Maternal & child health care (MCH)
Specific objectives
At the end of the lecture you will be able to

1. Define MCH.
2. List the components of PHC prog.
3. Explain why we need MCH services.
4. Describe the health indices, & demographic profile of Iraqi population by the use of population pyramid.
5. Define and classify maternal death.
6. common causes of maternal death.
7. State the objectives and goals of MCH.
8. Practicing vital indices.
9. Identify & describe the components of MCH.
MCH:

- it concerned with the *physical, mental and medical* care of children and women in order to enhance the future health and welfare of society and subsequent generations.

- CHILDREN?

- WOMEN?

- **Is one of the essential components of PHC**
Main elements of PHC program:

1. Health education
2. Proper nutrition
3. Immunization
4. Maternal and child health & family planning (FP)
5. Water and sanitation
6. Control of endemic disease
7. Rx of common disease
8. Provision of essential drugs
   o Promotion of mental health
   o School health services.
Why we need MCH services?
Justification to provide MCH services

1. Mothers & children form the majority of the population in Developing countries.
2. Many of health problems encountered by mothers & children are preventable.
4. Mother & children represent the least powerful sector of the community.
5. Deaths of mothers & children is major determinant of mortality in Developing countries.
Several lessons can be learned from the west:

- $500,000/yr$
- $10$ million /yr

*History:*

*Obstacles in developing count.*?
Globally

Annually 200,000,000 women become preg.

15% need skilled obst. care

580,000 women develop fatal complications of preg. & childbirth

Infants born alive

8,100,000 (die during the 1st year)

4,000,000 (die during the 1st month)

2,800,000 (die during the 1st week)

Another 2,800,000 die because of abortion & stillbirths

1st - 6th wks of pregnancy
the demographic profile of Iraqi population:

- type of Iraqi population? Why?
- Pop. Pyramid shape?
- <20?
- 60+?
- infants 3.9%
- <5 is 16.9%.
- <15 is 40%.
- The sex ratio??
- marital status?
Figure 1: Population Pyramid: All Iraq (IFHS 2006/7)
Dark color indicates the percentage of the population who are married.
England & Wales Population 2010

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td>364400</td>
<td>346200</td>
</tr>
<tr>
<td>01-04</td>
<td>1330700</td>
<td>1497900</td>
</tr>
<tr>
<td>05-09</td>
<td>1497900</td>
<td>1542900</td>
</tr>
<tr>
<td>10-14</td>
<td>1680500</td>
<td>1718100</td>
</tr>
<tr>
<td>15-19</td>
<td>1855700</td>
<td>1844800</td>
</tr>
<tr>
<td>20-24</td>
<td>1855700</td>
<td>1844800</td>
</tr>
<tr>
<td>25-29</td>
<td>1882100</td>
<td>2018000</td>
</tr>
<tr>
<td>30-34</td>
<td>1718100</td>
<td>2018000</td>
</tr>
<tr>
<td>35-39</td>
<td>1882100</td>
<td>2018000</td>
</tr>
<tr>
<td>40-44</td>
<td>2069800</td>
<td>2041700</td>
</tr>
<tr>
<td>45-49</td>
<td>2041700</td>
<td>1707800</td>
</tr>
<tr>
<td>50-54</td>
<td>1770000</td>
<td>1707800</td>
</tr>
<tr>
<td>55-59</td>
<td>1605100</td>
<td>1707800</td>
</tr>
<tr>
<td>60-64</td>
<td>1707800</td>
<td>1707800</td>
</tr>
<tr>
<td>65-69</td>
<td>1343700</td>
<td>1343700</td>
</tr>
<tr>
<td>70-74</td>
<td>1153800</td>
<td>1153800</td>
</tr>
<tr>
<td>75-79</td>
<td>977800</td>
<td>977800</td>
</tr>
<tr>
<td>80-84</td>
<td>786900</td>
<td>786900</td>
</tr>
<tr>
<td>85+</td>
<td>856400</td>
<td>856400</td>
</tr>
</tbody>
</table>
Main causes of children deaths:

- **infectious disease and malnutrition.**
- **Pneumonia & diarrhea** account for ½ of deaths → ARI & diarrh. Control program.
- The children who escape death suffer from blindness, crippling and mental retardation.
Main causes of new born deaths:
- asphyxia → 21% of newborn deaths.
- pneumonia → 19%
- neonatal tetanus → 14%
WHAT ARE THE VITAL STATISTICS IN MCH?
The health indicators for Iraq are as follows:

- Maternal mortality ratio of 84/100,000 live births, 2006.
- Under 5 mortality rate (U5) is 58.9/1000 live birth, 2003-2005.
- Neonatal mortality rate is 23 per 1000 live births.
- Low birth weight is 23.1%.
- Abortion rate is 9.7% (2006).
- Still birth is 0.9% (2006).
What is the leading cause of death among women of reproductive age?
What is the Definition of Maternal Mortality

is the death of a woman while pregnant, during delivery or within 42 days of termination of pregnancy, regardless of site or duration of pregnancy, from any cause related to or aggravated by pregnancy or its management due to direct or indirect maternal causes, but not from accidental or incidental causes.
Causes of maternal mortality

- Sever bleeding: 25%
- Infection: 15%
- Unsafe abortion: 12%
- Eclampsia: 12%
- Obstructed labour: 8%
- Other direct causes**: 8%
- Indirect causes**: 20%
Maternal mortality ratio

- Represents the risk of each pregnancy obstetrical risk.
- calculated as the number of maternal deaths during a given year per 100 000 live birth during the same period.
Maternal mortality rate

• Measures both the obstetric risk & the frequency with which women exposed to this risk.

• Calculated as the number of maternal deaths in a given period per 100,000 women of reproductive age (usually 15-49 years).
Maternal disability

• Short or long-term illness caused by obstetric complications
• 1 death: 20 disabled.
• Commonest disability is?
Objectives of MCH:

- Reduction of maternal, childhood mortality and morbidity.
- Promotion of reproductive health
- Promotion of physical and psychological development of the child.
Common goals of MCH

1. Reduction of mortality; MMR, IMR, U5MR.
2. Women education
3. Better nutrition
   - Reduction of LBW to <10%
   - Enable all women to exclusively BF
   - Elimination of severe malnutrition as stunting, wasting, and obesity in young children, iodine deficiency, nutritional blindness,
4. Control of childhood diseases; polio, neonatal tetanus, measles, diarrhea, ARI.
5. Control of environment; safe water, sanitary sewage disposal, safe environment free of radiation, chemical and microbiological pollution
Vital statistic in MCH

- Example: in a population, the no. of live births in the year 2011 was 1000, there were 30 stillborn babies, 20 deaths in the 1st wk of life, 25 deaths between 1 and 4 wks of birth, and 40 deaths between 4-52 wks of birth. 2 women died of causes related to pregnancy or its consequences at the same yr, calculate the various mortality rates during that yr in that population:
Essential elements (phases) of MCH services in PHC center:

1. (pre-marital care)
2. (pre-natal care)
3. (natal) care
4. Post-natal care
5. Family planning (FP) → Reproductive Health Center
6. Care of new born
7. Child health care
Pre-marital care include:

1. Complete medical and family history: thalassemia, TB, STD....ect.
2. Full clinical examination including chest X-ray
4. Laboratory investigation????.
5. IMMUNIZATION(?)
Pre-natal care:

Aims and objectives of ANC

The aim of good prenatal care:

- To detect any potential problems early,
- To prevent them if possible,
- To direct the woman to appropriate specialists, hospitals, etc. if necessary.
Ante-natal care (ANC)

Defines as the complete health supervision and care of pregnant women to:

Maintain, protect & promote health and well being of mother, fetus & new born infant.

It includes every aspect from screening to intensive life support.
Components of ANC

1. Ante-natal examination
2. Risk screening and assessment
3. Preventive measures
4. Health education.
The ante-natal follow-up should be:

Adequate: which includes quantity & quality

1. **Quantity**
   - Time of onset → 1\textsuperscript{st} trimester
   - No. of visits →

(7) distributed throughout pregnancy
2. Quality
standard care include:

- Confirmation of pregnancy
- Family, medical, past obstetrical, present pregnancy history.
- Physical examination
- Fatal heart after the 1\textsuperscript{st} trimester (at 2\textsuperscript{nd})
- Ultrasound
- Record all the information
Ante-natal examination: Standards of ANC

AT 1ST VISIT → INCLUDES

A:- General information: Start by;
  - confirming pregnancy.
  - preparation of pregnancy file.

B:- History: includes:
  1. medical & surgical history.
  2. Family history:
  3. Past obstetric history:
  4. Menstrual history:
  5. Drug History:
6. Present pregnancy:

LMP

- to calculate
- the EDP, EDD

- to calculate the gestational age
C:- physical examination

- **Wt.** → sudden wt gain → pre-Eclampsia.
- **Ht.** → if less than 150 cm → risk of contracted pelvis.
- **Blood pressure,**
- **breast abnormality,**
- **heart and lung examination,**
- **teeth caries, varicosity and leg edema.**
- Abdominal examination; fundal height, fetal heart sound.
- Pelvic examination; evaluation of bony pelvis for symmetry & examination of cervix for infection and dilatation.
D: lab investigation:

- GUE: look for pus cell & bacteria → UTI
- protein → pre-eclampsia
- glucose → glucose urea
  - Normal (preg. Associated)
  - borderline (gTT)
  - elevated (gestational DM)
- Serology → Syphilis
  → HIV
  → Rubella antibodies
  → HBS screening
  - history of chronic liver disease
  - working in hemodialysis unit
  - house hold contact
  - multiple episodes of STDs
  - multiple exposure to blood
- Rh, ABO group
- Hb & PCV
E: subsequent visits (instruction)

- **Frequency**
  - one visit every month, till 28th week
  - 28th-36th wk every 2 wk
  - 36th onward → once wkly

- **Examination**
  - blood pressure each visit
  - wt each visit;
    - little ↑ during the 1st 12 wks
    - 16th-28th wk → 6kgs
    - After that → 2kgs/4wks
  - GUE, Hb level during 2nd or 3rd trimester
  - Rh –ve mother perform Ab determination test.
Repeated blood sugar estimation if there is family history of DM, and?

Fundal height should be recorded in every visit, similarly fetal heart sound and from 32\textsuperscript{ed} wk onward presentation should be checked also.
**استمارة الحامل**

<table>
<thead>
<tr>
<th>Notes for Special care: Colour letter (R) in red pencil here</th>
</tr>
</thead>
<tbody>
<tr>
<td>ر</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MINIMALS HISTORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
</tr>
<tr>
<td>Hypertension</td>
</tr>
<tr>
<td>Renal Disease</td>
</tr>
<tr>
<td>Heart Disease</td>
</tr>
<tr>
<td>Epilepsy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MENSTRUAL HISTORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menarche</td>
</tr>
<tr>
<td>LMP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FAMILY HISTORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
</tr>
<tr>
<td>Hypertension</td>
</tr>
<tr>
<td>Multiple Pregnancy</td>
</tr>
<tr>
<td>Congenital Anomaly</td>
</tr>
<tr>
<td>Mental Retardation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAST OBSTETRIC HISTORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
</tr>
<tr>
<td>Duration of Pregnancy</td>
</tr>
<tr>
<td>Sex</td>
</tr>
<tr>
<td>Place of Delivery</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRESENT PREGNANCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Examination</td>
</tr>
<tr>
<td>Stature (slim. Normal. full)</td>
</tr>
<tr>
<td>Anaemia</td>
</tr>
<tr>
<td>Heart</td>
</tr>
<tr>
<td>Respiratory System</td>
</tr>
<tr>
<td>Breast</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INVESTIGATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teeth</td>
</tr>
<tr>
<td>goiter</td>
</tr>
<tr>
<td>Blood Pressure</td>
</tr>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>Hight</td>
</tr>
<tr>
<td>Hb</td>
</tr>
<tr>
<td>VDRL</td>
</tr>
<tr>
<td>Blood group</td>
</tr>
<tr>
<td>Urine</td>
</tr>
<tr>
<td>Rh</td>
</tr>
<tr>
<td>Others</td>
</tr>
</tbody>
</table>

| Gm. |
| TPHA |
| % |

<table>
<thead>
<tr>
<th>Antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>11</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>13</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>16</td>
</tr>
</tbody>
</table>