Maternal and Child Health (MCH)

Learning objectives:

After this lecture, the student should be able to:

1. Identify the components of antenatal check-up and visits.
2. Describe risk factors of pregnancy that should be considered in antenatal visits.
3. Describe the status of antenatal care in Jordan.
4. Identify pregnancy complications.
5. Identify the causes of maternal morbidities.

ANC

- Antenatal care can play a role in identifying danger signs or predicting complications around delivery by screening for risk factors and arranging for appropriate delivery care when indicated.

Antenatal checks and tests

- **Weight and height checks**

  to calculate BMI (body mass index)
- **Urine tests**

  urine is checked for several things , including protein or albumin.
- **Blood pressure test (A rise in blood pressure later in pregnancy could be a sign of pre-eclampsia)**
- **Blood tests**
- **ultrasound scan**

Urine Check

- Diabetes. High levels of glucose (or sugar) in your urine may indicate pre-existing type 1 or type 2 diabetes or, later on in pregnancy, gestational diabetes (GD).
- Gestational diabetes is also tested for with a glucose (blood sugar) screening.

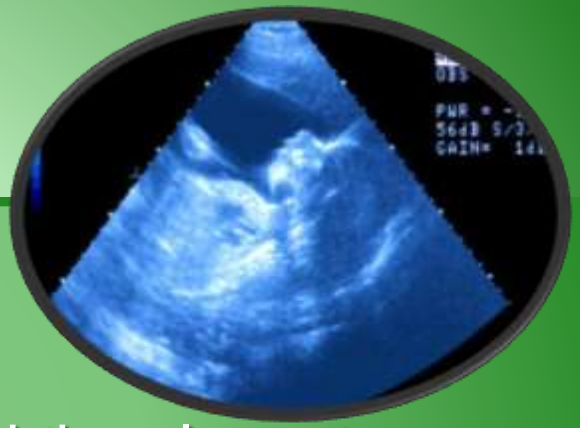
Urine Check

- Preeclampsia. Protein in urine is sometimes a sign of preeclampsia, or pregnancy-induced high blood pressure.
- A urinary tract infection (UTI). white blood cells in urine may be a sign of a UTI.

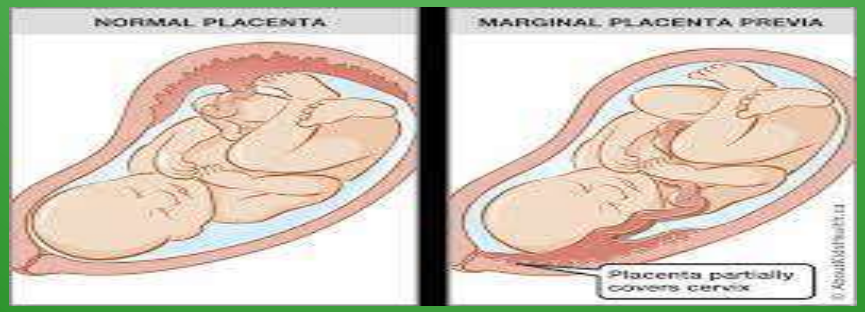
Urine Check

- Dehydration. Dark, coloured urine usually signals that there is a need to drink more water.

What can an ultrasound scan be used for?



- To check the baby size.
- To detect abnormalities.
- To show the position of the baby and the placenta. For example, when the placenta is low down in late pregnancy, a caesarean section may be advised (Placenta praevia (low-lying placenta). It may also cause bleeding.
- To check that the baby is growing normally



According to JPFHS 2017-2018

- Almost all of the women who received ANC for their most recent birth had had key ANC services performed, including having their blood pressure measured (97%), a urine sample taken (96%), a blood sample taken (97%), and their weight measured (97%)

ANC visits

- In low- and middle-income countries (LMICs), ANC utilization has increased since the introduction of the 2002 WHO ANC model, known as ‘focused’ ANC (FANC).
- This model aims at delivering ‘reduced but goal-orientated’ clinic visits, at which essential interventions should be provided to pregnant women at specified intervals.
- With the FANC model, healthy women with no underlying pregnancy complications should be scheduled a minimum of four ANC visits, and more than four in the case of danger signs or pregnancy-related illnesses.

ANC visits

- For many of the essential interventions in FANC, it is crucial to initiate the care as follows:

1. First visit: during the first trimester of pregnancy (up to 12 weeks of gestation).
2. Second visit at 24 to 28 weeks of gestation.
3. Third visit at 32 weeks
4. Fouth visit between 36 and 38 weeks of gestation.

Pregnancy risk factors that should be considered in ANC

1-Age under 18 or above 35 in Jordan mean age of females at first marriage **2017 is 26.3 years**

2-Height (less 150 cm) And Wt. under or over wt.

Short stature may lead to preterm birth, bleeding during delivery.

3-Residency

4-Education

5-Income

Pregnancy risk factors that should be considered in ANC

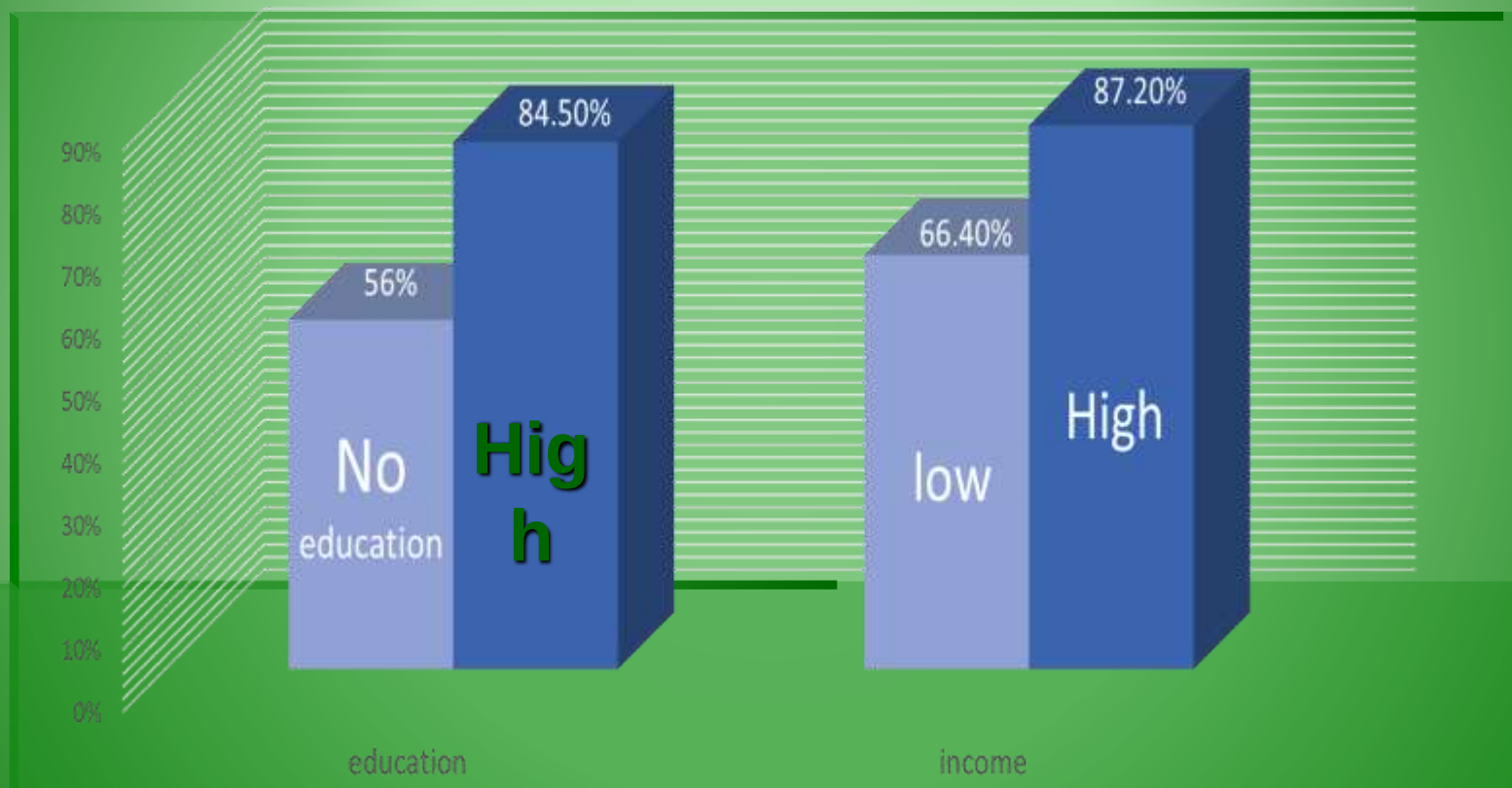
- 6-Past Medical history: Diabetes, cardiac problem, renal disease etc.
- 7-Past obstetric history: Previous caesarean section, vacuum, or forceps delivery
- 8. Previous perinatal death, stillbirth
- 9. Previous Post partum haemorrhage (PPH)
- 10. Previous ante partum haemorrhage (APH)

Pregnancy risk factors that should be considered in ANC

- 11-General condition of the woman pre-conceptional (Hb level, nutritional, blood pressure and general condition.)

- 12- Social history : Smoking, Alcohol or any drug therapy , **economic status.**

Antenatal care in Jordan in 2012 *JPFHS*



TEENAGE PREGNANCY (adolescent pregnancy) (being pregnant in the age ranging from 15-19 years)

- Children born to very young mothers are at increased risk of sickness and death.
- Teenage births result in health consequences; children are more likely to be born pre-term, have lower birth weight, and higher neonatal mortality, while mothers experience greater rates of post-partum depression.
- Teenage mothers are more likely to experience adverse pregnancy outcomes. Teenage girls are more often present later for care.
- An individual's education and training can be disrupted by teenage pregnancy.
- There is also an association between domestic violence and teenage pregnancy

Interventions and practice recommendations to manage teenage pregnancy (Act to reduce the risk of unintended adolescent pregnancy)

- Encourage long-acting reversible contraception (LARC), which has been shown to be more reliable in this age group and should be the first-line recommendation.

Antenatal care in teenage pregnancy

- Assess nutritional adequacy.
- Recognise that teenagers may have less anatomical knowledge and will be less likely to understand what is happening to their bodies so may benefit from explanations at all stages.
- Teach about signs and symptoms of preterm labour.
- Discuss contraceptive options before delivery.
- Encourage and facilitate breastfeeding.

Antenatal classes in Europe

Topics covered by antenatal classes are:

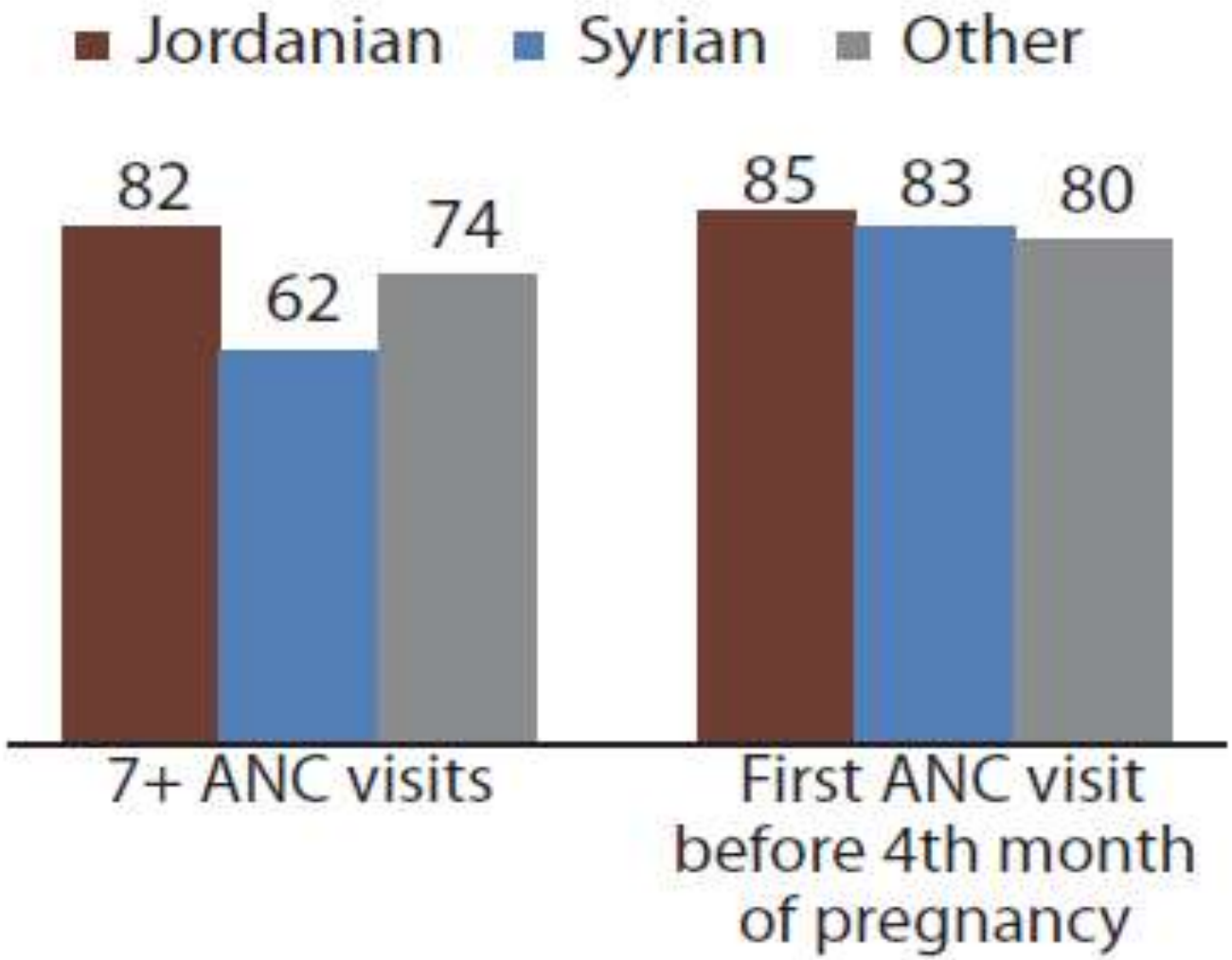
- health in pregnancy, including a healthy diet
- exercises to keep fit and active during pregnancy
- what happens during labour and birth
- coping with labour and information about different types of pain relief
- relaxation techniques during labour and birth
- information about different kinds of birth and interventions
- caring for the baby, including feeding
- health after birth
- "refresher classes" for those who've already had a baby

Access to ANC services

- As outlined by the WHO, access to ANC services consists of several elements, including distance and/or time to a facility, the physical availability of services, cultural and social factors that may impede access, economic and other costs associated with use of services, and the quality of the services offered

Number of Antenatal Care Visits and Timing of First Visit by Nationality

Percent of women age 15-49 who had a live birth in the five years preceding the survey who had:



Antenatal Care / Jordan JPFHS 2017

- Almost all ever-married women (98%) age 15-49 received at least one antenatal care (ANC) visit from a skilled provider (doctor or nurse/midwife).
- The timing and quantity of antenatal care visits are important. About 9 in 10 (92%) women age 15-49 made 4+ ANC visits.

Pregnancy complications

Problem	Symptoms
Anemia Hb.< 10	▪ Feel tired or weak ▪Look pale ▪Feel faint ▪Shortness of breath
Gestational diabetes Too high blood sugar levels during pregnancy	▪Usually, there are no symptoms. Sometimes, extreme thirst, hunger, or fatigue ▪ Screening test shows high blood sugar levels

Preeclampsia A condition starting after 20 weeks of pregnancy that causes high blood pressure and problems with the kidneys and other organs. Also called toxemia. Pregnant teens and women over 40 are at increased risk.	High blood pressure Swelling of hands and face Too much protein in urine Stomach pain Blurred vision Dizziness Headaches
Preterm labour – Going into labour before 37 weeks of pregnancy	Increased vaginal discharge Pelvic pressure and cramping Back pain radiating to the abdomen Contractions

Maternal Morbidities

Maternal morbidity

- The WHO Maternal Morbidity Working Group defines maternal morbidity as "any health condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman's wellbeing"

HYPERTENSIVE DISORDERS OF PREGNANCY

- Chronic hypertension is defined as blood pressure exceeding 140/90 mm Hg before pregnancy or before 20 weeks' gestation.

- When hypertension first is identified during a woman's pregnancy and she is at less than 20 weeks' gestation, blood pressure elevations usually represent chronic hypertension.

Preeclampsia (PE)

- Preeclampsia (PE) is a multisystem, pregnancy-specific disorder that is characterised by the development of hypertension and proteinuria (elevated levels of protein in the urine) after 20 weeks of gestation.
- PE is a leading cause of maternal, perinatal (from the 20th week of gestation to the 4th week after birth), and foetal/neonatal mortality and morbidity worldwide

Preeclampsia (PE)

- Clinically, PE presents as new-onset hypertension in a previously normotensive woman, with systolic and diastolic blood pressure readings of ≥140 and ≥90 mmHg, respectively, on 2 separate occasions that are at least 6 hours apart, together with proteinuria that develops **after 20 weeks of gestation**

Preeclampsia (PE)

- Preeclampsia occurs in approximately 5% of all pregnancies, 10% of first pregnancies, and 20-25% of women with a history of chronic hypertension.

- Hypertensive disorders in pregnancy may cause maternal and fetal morbidity and remain a leading source of maternal morbidity.

Preeclampsia

- Although the exact path physiologic mechanism is not clearly understood, preeclampsia can be thought of as a disorder of endothelial function with vasospasm. (placental ischemia).
- Reduce blood flow from uterus to placenta- placental ischemia- release of proteins from the placenta that go to mother circulations- vasospasm in blood vessels- Hypertension
- Evidence also indicates that an altered maternal immune response to fetal/placental tissue may contribute to the development of preeclampsia.

Preeclampsia (PE)

- PE can evolve into eclampsia which is a severe complication that is characterised by new-onset of epileptic seizures, due to angiospasms in the brain and brain oedema.

RISK FACTORS

- **Maternal risk factors:**
- First pregnancy
- Age younger than 18 years or older than 35 years
- History of preeclampsia
- Family history of preeclampsia in a first-degree relative
- Black race

Medical risk factors:

- Chronic hypertension
- Preexisting diabetes (type 1 or type 2).
- Renal disease
- Obesity


THANK
YOU