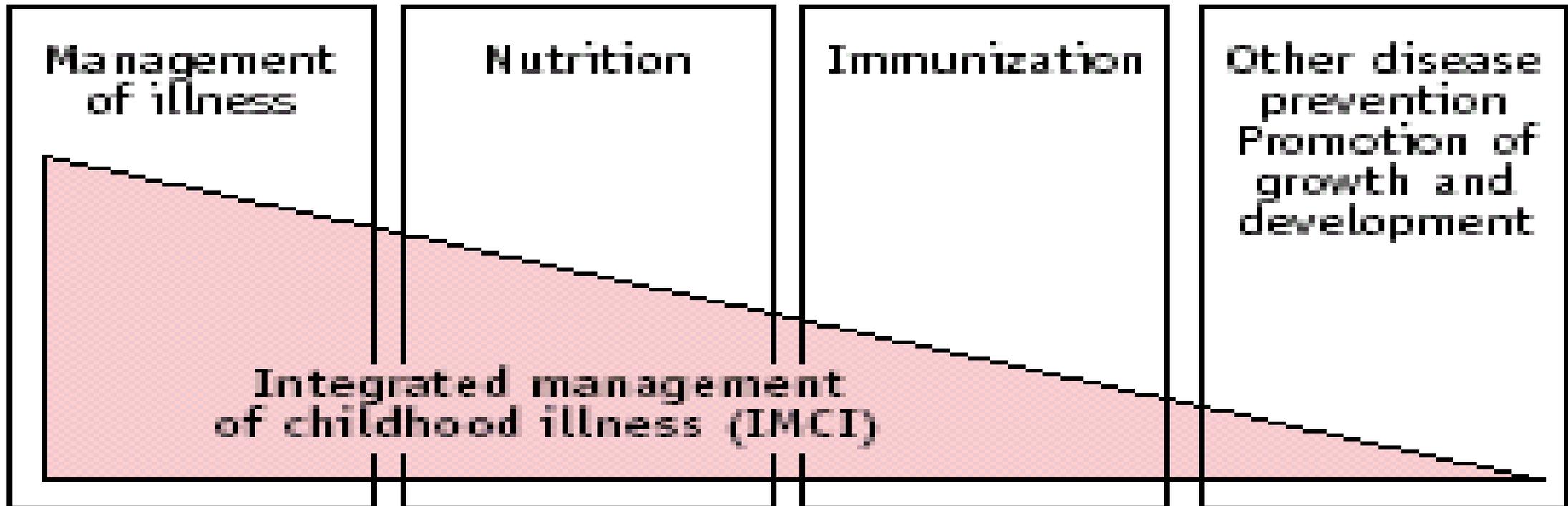
**4-speeds up the referral of severely ill children.**

## **In the home setting, IMCI objectives are:**

- ✓ **It promotes appropriate care seeking behaviour of parents**
- ✓ **Improved nutrition and preventative care**
- ✓ **Correct implementation of prescribed care**

# Key elements of IMCI

Integrated management of childhood illness (IMCI) as a key strategy for improving child health



# IMCI Case Management

## Focused Assessment

- Danger signs
- Main symptoms
- Nutritional status
- Immunization status
- Other problems

## Classification

Need to Refer

Specific treatment

Home management

## Counsel & Follow-up

Counsel caretakers  
Follow-up

## Treatment

Identify treatment  
Treat



# CLASSIFICATION ACCORDING TO COLOR CODE

## COLOR

\* pink

\* yellow

\* green

## CLASSIFICATION

Hospital referral or admission

Initiation of special treatment

Home management



# Cough or Difficulty of Breathing

## SIGNS

## CLASSIFY AS

## IDENTIFY TREATMENT

- Any general danger sign or
- Chest indrawing or Stridor in a clam child

**SEVERE PNEUMONIA OR VERY SEVERE DISEASE**

- Give first dose of an appropriate antibiotic
- Refer **URGENTLY** to a hospital

**Fast breathing**

**PNEUMONIA**

- Give an appropriate oral antibiotic for 5days
- Soothe the throat and relieve the cough with a safe remedy
- Advise mother when to return immediately
- Follow-up in 2days

**No signs of pneumonia or very severe disease**

**NO PNEUMONIA, COUGH OR COLD**

- If coughing >30days refer for assessment
- Soothe the throat and relieve the cough with a safe remedy
- Advise mother when to return immediately
- Follow-up in 6days if not improving

# DIARRHEA

SIGNS	CLASSIFY AS	IDENTIFY TREATMENT
<p>Two of the following signs:</p> <ul style="list-style-type: none"> <li>• Lethargic or unconscious</li> <li>• Sunken eyes</li> <li>• Not able to drink or drinking poorly</li> <li>• Skin pinch goes back very slowly</li> </ul>	<p><b>SEVERE DEHYDRATION</b></p>	<p><b>(Urgent pre-referral treatments are in bold print)</b></p> <ul style="list-style-type: none"> <li>▶ If child has no other severe classification               <ul style="list-style-type: none"> <li>- Give fluid for severe dehydration (Plan C).</li> </ul> </li> <li>OR</li> <li>If child also has another severe classification:</li> </ul> <p>Refer <b>URGENTLY</b> to hospital with mother giving frequent sips of ORS on the way. Advise the mother to continue breastfeeding.</p> <ul style="list-style-type: none"> <li>▶ If child is 2 years or older, and there is cholera in your area, give antibiotic for cholera.</li> </ul>
<p>Two of the following signs:</p> <ul style="list-style-type: none"> <li>• Restless, irritable</li> <li>• Sunken eyes</li> <li>• Drinks eagerly, thirsty</li> <li>• Skin pinch goes back slowly.</li> </ul>	<p><b>SOME DEHYDRATION</b></p>	<ul style="list-style-type: none"> <li>▶ Give fluid, Zinc supplements and food for some dehydration (Plan B)</li> <li>▶ <i>If Child also has a severe classification:</i></li> </ul> <p><i>Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way. Advise the mother to continue breastfeeding.</i></p> <ul style="list-style-type: none"> <li>▶ Advise mother when to return immediately.</li> <li>▶ Follow-up in 5 days if not improving.</li> <li>▶ If confirmed/symptomatic HIV, follow-up in 2 days if not improving.</li> </ul>
<ul style="list-style-type: none"> <li>• Not enough signs to classify as some or severe dehydration</li> </ul>	<p><b>NO DEHYDRATION</b></p>	<ul style="list-style-type: none"> <li>▶ Give fluid, Zinc supplements and food to treat diarrhoea at home (Plan A)</li> <li>▶ Advise mother when to return immediately.</li> <li>▶ <i>Follow-up in 5 days if not improving.</i></li> <li>▶ If confirmed/symptomatic HIV, follow-up in 2 days if not improving.</li> </ul>

Two of the following signs:

- Lethargic or unconscious
- Sunken eyes
- Not able to drink or drinking poorly
- Skin pinch goes back very slowly

**SEVERE DEHYDRATION**

Two of the following signs:

- Restless, irritable
- Sunken eyes
- Drinks eagerly, thirsty
- Skin pinch goes back slowly.

**SOME DEHYDRATION**

- Not enough signs to classify as some or severe dehydration

**NO DEHYDRATION**

# 1 - 4-year Mortality Rate

$$1-4 \text{ MR} = \frac{\text{No. of deaths of children aged 1-4 years during a year}}{\text{Total no. of children aged 1-4 years at the middle of the year}} \times 1000$$

- Mid-year estimated population means population counted on the 1st of July

**This rate reflects the main environmental factors affecting the child health, such as nutrition, sanitation, communicable diseases and accidents around the home.**

**It is more advanced indicator of social situation of country than IMR .**

**25 times higher in developing countries compared to developed countries.**

# Causes of 1-4 years mortality

## Developing countries

**Diarrhea**

**ARI**

**Malnutrition**

**Infectious diseases**

**Accidents**

## Developed countries

**Accidents**

**Congenital anomalies**

**Malignancies**

**Influenza**

**Pneumonia**

# **Under-five mortality (child mortality)**

**Child mortality, also known as under-5 mortality or child death, refers to the death of infants and children under the age of five years.**

**Nearly half of these deaths are in newborns.**

# **The leading causes of death among children under five are :**

**1-Preterm birth complications**

**2-Pneumonia**

**3-Intrapartum-related complications**

**4-Diarrhea**

**5-Congenital abnormalities.**

**6-Nutritional deficiency Problems include**

✓ **Malnutrition**

✓ **Vitamin A Deficiency**

✓ **Iron Deficiency**

✓ **Low Birth Weight**

# **Under 5 Mortality Rate**

**Number of deaths of < 5 years of  
age in a given year**

**U5MR ----- x 1000**

**Total number of live births in the same year**

# Why use the U5MR as the single most important indicator of the state of the world's children?

For the following reasons

**1-The U5MR reflects the nutritional health and the health knowledge of the mothers.**

**2-The level of immunization and ORT use.**



**3-The availability of maternal and child health services [including the antenatal care].**

**4-Income and food availability in the family.**

**5-The availability of clean water and safe sanitation.**

**6-The overall safety of the child's environment**

# Child Survival Index

$$\text{CSR} = \frac{1000 - \text{under 5 mortality rate}}{10}$$

**This figure shows the percentage of those who survive to the age of 5 years.**

**U5MR of Iraq in 2006 = 39/1000 live births**  
**CSR = 1000 - 39/10 = 96.1%**

# INDICATORS OF MATERNAL AND CHILD HEALTH CARE

**WHO defines Indicators as**  
**“variables which measure change”**

# **Maternal and child health status is assessed through mortality, morbidity and growth and development and other indicators**

**1- Maternal mortality ratio**

**2-Under-five child mortality, with the proportion of newborn deaths**

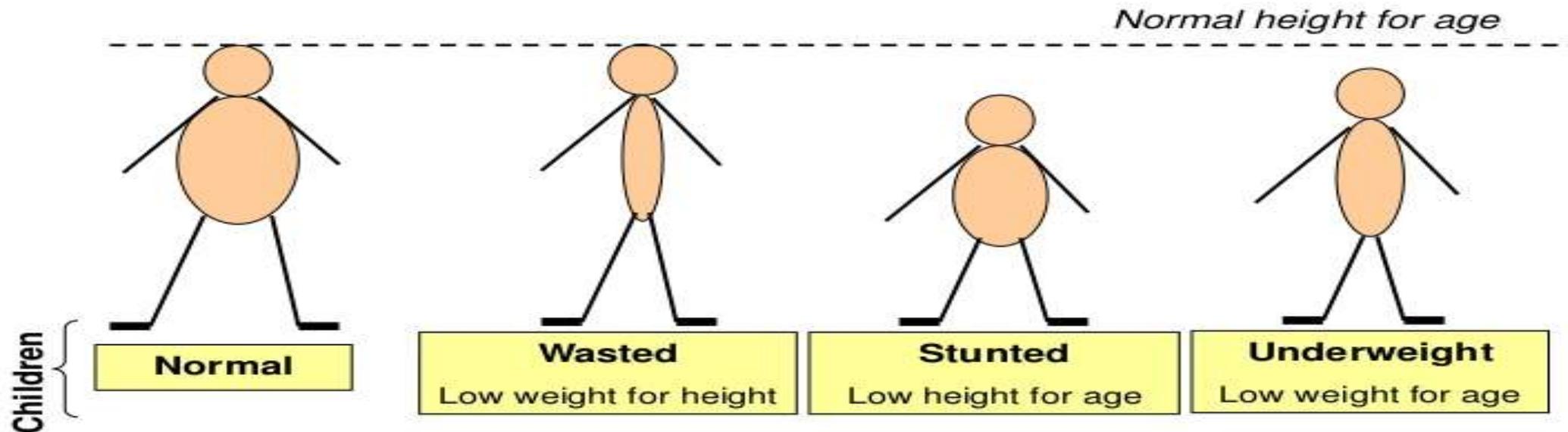
**3- Children under five who are stunted**

**Stunted typically have short heights and low body masses for their age group.**

**Number of children under five years of age whose length-for-age or height-for age is below minus two standard deviations from the median of the WHO Child growth standards**

**Stunting reflects continued, long term exposure to poor health and nutrition, particularly during the first two years of life**

## Different Types of Childhood Malnutrition



More than 40% of  
all kids in Tanzania  
are stunted.

This line is the median  
height of 9-year-olds  
worldwide

We couldn't find a 9-year-old  
in Mirongoine, Tanzania who  
stood taller than this line

SOURCE: World Health Organization, Child Growth Standards, 2014

[gatesnotes.com](http://gatesnotes.com)

## **4. Proportion of demand for family planning satisfied (met need for contraception)**

**Is defined as the sum of the number of women of reproductive age (15–49 years) who are currently using, or whose partner is currently using, at least one contraceptive method.**

**Number of women 15–49 years old who are using modern contraceptive methods**

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**Total number of women 15–49 years old with a demand for family planning.**

## 5-Antenatal care coverage

Indicator: **Percentage of women attended, at least once during pregnancy, by skilled health personnel for reasons relating to pregnancy. At least 4 times during pregnancy**

## 6-Births attended by skilled health personnel

Indicator: **Percentage of births attended by skilled health personnel.**

**Skilled attendant at birth is a measure of a health system's ability to provide adequate care for pregnant women during labour and delivery.**

# 7-C-sections as a percentage of all births in the population

This indicator is aimed at measuring progress towards the reduction of maternal mortality.

(WHO),state that caesarean section use continues to rise globally, now accounting for more than 1 in 5 (21%) of all childbirths. This number is set to continue increasing over the coming decade, with nearly a third (29%) of all births likely to take place by caesarean section by 2030

**According to WHO optimal rate for CS between 10-15%**

**When c- section rates in a country near 10%, there is significant decrease in maternal and newborn deaths.**

**When rate goes over 10% , there is no evidence that death rates will improve.**

**CS rate was (37.8%) in Iraq 2016**

**8-Three doses of combined diphtheria-tetanus pertussis (DTP3)**

**9-Immunization coverage among children aged (12–23 months)**

**10- Exclusive breast feeding for six months(0-5) months**

**11- Antibiotic treatment for suspected pneumonia among under five children**

**12-Postnatal care for mothers and babies within two days of birth**

**Any Question ?**

