



2024 SUMMARY

COMMUNITY MEDICINE

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Maternal and Child Health Care (MCH)

- **MCH:** is the health service provided to mothers (women in their childbearing age) and children
- It targets **all women** in their reproductive age, (15 - 49 years), **children** (school age, adolescents)
- It focuses on health issues concerning women, children and families, such as:
 - Access to recommended **prenatal** and well-child visits and Newborn **screening**
 - Infant and maternal **mortality prevention** and promotion of **mental health**
 - Child **immunizations** and **nutrition**
 - Services for children with **special health care needs**
- Objectives of Maternal Child Health Services
 - To **reduce morbidity and mortality** among mothers and children, by promotion instead of cure
 - **Improve women and children health** by fertility regulation methods, adequate antenatal coverage, and care during and after delivery
 - To **reduce unplanned or unwanted pregnancies** through sex education and contraceptives
 - To **reduce perinatal and neonatal morbidity and mortality**
 - ✓ In countries with **low** neonatal mortality, neonatal deaths are due to congenital anomalies
 - ✓ In countries with **high** neonatal mortality, it is due to neonatal infections
 - **Promotion of reproductive health**
 - **physical and psychosocial development** of the child and adolescent within the family
 - To **reduce the risk of sexually transmitted diseases** (STDs), HIV infection and cervical cancer
 - To **reduce domestic and sexual violence** and ensure proper management of the victims
- Justifications for the provision of MCH Care (Why)?
 - Mothers and children make up **over half of the whole population**
 - Maternal mortality is an **adverse outcome** of many pregnancies and obstetric causes
 - **Insufficient or no prenatal care** and appropriate delivery in developing world
 - **Unwanted pregnancies** carry high risks of morbidity and mortality, with high costs
 - Poor **maternal health** affect women's productivity, welfare, and socioeconomic development
 - ✓ Women with poor nutritional status are more likely to deliver a low-birth-weight infant
 - ✓ Majority of perinatal deaths are associated with maternal complications, poor management techniques during labor and delivery, and maternal status before and during pregnancy
 - Majority of pregnancies that end in a **maternal death** also result in fetal or perinatal death
 - **Physiological changes** that the mother and her child pass through
- Risk assessment in pregnancy
 - **High-risk pregnancy:** the mother, fetus, or both are more likely to face complications or poor outcomes compared to a typical, low-risk pregnancy
 - Risk during pregnancy caused by:
 - ✓ **Environmental, inherited** or certain **behaviors**
 - ✓ **Epidemiological** risk factors such as maternal **age** and **weight** and **social** circumstances
 - ✓ Chronic health or **Medical issues** (Diabetes mellitus, Anemia, Hypertension, Urinary tract infection, Heart disease, Epilepsy, drug usage), and infections
 - ✓ Complications from **previous pregnancies** (obstetric history), such as previous Cesarean

- Risk factors related to past obstetric history: History of **operative delivery, stillbirth** or **neonatal death, ante-partum or post-partum hemorrhages** or **low-birth-weight infant**
- The cesarean birth rate has seen a significant increase due to advanced medical technology and a decline in operative vaginal births
 - **Vaginal birth after cesarean (VBAC)**: cesarean delivery would prevent a woman from having a successful vaginal birth in subsequent pregnancies
- Impact of Maternal Age on Pregnancy Risk
 - Advanced maternal age (35 and older) is linked to higher risks of maternal mortality, preeclampsia, poor fetal growth, fetal distress, and stillbirth compared to women aged 25-29
 - Teenage pregnancy (ages 15-19) increases the likelihood of complications like postpartum hemorrhage, and preeclampsia
 - Both early and late pregnancies are also associated with higher rates of preterm birth
 - ✓ **Preterm birth**: premature birth occurs before the 37th week of pregnancy
 - ✓ A normal pregnancy lasts about 40 weeks
- Impact of Overweight and Obesity on Pregnancy:
 - Over-weight and obesity increase the likelihood of gestational diabetes, hypertensive disorders, preterm birth, cesarean delivery, miscarriage, stillbirth
 - They often face weight stigma in daily life and healthcare (negative attitudes from providers)
 - ✓ Studies show that women with higher BMI may report lower quality of care during and after pregnancy due to weight bias
- Reproductive health indicators for global monitoring:
 - **Total Fertility Rate (TFR)**: Total number of children a woman would have by the end of her reproductive period (**Jordan is 2.6**)
 - **Contraceptive Prevalence Rate (CPR)**: Percent of women of reproductive age (15-49) who are using a contraceptive method at a particular point in time
 - **Maternal Mortality Ratio (MMR)**: Annual number of maternal deaths per 100,000 live births
 - **Antenatal Care Coverage**: Percent of women attended at least once during pregnancy, by skilled health personnel, for reasons relating to pregnancy
 - **Availability of Comprehensive Essential Obstetric Care**: Number of facilities with functioning comprehensive essential obstetric care per 500,000 population
 - **Perinatal Mortality Rate (PMR)**: Number of perinatal deaths per 1,000 total births
 - **Low Birth Weight Prevalence**: Percent of live births that weigh less than 2,500g
 - **Prevalence of Anemia in Women and HIV Prevalence among Pregnant Women**
- Maternal and child health care is one of the components of Primary Health Care (PHC) systems
- Safe Motherhood Initiative: Aimed to reduce maternal mortality
- **Millennium Development Goals (MDGs)**
 - **Goal 4**: Reduce **child** mortality, **Goal 5**: Improve **maternal** health
- Sustainable developmental goals:
 - **Goal 3**: ensure healthy lives and promote well-being for all at all ages

Maternal and Child Health Care (MCH)

• Premarital services

- Targets couples *about to marry*, the *newly married* and any individual *seeking advice*
- It functions: family *health education, sexuality and puberty, marriage and parenthood*
- It also involves genetic counselling to identify β -thalassaemia carriers among couples
 - ✓ In Jordan, premarital screening for β -thalassemia is obligatory

• Preconception care

- Provided to individuals or *couples before pregnancy* to optimize health and promote favorable outcomes for both the mother and the baby (period preceding conception is critical)
- It involves *health promotion, risk assessment*
 - ✓ Such as encouraging physical activity, diet, Nutrition and weight monitoring (by BMI), Preconceptional intake of folic acid, oral multivitamin supplement (iodine), using iodized salt
 - ✓ Megavitamins and herbal preparations should be discontinued
 - ✓ Megadoses of vitamin A during early pregnancy is associated with congenital anomalies
 - ✓ Anemia during pregnancy can threaten the life of both mother and fetus
 - ✓ Avoid harmful substances like smoking, alcohol, and illicit drugs
- *Family planning and contraception*
- *Screening and managing pre-existing conditions* (diabetes, hypertension, or infections)
- *Immunizations* and infectious disease prevention such as **rubella and hepatitis B**, which can adversely affect pregnancy
 - ✓ **Rubella (German Measles)** infection in the first trimester of pregnancy, can cause miscarriage, intrauterine fetal demise or congenital rubella syndrome (CRS)
 - ✓ MMR vaccine is an attenuated (weakened) live virus vaccine, pregnant women should not get
 - ✓ Women who are planning to become pregnant should check that they are vaccinated
 - ✓ Adult women of childbearing age should avoid getting pregnant for at least four weeks after receiving MMR vaccine
- *Psychosocial* support and mental health considerations (emotional, stress management)
- *Fertility investigation* by hormonal evaluation for females and semen analysis for males

• Antenatal care ANC (Conceptional care)

- Offered to mother and unborn child *during pregnancy*
- Involves: *risk identification*, prevention and *management* of pregnancy-related or concurrent diseases and health *education* and health promotion
- Maintain Physical, mental and social health by providing education on nutrition, personal hygiene and birthing process and detect and manage complications during pregnancy
- Help prepare mother to breastfeed successfully, experience normal puerperium
- The first visit or initial visit should be made as early in pregnancy as possible
- Antenatal checks and tests include
 - ✓ Weight and height checks (BMI), and Ultrasound scan
 - ✓ Urine tests (urinalysis, urine check for protein)
 - ✓ Blood pressure, Blood tests (CBC, TSH, Blood glucose)

- Ultrasound is important to establish viability, determine gestational age, assess the number of fetuses, monitor fetal growth and detect fetal abnormalities
 - ✓ Recommended all pregnant women undergo ultrasound at **10 to 13 weeks** of gestation to determine an accurate gestational age for the optimal assessment of fetal growth
- According to the **focused ANC (FANC)** model healthy women (no complications) should be scheduled a minimum of **four ANC** visits, and **more** in the case of danger signs
- Recent evidence suggests that the focused antenatal care (FANC) model, is associated with more perinatal deaths than **ANC models** (by WHO) that comprise **at least eight contacts** between the pregnant woman or adolescent girl and the health care provider
 - ✓ **1 contact in the first trimester, 2 in the second trimester, 5 in the third trimester**
- ANC services are high in Jordan (97%)
- Pregnancy risk factors that should be considered in ANC:
 - Age under 18 or above 35
 - Height (less 150 cm)
 - BMI <18, >25
 - Education and income
 - Past **Medical** history: Diabetes, cardiac problem, renal disease
 - The **general condition** pre-conceptional (Hb level, nutritional, blood pressure)
 - Past **obstetric history** (caesarean section, vacuum, forceps delivery, perinatal death, stillbirth)
 - Previous Post partum or ante partum **hemorrhage** (PPH or APH)
 - Social history: **Smoking, Alcohol**
- Topics covered by antenatal classes in Europe: **Health in pregnancy** (healthy diet and exercises), **labor and birth**, **Coping** with labor and information about different types of **pain relief**, **Relaxation** techniques during labor and birth, **Caring for the baby**, including feeding, Health after birth and **Refresher classes** for those who've already had a baby
- Access to ANC services consists of several elements, including:
 - Distance and/or time to a facility and the physical availability of services
 - Cultural and social factors that may impede access
 - Economic and costs associated with use of services
 - The quality of the services offered
- **Maternal Morbidity** is Any departure, from a state of physiological or psychological maternal well-being; during **pregnancy**, **childbirth** and the **postpartum period up to 42 days** of delivery
- Causes of Maternal Morbidities:
 - Medical comorbidities (Hypertension, Diabetes, anemia, depression, postpartum sepsis)
 - Stillbirth and abortion
 - Hemorrhage
 - Preterm delivery
 - Ectopic pregnancy
 - Perineal tears
 - Uterine rupture
 - Obstructed labor

- Hypertensive disorders of pregnancy
 - Chronic hypertension is defined as blood pressure exceeding **140/90** mm Hg before pregnancy before 20 weeks of gestation
 - **Preeclampsia (PE)**: is a multisystem, pregnancy-specific disorder involve hypertension and proteinuria after 20 weeks of gestation
 - ✓ Causes maternal, and 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
 - ✓ It can be thought of as a disorder of endothelial dysfunction with vasospasm
 - PE can evolve into **eclampsia** which is a severe complication that is characterised by new-onset of epileptic seizures, due to angiospasm in the brain and brain edema
 - ✓ Maternal risk factors: **First pregnancy, Age 35 years, History of preeclampsia, Family history of preeclampsia in a first degree relative, Black race**
 - ✓ Medical risk factors: **Chronic hypertension, Diabetes (type 1 or type 2), Renal disease, Systemic lupus erythematosus, Obesity**




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