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.

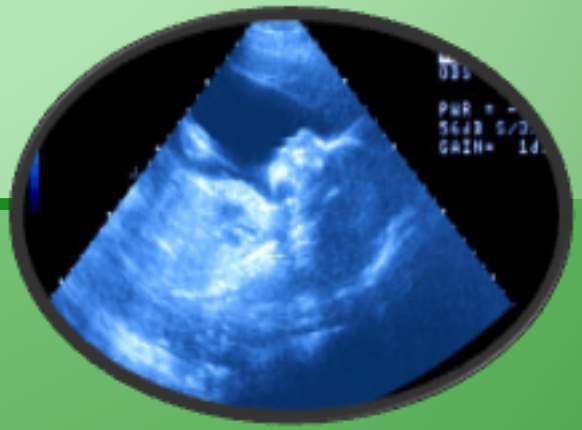
Antenatal checks and tests

- **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**
- **Blood tests**
- **ultrasound scan**

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.
- 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 during the first trimester of pregnancy (up to 12 weeks of gestation), and schedule the second visit at 24 to 28 weeks of gestation and the third and fourth visits at 32 weeks and between 36 and 38 weeks of gestation, respectively.

- Antenatal care centers should provide programs to seek out women unable or unwilling to attend a clinic and take the services to them, and so attaining a coverage of 100% as we are not far from reaching this number

as recommended by the World Health Organization (WHO), providing pregnant women with four antenatal visits, of which the initial contact should be scheduled during the first trimester of pregnancy.

Pregnancy risk factors that should be considered in ANC

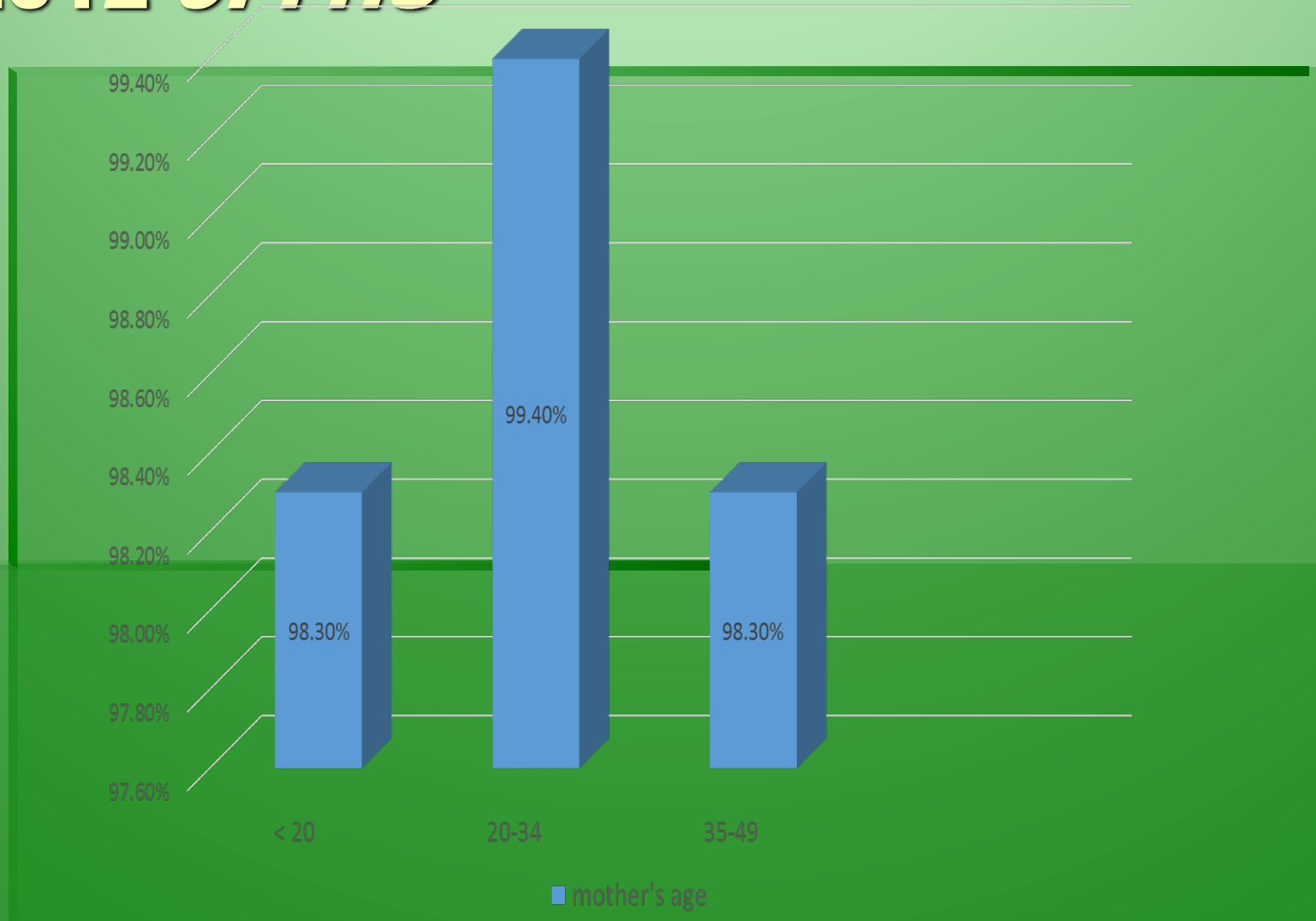
1-Age under 18 or above 35 in Jordan mean age of females at first marriage **2017 is 26.3 years**
2-Height(less 150 cm) And Wt. under or over wt.
3-Residency
4-Education
5-Income
6-Parity (Primigravida , More than 6 pregnancies)

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

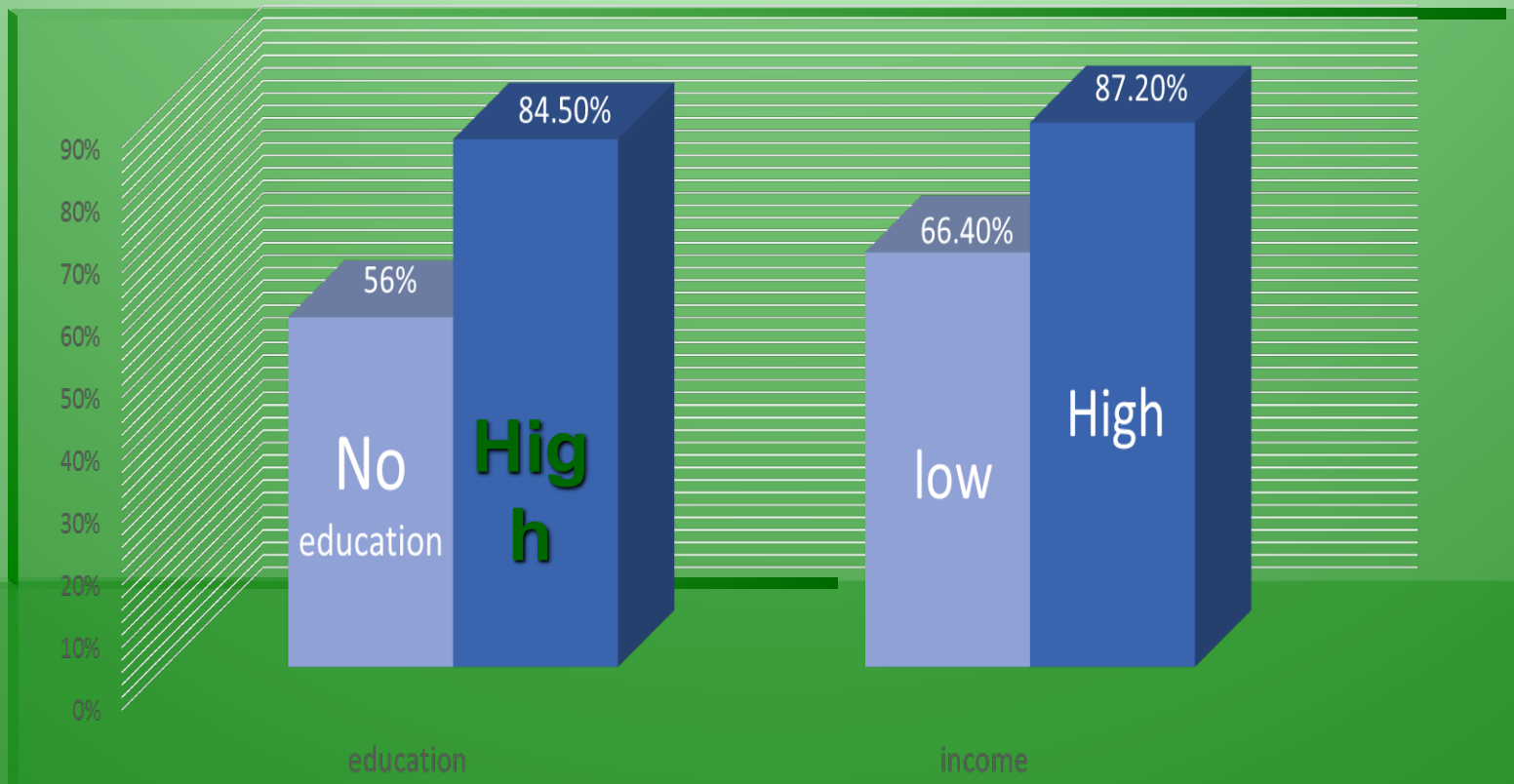
- 10-General condition of the woman pre-conceptional (Hb level, nutritional, blood pressure and general condition.)

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

Antenatal care in Jordan (according to mother's age) in 2012 *JPFHS*



Antenatal care in Jordan in 2012 *JPFHS*

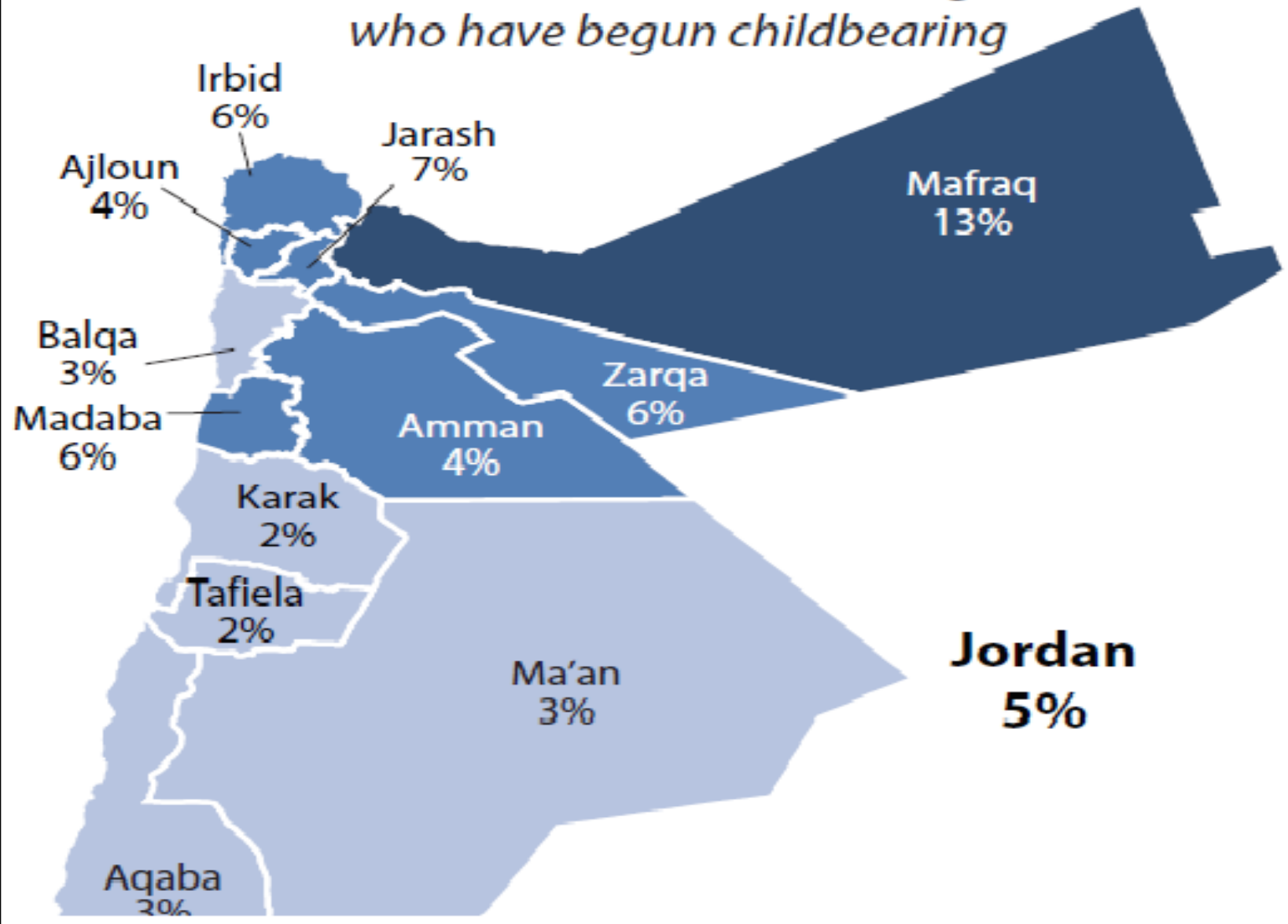


TEENAGE PREGNANCY (adolescent pregnancy)

- The issue of adolescent fertility is important for both health and social reasons.
- Children born to very young mothers are at increased risk of sickness and death.
- Teenage mothers are more likely to experience adverse pregnancy outcomes and are more constrained in their ability to pursue educational opportunities than young women who delay childbearing.

Teenage Childbearing by Governorate

Percent of ever-married women age 15-19 who have begun childbearing



- 5% of women age 15-19 in Jordan have begun childbearing: 3% have had a live birth, and 2% were pregnant with their first child at the time of interview.
- As expected, the proportion of women age 15-19 who have begun childbearing rises rapidly with age, from 5% among women age 17 to 11% among those age 19..

- Teenage childbearing is more common among women in the Mafraq governorate (13%) and Syrian women (28%).
- The proportion of women who have started childbearing decreases with increasing level of education: more than 1 in 4 women age 15-19 with elementary education (27%) have begun childbearing compared with 8% of women who have attained preparatory

- education and 4% of those who have attained secondary education.
- Teenage childbearing also appears to decrease with wealth: 13% of women age 15-19 and women from the lowest wealth quintile have begun childbearing compared with 4% of those in the middle quintile

Antenatal classes in Europe

Topics covered by antenatal classes are:

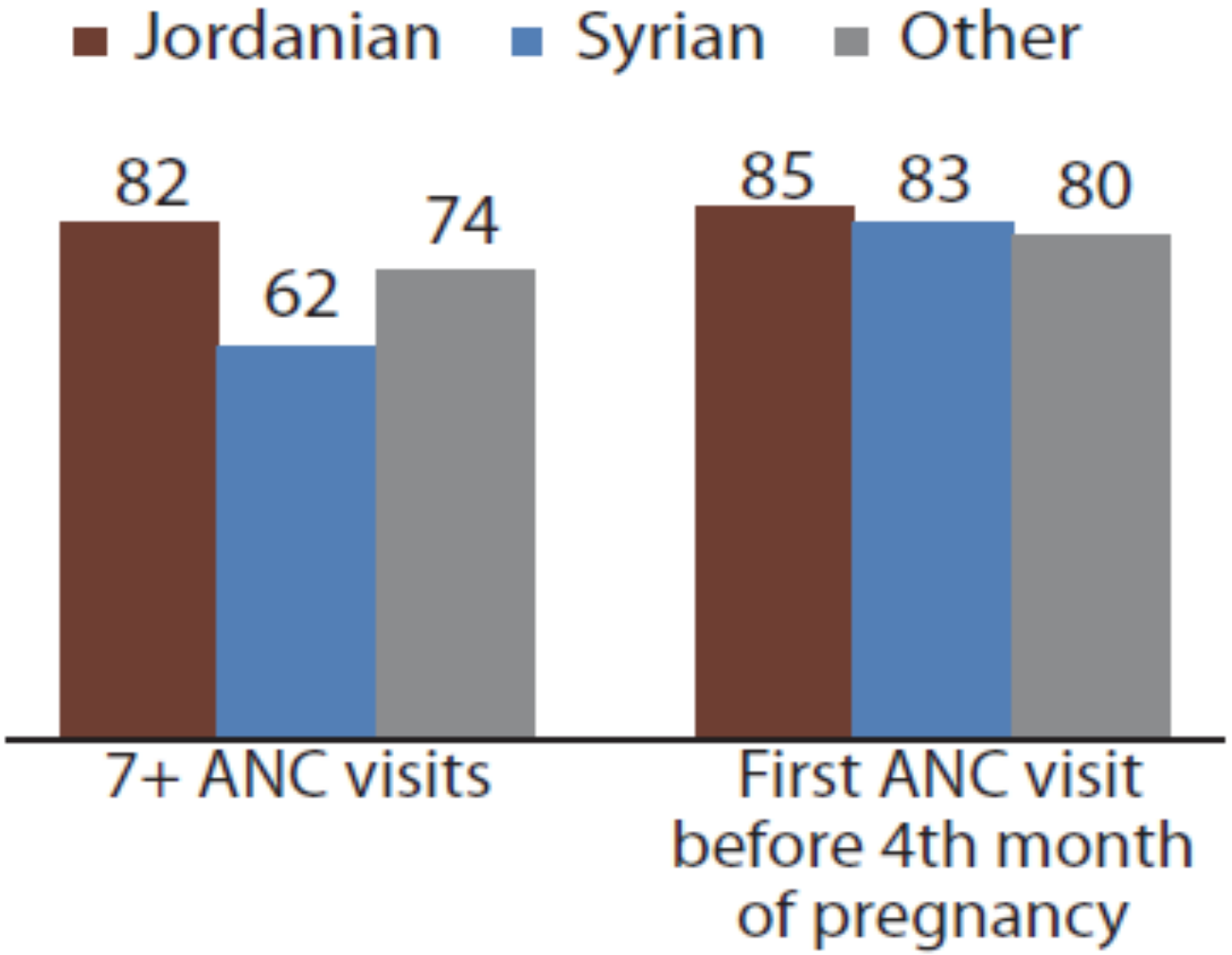
- health in pregnancy, including a healthy diet
- exercises to keep fit and active during pregnancy
- what happens during labour and birth
- coping with labour and information about different types of pain relief
- relaxation techniques during labour and birth
- information about different kinds of birth 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, and 79% had the recommended 7+ 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
High blood pressure (pregnancy related) High blood pressure that starts after 20 weeks of pregnancy and goes away after birth	▪ High blood pressure without other signs and symptoms of preeclampsia

Miscarriage **Pregnancy loss from natural causes before 20 weeks. As many as 20 percent of pregnancies end in miscarriage. Often, miscarriage occurs before a woman even knows she is pregnant**	**Signs of a miscarriage can include:** **Vaginal spotting or bleeding*** **Cramping or abdominal pain** **Fluid or tissue passing from the vagina** *** Spotting early in pregnancy doesn't mean miscarriage is certain. Still, contact your doctor right away if you have any bleeding.**
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.	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

WHAT IS MATERNAL MORBIDITY??

- Any departure, subjective or objective, from a state of physiological or psychological maternal well-being; during pregnancy, childbirth and the postpartum period up to 42 days of delivery, related to changes taking place in these periods.

Another definition for 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”

- ***Most frequently reported maternal morbidities "from the most to the least common"** (taken from WHO's systematic review of maternal mortality and morbidity (2003) that covered all published and unpublished reports on maternal mortality and morbidities from 1997 to 2002)

Causes of Morbidities

- I. Hypertensive disorders
- 2.Stillbirth
- 3.Abortion
- 4.Hemorrhage
- 5.Preterm delivery
- 6.Anemia in pregnancy
- 7.Diabetes in pregnancy
- 8.Ectopic pregnancy
- 9. Perineal tears
- 10. Uterine rupture
- 11. Depression
- 12.0bstructed labour
- 13. Postpartum sepsis

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

- 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

- 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. (Fetal ischemia)
- Evidence also indicates that an altered maternal immune response to fetal/placental tissue may contribute to the development of preeclampsia.

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

RISK FACTORS

- **Maternal risk factors:**
- First pregnancy
- New partner/paternity
- 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
- Secondary causes of chronic hypertension such as hypercortisolism, hyperaldosteronism, pheochromocytoma, or renal artery stenosis
- Preexisting diabetes (type 1 or type 2), especially with microvascular disease
- Renal disease
- Systemic lupus erythematosus
- Obesity

Discussion Questions

1. What is the definition of maternal morbidity?
2. What are the most common causes for maternal morbidities?
3. What are the key features of preeclampsia?

Thank you