

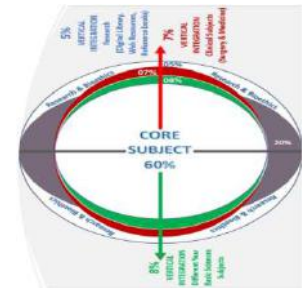
MODULE 4 POPULATION MEDICINE & REPRODUCTION

Preventive Medicine in Obstetrics- II Antenatal Care

Dr Khola Noreen
Dr Mehwish Riaz

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• Prof Umar's Model



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Gits of the Session Contents

1. Statement of learning outcomes (01 slide)
2. Order & Components of the session
 - a. Core subject (contains throughout relevant clinical contents) (30 slides)
 - b. Horizontal Integration (6 slides)
 - c. Research pertinent to enhance understanding o the subjects (02 slides)
 - d. Bioethics : pertinent discussion (01 slides)
 - e. End of the session relevant assessments (01 slides)
 - f. Suggested additional readings (01 slide)

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Vision & Mission of RMU

Vision

Highly recognized and accredited center of excellence in Medical Education, using evidence-based training techniques for development of highly competent health professionals, who are lifelong experiential learner and are socially accountable.

Mission Statement

To impart evidence-based research-oriented health professional education in order to provide best possible patient care and inculcate the values of mutual respect, ethical practice of healthcare and social accountability.



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Antenatal Care learning outcomes

Core
Content

At the end of the lecture students would be able to ;

1. Explain the concept of dimensions of continuum of care
2. Describe the in detail the services for mother during antenatal period
3. Describe the in detail the relevance of antenatal care to the health of mother and pregnancy outcome.

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Continuum of Care RMNCH

Core Content

What is Continuum of care?

The concept of continuum of care is *an approach* to integrate the care that a woman should receive to have *safe motherhood* or *safe childbirth*

The "Continuum of Care" for reproductive, maternal, newborn and child health (RMNCH) includes *integrated service delivery* for *mothers and children* from *pre-pregnancy to delivery*, the *immediate postnatal period*, and *childhood*

Families and communities, outpatient services, clinics and other health facilities, should provide such care. The Continuum of Care is very important for the health of the both women and the newborn child

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2.Places where the care is provided



With respect to the *place-of-care dimension* of the continuum, MNCH interventions can be delivered:

- at a household and in a community – community level/home services;
- through outreach from first-level facilities (includes immunization, antenatal, postnatal care delivered from/at village health posts) – first level/outreach services;
- at district hospital or referral hospitals – referral level services (includes diagnostics, treatment, care, counseling and rehabilitation).

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Dimensions of Continuum of Care

Core Content

- There are two dimensions of continuum of care:
- 1. Stages of the life cycle (Time)
- 2.Places where care is provided

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Objectives

Core Content

The specific objectives of MCH Services as continuum of care focuses on

1. Promotion of reproductive health
2. Reduction of maternal , perinatal, infant, and childhood mortality and morbidity
3. Promotion of physical and psychological development of child and adolescent

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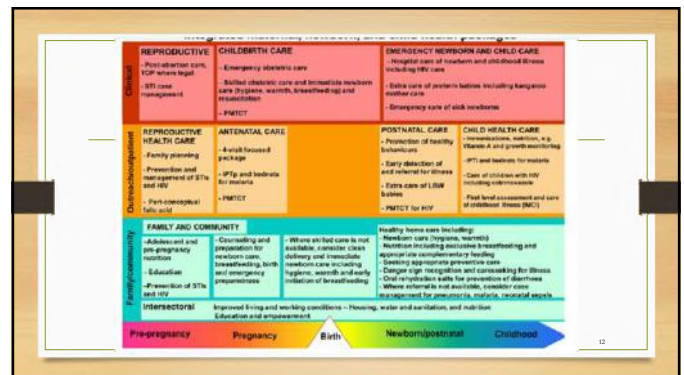
Continuum of care

Core Content

- 1. Stages of the life cycle (Time): In simple language this is continuous care that a woman should get in her lifetime at every **stage of life** from her own family, community and health facilities



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Prevention of Maternal Mortality

Core Content

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a) Pre-Conception Guidance

Horizontal Integration

- Avoid medications
- Take **folic acid** (400 mcg) daily for at least one month before you conceive
- Eat a **healthy diet** and exercise in moderation
- Obtain necessary **vaccinations** (rubella & chicken pox) at least three months before conception
- Identify and **remove health hazards** in your home or workplace
- Achieve a **healthy weight**
- **Discontinue cigarettes** alcohol and other drugs
- **Test for infectious diseases** and screen for other medical problems
- **Genetic counseling**

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HOW MUCH TIME DO WE HAVE WHEN OBSTETRIC COMPLICATIONS ARISE?

It is estimated that, if untreated, **death** occurs on average in :

02 hours	12 hours	02 days	06 days
• Postpartum Hemorrhage	• Antepartum Hemorrhage	• Obstructed labor	• Infection

To avert death and disability...we need to ensure that women have the access to emergency obstetric care (Emoc) 24 hours

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b) Antenatal /Prenatal Care

Horizontal Integration



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Prevention of Maternal Mortality

Horizontal Integration

- Pre - conception Guidance
- Ante-natal / Pre-natal Care
- Natal Care
- Post-natal care

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Antenatal care

Horizontal Integration

- It means the care of mother **during pregnancy**
- Antenatal care aims at prevention and detection of problems of **pregnancy at an early stage** to reduce maternal and perinatal morbidity and mortality.

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Schedule of Ante Natal visit

- Ideally, a pregnant woman should be examined every month until 7 months of pregnancy, fortnightly (after 2 weeks) for the next four weeks and weekly after that, if everything is normal.

Horizontal
Integration

Schedule of Antenatal Visits

- During antenatal period , minimum of three visits are required
- 1st Visit:** 6-16 week
- 2nd Visit:** 32nd -36th week
- 3rd Visit:** 38th -39th week

Ref: Ilyas& Ansari

Horizontal
Integration

Objectives of Antenatal Care

- To promote, maintain and protect the health of mother during pregnancy
- To detect "high risk" cases and give them special attention
- To foresee complications and prevent them
- To remove anxiety associated with pregnancy
- To teach mother elements of child care , nutrition, personal hygiene and environmental sanitation
- To sensitize mother for need of family planning
- To attend under five accompanying mothers

Horizontal
Integration

WHO Focused antenatal care model

WHO FANC model	2016 WHO ANC model
First trimester	
Visit 1: 8-12 weeks	Contact 1: up to 12 weeks
Second trimester	
Visit 2: 20-26 weeks	Contact 2: 30 weeks Contact 3: 26 weeks
Third trimester	
Visit 3: 32 weeks	Contact 4: 30 weeks Contact 5: 34 weeks Contact 6: 36 weeks Contact 7: 38 weeks Contact 8: 40 weeks
Return for delivery at 40 weeks if not given birth.	

Schedule of Antenatal Visits

- 1st Visit:** within 12 weeks
2nd Visit: between 14 and 26 weeks
3rd visit: between 28 and 34 weeks
4th visit: between 36 weeks and term

Ref: Park 24th EditionHorizontal
Integration

WHO Focused ANC Model

Goals	First visit 8-12 weeks	Second visit 24-26 weeks	Third visit 32 weeks	Fourth visit 36-38 weeks
	Confirm pregnancy and EDD, classify women for basic ANC (4 visits) or more specialized care.	Assess maternal and fetal well being	Assess maternal and fetal well being	Assess maternal and fetal well being
	Screen, treat and give preventive measures.	Exclude PIH, and Anemia.	Exclude PIH, and Anemia multiple pregnancy.	Exclude PIH, and Anemia multiple pregnancy, malpresentation.
	Develop a birth and emergency plan	Give preventive measures.	Give preventive measures.	Give preventive measures.
	Advise and counsel.	Review and modify birth and emergency plan. Advise and counsel.	Review and modify birth and emergency plan. Advise and counsel.	Review and modify birth and emergency plan. Advise and counsel.

Relevant links



Infographics
www.who.int/reproductive-health/publications/maternal-perinatal-health/ANC_infographics/en/index.html

As soon as you know you are pregnant, seek antenatal care for:

- Antenatal support and advice
- Health care
- Monitor and check pregnancy progression

Quality antenatal care will:

- Encourage women to seek antenatal care at an early stage
- Reduce stillbirths, preterm complications and newborn deaths
- Help women get care and counselling in time relative to various conditions
- Monitor antenatal care to ensure it is available for all who require it, and to improve the quality of care

Throughout pregnancy, all women should have in contact with a health provider. These can happen in settings such as:

- Health Facilities
- Community-based services

Health systems should provide that all women are supported and empowered with necessary skills and supplies.

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Contd...

Core Content

4. Assessment of gestational Age

5. Investigation

i.e. pregnancy test, complete Blood Picture, Urine R/E, urine for albumin & sugar, Blood group and Rh Factor, Random Blood Sugar, HIV Testing, VDRL, HBsAg for Hepatitis B Infection

- Prescribe Medications i.e. iron, folic acid, calcium
- Counselling i.e. nutrition, avoiding drugs, radiation, rest,
- Immunization
- Reschedule Next visit

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Preventive services during Antenatal Care

Core Content

- Routine antenatal care during pregnancy
- Prenatal Advice
- Specific Health protection in pregnancy
- Mental Preparation
- Family Planning
- Pediatrics Component

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Schedule of Tetanus Toxoid (WHO)-Pregnant Women

THE MOST IMPORTANT

Horizontal Integration

- ✓ TT1: At first contact or as early as possible during pregnancy
- ✓ TT2: Four weeks after TT1
- ✓ TT3: Six months after TT2
- ✓ TT4: One year after TT3
- ✓ TT5: One year after TT4 or during next pregnancy

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Routine antenatal care

Core Content

- History**
- Physical Examination:** i.e. pallor, Height, weight blood pressure, pulse, respiratory rate, edema, breast examination
- Abdominal Examination:** measurement of fundal height, fetal heart sounds, fetal movements, fetal parts, multiple pregnancy, fetal lie and presentation, inspection of abdominal scar

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Risk Approach

Core Content

High-Risk Pregnancies

- Women **less than 18 or more than 30 years** of age.
- **Short statured women** (less than 5 feet tall).
- **Grand multipara**, i.e. those who have had 5 or more previous deliveries.
- Women delivering **less than 2 years** after the last confinement.
- Women with **multiple pregnancy** such as twins or triplets
- Women with a **mal-presentation** such as breech, oblique or transverse lie

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Core Content

- Antepartum hemorrhage ,threatened abortion
- Eclampsia , pre eclampsia
- Anemia
- Twin, ,hydramnios
- Previous still birth, intrauterine death, manual removal of placenta
- Prolong pregnancy(14 days after expected days of delivery)
- History of previous caesarean or instrumental delivery
- Pregnancy associated with **underlying systemic diseases** i.e cardiovascular, kidney disease, diabetes, Tuberculosis, Liver Disease, malaria, convulsions, asthma, HIV, RTI, STI
- **Treatment of infertility**
- Three or more spontaneous consecutive abortions

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Core Content

iii. Continuous Monitoring of Maternal Well Being

- ✓ Routine check up
- ✓ Hypertension in pregnancy
- ✓ Gestational diabetes
- ✓ Pregnancy anemia
- ✓ Miscellaneous conditions

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Core Content

ii. Prenatal Advice

- Diet
- Personal Hygiene
 - Personal cleanliness
 - Rest & sleep
 - Bowels
 - Exercise
 - Smoking
 - Alcohol
 - Dental care
- Drugs
- Radiations
- Warning signs
- Child care

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Core Content

iv. Continuous Monitoring Of Fetal Development

- a. Abdominal examination**
 - ✓ Fundal height
 - ✓ Foetal heart
 - ✓ Foetal movement
 - ✓ Foetal parts
 - ✓ Presentation
 - ✓ Twin pregnancy
- b. Ultrasound**
- c. Other examinations (RH Immunoglobulin)**

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Core Content

iii. Specific Health Protection In Pregnancy

- ✓ Anemia
- ✓ Other Nutritional Deficiencies
- ✓ Asymptomatic Bacteraemia
- ✓ Toxemia of pregnancy
- ✓ Tetanus
- ✓ Syphilis
- ✓ German measles
- ✓ Rh Status
- ✓ HIV infection
- ✓ Hepatitis B Infection
- ✓ Gestational Diabetes
- ✓ Prenatal Genetic Counseling

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Core Content

iv. Mental Preparation

- Sufficient time & opportunity should be given to expectant mother to have free & frank talk on all aspects of pregnancy & delivery.

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v. Family Planning

- Mother is psychologically more receptive to advise of family planning at this time.
- Educational & motivational efforts must be initiated during antenatal period for family planning

Core Content

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Maternal mortality in Pakistan: Challenges, efforts, and recommendations

Shreen Khatun Shaukat¹, Zohab Hossain Tharwan², Waqar Shah³, Zaminia Islam⁴,
Almohammad Wair Israr⁵
ARTICLE INFORMATION
PMID: 36042926 PMCID: PMC9420499 DOI: 10.1016/j.amsu.2022.104380
Free PMC article

Abstract

Maternal mortality is a major concern in various countries across the globe and particularly Pakistan. Regardless of the fact that the maternal mortality rate is steadily decreasing over time, Pakistan still lags behind the progress necessary to reach its set goals. Challenges such as lack of skilled staffing, the facilities to issue them, lack of education as well as social conventions are proving to be significant obstacles for the healthcare system of Pakistan and its attempts to reduce the maternal mortality rate. Furthermore, the rural environment of the country, poverty constraints, and general ignorance continue to exacerbate the factors previously listed. In order to address these issues, the government needs to work alongside international organizations to acquire funding to build new facilities, particularly in rural areas, train skilled staff, educate on the benefits of antenatal and delivery care, and provide additional funding to subsidize the care itself for those in need. This will further research done in order to assess the effectiveness of various programs and the progress over time will make an impact on reducing the maternal mortality rate in Pakistan.

Shaeen SK, Tharwani ZH, Bilal W, Islam Z, Essar MY. Maternal mortality in Pakistan: Challenges, efforts, and recommendations. Ann Med Surg (Lond). 2022 Aug 18;81:104380. doi: 10.1016/j.amsu.2022.104380. PMID: 36042926; PMCID: PMC9420499

Research

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vi. Paediatric Component

- To attend under 5 accompanying mother

Core Content

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Bioethics

Faheem Moazzam, "Islamic perspectives on abortion," Bioethics (Oxf), vol. 3, no. 3 (2005).
Reproduced with permission.

Islamic Perspectives on Abortion Faheem Moazzam

Islam does not have a central interpretive authority akin to the Catholic Church that a hierarchy of opinion can be based on the issue of abortion within historical and contemporary Islamic jurisprudence. Muslim communities create to some extent an ad hoc system of law through the Quran and the Shari'a in primary sources, and often a common methodology for developing opinions.

The Quran and Hadith

Four verses of the Quran refer to the stages of fetal development (22:4 and 23:12-14). Both describe 2 stages in the progressive development of the fetus beginning from a drop or germ, through to a complete fetus or a fully formed, and develop a 40-day or 100-day gestation period.

The Quran and Hadith are interpreted in the context of the stages of fetal development. The Quran and Hadith are interpreted in the context of the stages of fetal development. The Quran and Hadith are interpreted in the context of the stages of fetal development.

Issues of Fetus Development and Health

The Quran and Hadith emphasize the sanctity of life, and there is agreement that aborting a fetus is a capital offense. There is a consensus that the fetus is a human being from the moment of fertilization.

- **Suggested Reading** • Abdel Rahim Osman, Family Planning in the Legacy of Islam, (London, New York: Routledge Publishers, 1992). This is a superb, comprehensive collection of opinions and fatawa compiled by Dr. 150 Osman, Chief Advisor to the Al-Azhar International Islamic Center in Cairo and Professor of Healthcare Services at George Washington University

Abstract

Abstract: This article discusses the Islamic perspective on abortion, focusing on the Quran and Hadith.

Legal aspects of abortion: An international overview Shameen Ali Khan

Abstract: This article discusses the legal aspects of abortion, focusing on the Quran and Hadith.

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Promoting IT and research culture How To Access Digital Library

• Steps to Access HEC Digital Library

- Go to the website of HEC National Digital Library.
- On Home Page, click on the INSTITUTES.
- A page will appear showing the universities from Public and Private Sector and other Institutes which have access to HEC National Digital Library HNDL.
- Select your desired Institute.
- A page will appear showing the resources of the institution
- Journals and Researches will appear
- You can find a Journal by clicking on JOURNALS AND DATABASE and enter a keyword to search for your desired journal.

Research

Important Links

- https://www.pbs.gov.pk/sites/default/files/population/publications/pds2020/pakistan_demographic_survey_2020.pdf
- <https://data.unicef.org/country/pak>
- <https://youtu.be/EETc6AUqtrQ>
- <https://dhsprogram.com/pubs/pdf/PR128/PR128.pdf>

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End of lecture Assessment

The unfair and inequitable distribution of health resources is responsible for health inequities and major contributing factors of maternal mortality According to data of Pakistan Maternal Mortality Survey (PMMS), 2019, which province of the Pakistan has highest maternal mortality?

- a.Khyber Pakhtunkhwa
- b. Punjab
- c.Sindh
- d. Azad Kashmir
- e.Baluchistan

Correct : e

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Reading
sources:

Primary (recommended textbook)

- J Parks textbook of Preventive & social Medicine. **Ch.10 Pages 575** (25th edition)
- Textbook of Community Medicine & Public Health. By Muhammad Ilyas , Dr Ifanulah Siddiqui **Ch.11** (8th edition)

Additional readings

- Pakistan Demographic & Health survey 2020
- Maternal Mortality survey 2019
- Guidelines and Teachers Handbook for Introducing Bioethics to Medical and Dental Students
- Developed by:
• Healthcare Ethics Committee (HCEC) of the
• National Bioethics Committee (NBC)

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