

**COURSE
GUIDE**

**PHS 401
REPRODUCTIVE AND ADOLESCENT HEALTH**

Course Team Dr. (Mrs.) C.O. Agbedia (Course
Developer/Writer). Delta State University, Abraka.
Professor Abubakar Mustapha Jamda
(Course Reviewer) University of Abuja, Nigeria
Prof. Grace Okoli (Programme Leader)-NOUN



NATIONAL OPEN UNIVERSITY OF NIGERIA

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National Open University of Nigeria
Headquarters
University Village
Plot 91, Cadastral Zone
Nnamdi Azikiwe Expressway
Jabi, Abuja

Lagos Office
14/16 Ahmadu Bello Way
Victoria Island, Lagos

e-mail: centralinfo@nou.edu.ng

URL: www.nou.edu.ng

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Print: 2021, 2020

ISBN: 978-978-970-011-0

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INTRODUCTION

The course Reproductive and Adolescent Health (PHS401) is a 3 Units course.

The rapid changes in health, technological advances, knowledge explosion, demographic changes and advance medical science demands that health workers be educationally prepared to provide effective maternity and reproductive health care across the continuum of setting – from hospital or clinic to home or community. The course you are about to study is reproductive and adolescent health and is taught in 5 modules. Reproductive and adolescent health is designed in such a way that you will learn to care for clients/patients with reproductive health issues. Manage patients before, during and after labour. Demonstrate understanding of principles and techniques of family planning. Demonstrate ability to take delivery with the assistance of a qualified health care provider.

WHAT YOU WILL LEARN IN THIS COURSE

The course consists of five Modules and 22 Units and a Course Guide. This Course Guide explains to you briefly what the Course is all about, what course materials you will be using and how you can work with the materials for successful course completion. In addition, the Guide provides some general guidelines for the amount of time you are likely to spend on each unit of the course to complete it successfully. Furthermore, it gives you guidance in respect of your Tutor-Marked Assignments (TMAs) which will be made available in the assignment file. There will be regular tutorial classes that are related to the course. It is advisable for you to attend these tutorial sessions. The course will prepare you for the challenges you will meet in environmental health and safety professional practices.

COURSE AIM

The goal of this course (**Reproductive and Adolescent Health**) is to provide you with the necessary knowledge and the skills needed for effective management and care of pregnancy, labour and during puerperium among other components of reproductive health. Understand the management of youth-friendly services.

COURSE OBJECTIVES

In addition to the aims above, this course is set to achieve some objectives. After going through this course, you should be able to:

- i. Understand the basic concept and terminologies in Maternity Services
- ii. Understand the anatomy and physiology of the reproductive systems
- iii. Know certain health conditions that can threaten a pregnancy.
- iv. Understand the labour process and the care of a patient in labour.
- v. Understand problems associated with sexually transmitted infections
- vi. Know the investigations and treatment of couples with infertility.
- vii. Understand patient care during pregnancy, labour and puerperium
- viii. Understand the Management of youth-friendly services

WORKING THROUGH THE COURSE

This course involves that you would be required to spend a lot of time reading. The contents of this material are very dense and require you to spend a great time studying it. This account for the great effort puts into its development in the attempt to make it very readable and comprehensible. Nevertheless, the effort required of you is still tremendous. I would advise that you avail yourself of the opportunity of attending the tutorial sessions where you would have the opportunity of comparing knowledge with your peers.

THE COURSE MATERIAL

The components of the Course are:

1. The Course Guide
2. Modules
2. Study Units
3. References/Further Reading
4. Assignments
5. Presentation Schedule

STUDY MODULES/UNITS

This course, reproductive and adolescent health is divided into five modules.

Module I lay the foundation for reproductive and adolescent health and provides you with knowledge of basic concepts and terminologies in maternity nursing. A review of the anatomy and physiology of the reproductive systems are done here. It also deals extensively on the health and nutritional needs during pregnancy

Module 2 deals with signs of pregnancy, the physiological changes, the minor discomfort of pregnancy and abortion and its issues. Health conditions that can threaten pregnancy are also discussed. It also focuses on high-risk women and infants.

Module 3 deals with the challenges of the labour process and the care of patients in labour.

Module 4 focuses on sex and sexuality. The unit on reproductive infections deals extensively on sexually transmitted infections, with special emphasis on HIV/AIDS. The final unit deals with counselling youth and youth-friendly services. It also addresses the need for the importance of male involvement in reproductive health and gender-based violence.

Module 5 deals with the principle and techniques of family planning.

ASSIGNMENT FILE

The two aspects of assessment ascribed to this course are as follows: Tutor-Marked Assignments (30%), and Final Examination (70%).

TUTOR-MARKED ASSIGNMENTS (TMAs)

The TMA is a continuous assignment component of your course. It accounts for 30% of the total score. You will be given 3 TMAs to answer. These three TMAs must be answered before you are allowed to sit for the end of Course Examination. The TMAs will be given to you by your Course Facilitator and returned after you have done the assignment. Assignment questions for the units in this Course are contained in the Assignment File. You will be able to complete the assignments from the information and material contained in your reading, references and study units. However, it is desirable in all degree levels of education to demonstrate that you have read and researched more into your references, which will give you a wide viewpoint and provide you with a deeper understanding of the subject.

Ensure that each assignment reaches your Facilitator on or before the deadline given in the Presentation Schedule and Assignment File. You must contact your Course Facilitator before the assignment due date of submission should you be unable to complete your assignment on time to discuss the possibility of an extension. The extension will not be granted after the due date unless there are exceptional circumstances.

FINAL EXAMINATION AND GRADING

The end of the Course and Examination for this course will be for about 2 hours and it has a value of 70 per cent of the total course work. The examination will consist of questions, which will reflect the type of self-testing, practice exercise and Tutor-Marked Assignment problem you have previously encountered. All areas of the course will be assessed. You are advised to use the time between finishing the last unit and sitting for the examination to revise the whole course. You might find it useful to review your self-tests, TMAs and comments on them before the examination. The end of Course examination will cover information from all parts of the Course.

PRESENTATION SCHEDULE

Your course materials have important dates for the early and timely completion and submission of your TMAs and attending tutorials. You should remember that you are to submit all your assignments by the stipulated time and date. You should guard against falling behind in your work.

STUDY UNITS

The units covered in this course are;

Module 1 Review of Anatomy and Physiology of the Reproductive System

- Unit 1 Review of Male/Female Reproductive System
- Unit 2 Fertility
- Unit 3 Health and Nutrition during Pregnancy

Module 2 Pregnancy

- Unit 1 Signs of Pregnancy and Physiological Changes
- Unit 2 Common Discomforts in Pregnancy
- Unit 3 The Antenatal Visit
- Unit 4 Abortion
- Unit 5 High Risk Women and Infants
- Unit 6 Fetal Health

Module 3 The Process of Labour

- Unit 1 Abdominal examination
- Unit 2 Labour Process
- Unit 3 Abnormal Labour
- Unit 4 The Postpartum Visit and Examination

Module 4 Sex and Sexuality

Unit 1	Sexuality
Unit 2	Sexually transmitted Infections
Unit 3	Counselling Adolescents on Reproductive issues
Unit 4	Male Involvement in Reproductive Health
Unit 5	Gender-based Violence

Module 5 Family Planning

Unit 1	Hormonal Contraception
Unit 2	Injectable Contraception
Unit 3	Intrauterine Devices
Unit 4	Condom and Sterilization

ASSESSMENT

There are two components of assessment for this course. The Tutor-Marked Assignments (TMAs), and the end of course examination.

COURSE MARKING SCHEME**Table 1. Course marking scheme**

Assignment	Marks
Tutor-Marked Assignment (TMAs) 1 – 3	Three assignments, three marks at 10% each = 30% of Course Marks
End of Course Examination	70% of overall Course Marks
Total	Total 100% of Course Materials

Table 2: Course Organisation

Unit	Title of Work	Weeks Activity	Assessment (End of Unit)
	Course Guide	Week	
1	Review of Male/Female, reproductive System Fertility	Week 1	Assignment 1
2	Health and Nutrition during Pregnancy	Week 2	Assignment 2
3	Signs of Pregnancy and Physiological Changes And Common Discomforts in Pregnancy	Week 3	Assignment 3
4	The Antenatal Visit and Abortion	Week 4	Assignment 4
5	High-Risk Women and Infants	Week 5	Assignment

	and Fetal Health		5
6	Abdominal Examination and Labour Process	Week 6	Assignment 6
7	Abnormal Labour and The Postpartum Visit and Examination	Week 7	Assignment 7
8	Sexuality and Sexually transmitted Infections	Week 8	Assignment 8
9	Counselling Adolescents on Reproductive Issues	Week 9	Assignment 9
10	Male Involvement in Reproductive Health and Gender-based Violence	Week 10	Assignment 7
11	Hormonal Contraception and Injectable Contraception	Week 11	Assignment 8
12	Intrauterine Devices and Condom and Sterilisation	Week 12	Assignment 9

HOW TO GET THE MOST FROM THIS COURSE

In distance learning, the study units replace the university lecturer. This is one of the huge advantages of distance learning mode; you can read and work through specially designed study materials at your own pace and at a time and place that suit you best.

Think of it as reading from the teacher, the study guide tells you what to read, when to read and the relevant texts to consult. You are provided exercises at appropriate points, just as a lecturer might give you an in-class exercise.

Each of the study Units follows a common format. The first item is an Introduction to the subject matter of the unit and how a particular Unit is integrated with the other Units and the Course as a whole. Next to this is a set of learning objectives. These learning objectives are meant to guide your studies. The moment a unit is finished, you must go back and check whether you have achieved the objectives. If this is made a habit, then you will significantly improve your chances of passing the course.

The main body of the Units also guides you through the required readings from other sources. This will usually be either from a textbook or from other sources. Self-assessment exercises are provided throughout the unit, to aid personal studies and answers are provided at the end of the unit. Working through these self-tests will help you to achieve the Objectives of the Unit and also prepare you for the tutor-marked assignments and examinations. You should attempt each self-test as you encounter them in the Units.

The following are practical strategies for working through this course. They include:

1. Read the Course Guide thoroughly;
2. Organize a study schedule. Note the time you are expected to spend on each Unit and how the assignment relates to the Units. Important details, e.g. details of your tutorials and the date of the first day of the semester are available. You need to gather together all this information in one place such as a diary, a wall chart calendar or an organizer. Whatever method you choose, you should decide on and write in your dates for working on each unit;
3. Once you have created your study schedule, do everything you can to stick to it. The major reason that students fail is that they get behind with their course works. If you get into difficulties with your schedule, please let your tutor know before it is too late for help;
4. Turn to Unit 1 and read the Introduction and the Objectives for the unit;
5. Assemble the study materials. Information about what you need for a Unit is given in the table of contents at the beginning of each Unit. You will almost always need both the study Unit you are working on and one of the materials recommended for further readings, on your desk at the same time;
6. Work through the Unit, the content of the Unit itself has been arranged to provide a sequence for you to follow. As you work through the Unit, you will be encouraged to read from your textbooks;
7. Keep in mind that you will learn a lot by doing all your assignments carefully. They have been designed to help you meet the objectives of the course and will help you pass the examination;
8. Review the Objectives of each study Unit to confirm that you have achieved them. If you are not certain about any of the Objectives, review the study material and consult your tutor;
9. When you are confident that you have achieved a Unit's Objectives, you can start on the next Unit. Proceed Unit by Unit through the course and try to pace your study so that you can keep yourself on schedule;
10. When you have submitted an assignment to your tutor for marking, do not wait for its return before starting on the next unit. Keep to your schedule. When the assignment is returned, pay particular attention to your tutor's comments, both on the tutor-marked assignment form and also that written on the assignment.

Consult your tutor as soon as possible if you have any question/s or problem/s;

11. After completing the last Unit, review the course and prepare yourself for the final examination. Check that you have achieved the unit Objectives (listed at the beginning of each unit) and the course Objectives (listed in this course guide).

FACILITATOR/TUTORS AND TUTORIALS

Information about the hours of tutorials, dates, times and location of the tutorials as well as the name and contact of your Facilitator will be communicated to you as soon as you are allocated into a tutorial group. All assignments are expected to be mailed to your facilitator. You can contact your facilitator for any assistance or clarification. You should endeavour to read well, ruminate over what you have read, go through the Self-Assessment Exercise and TMA provided in each Study Unit. You will appreciate this course.

TEXTBOOKS

The course comes with a list of recommended textbooks, which though are not compulsory for you to acquire or indeed read, are necessary as supplements to the course material.

1. Reproductive Health and Cancer in Adolescents and Young Adults. Kenny A. Rodriguez-Wallberg MD, PhD (auth.), Gwendolyn P. Quinn, Susan T. Vadaparampil (eds.) 1st Ed. 2012. 13: 9789400724914
2. Promoting Adolescent Sexual and Reproductive Health in East and Southern Africa Knut-Inge Klepp. 1st Ed. 2008. ISBN 13: 9780796922106.
3. Brunner & Siddhartha's (2004) Medical-Surgical Nursing. (10th ed.) Lippincott Wilkins
4. Ajayi, V. A textbook of midwifery. London, Macmillan, 1980. (Macmillan Tropical Nursing and Health Sciences Series).
5. Olds, S., London, M. Ladewig, P., Davison, M. Maternal and Newborn Nursing and Women Health, 7TH Ed. 2004. Pearson Prentice Hall
6. Novak, J. and Broom, B. Maternal and Child Health Nursing, 1999. Mosby Inc.

SUMMARY

This course intends to provide you with the necessary knowledge and skills needed for effective understanding, community diagnosis and interventions for reproductive issues. We do hope you will enjoy the course.

Good Luck!

**MAIN
COURSE**

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**MODULE 1 ANATOMY AND PHYSIOLOGY OF THE
REPRODUCTIVE SYSTEM**

- Unit 1 Review of Male / Female Reproductive Organs
- Unit 2 Fertility
- Unit 3 Health and Nutrition Education during Pregnancy

**UNIT 1 REVIEW OF MALE/FEMALE
REPRODUCTIVE ORGANS****CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
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 - 3.2 The Male Reproductive System
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 - 3.3.1 Characteristics and Functions of the Female Reproductive System
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 - 3.5 Foetal Development
 - 3.6 Birth Defects
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment (TMA)
- 7.0 References/Further Reading

1.0 INTRODUCTION

Providers of maternity and family planning services must know the anatomy and physiology of the reproductive organs of the human male and female. An understanding of human male anatomy is basic to understanding the process of conception. It is also essential for understanding the principles of family planning and the reasons for infertility. This unit focuses on the review of the anatomy and physiology of the male and female reproductive organs,

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- Learn the various terminologies used by those involved in maternity care.
- Label the following on a diagram of the external female genitalia: Mons pubis Clitoris, Labia majora, and minora, urethral opening, vaginal opening, Bartholin glands Perineum.
- Label the following on a diagram of the internal female reproductive organs: Vagina Uterus Cervix: internal os and external os Fallopian tubes: isthmus, ampulla, infundibulum ovaries.
- Describe the characteristics and/or functions of the organs identified above.
- Label and state the characteristics and functions of the following on a diagram of the male reproductive system: Penis, Urethra, Scrotum, Testes, Epididymis,
- The Prostate Gland, Bladder
- Name two Female Sex Hormones.
- Define Menstrual Cycle.

3.0 MAIN CONTENT

3.1 Obstetric Terms

All professions have certain words that help people in the profession to communicate with each other. The following words are used by those involved in maternity care. They should be memorized.

Table 1: Meaning of selected obstetric terms

Term	Meaning
Amenorrhoea	Absence of menstruation
Antenatal/Antepartum	Before the birth of the fetus / during pregnancy
Antepartum Haemorrhage (APH)	Bleeding during pregnancy or before the birth of the fetus
Embryo	The developing baby from the time of fertilization to 11 weeks gestational age (Some authors say 12 weeks.)
Estimated Day of Delivery (EDD)	The approximate date the baby is due. The date is calculated from the first day of the last normal menstrual period. EDD marks the beginning of the 40th week of pregnancy.
Fetus	The developing baby from the 11th or 12th week of pregnancy until birth

Fertilization	A process where sperm unites with an ovum and pregnancy begin.
Gestation	Pregnancy
Gravida	A woman who is pregnant or who has been pregnant
Nulligravida	A woman who has never been pregnant and is not pregnant now.
Multigravida	A woman who has been pregnant more than once.
Primigravida	A woman who is pregnant for the first time
Intrapartum	During labor or at the time of birth
Labor/Parturition	The process of giving birth
Maternal Mortality Rate	The number of maternal deaths that occur as the result of being pregnant or giving birth during the time 100,000 babies are born alive. In some countries, this rate is calculated per 1,000 live births, or 10,000 live births, instead of 100,000 live births. There are direct and indirect maternal deaths: direct when caused by obstetric complications such as bleeding to death from PPH and indirect when it results from a disease that worsened when the mother became pregnant, such as diabetes mellitus.
Para-	A woman who has given birth to a baby beyond the stage of viability (usually 20 weeks' gestation)
Nullipara	A woman who has never given birth to a baby who reached the stage of viability
Primipara	A woman who has delivered one baby who reached the stage of viability
Multipara	A woman who has delivered two or more babies beyond the stage of viability
Parturient	A woman in labor
Postnatal/postpartum	After birth
Postpartum Haemorrhage (PPH)	Excessive bleeding after the birth of a baby

3.2 The Male Reproductive Organs

The male reproductive organs are divided into external and internal genitalia. The external genitalia consists of the penis and the scrotum. The internal male reproductive organs are shown on the following diagram:

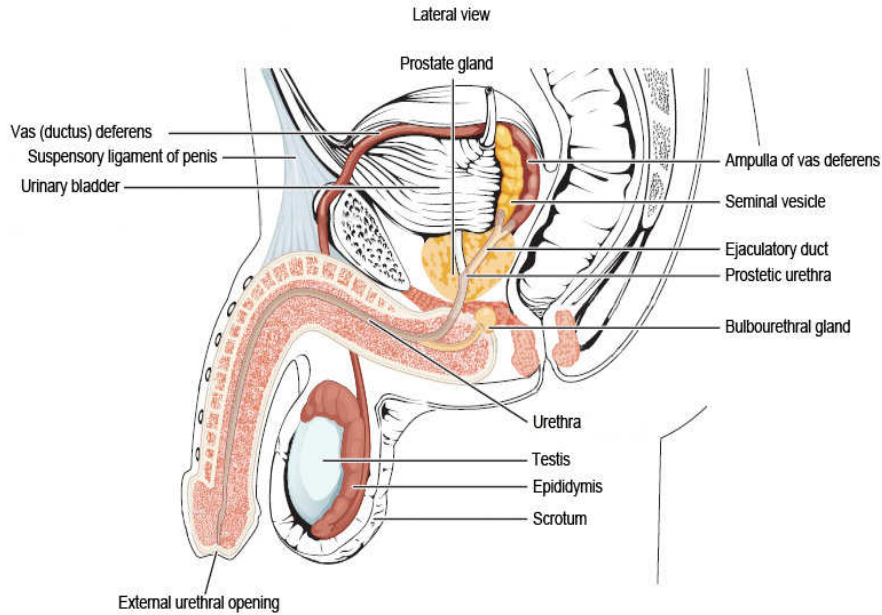


Figure 1: Male Reproductive Organ

3.2.1 Characteristics and Functions of the Male Reproductive Organs

Penis: This is the male organ of orgasm, reproduction, and urination. Part of the urethra goes through the center of the penis. The tip of the penis (the glans) contains a small opening, the urethral opening, through which urine and semen are expelled.

Scrotum: This is a wrinkled, sac-like pouch behind the penis which contains the testes (testicles). It is located outside the body because sperm production requires a temperature lower than that inside the body.

Testes -These structures lie within the scrotum produce and sperm and male hormones. The left testis is usually lower than the right and the left scrotal sac is lower and larger than the right one.

Epididymis –They are small, twisted tubes leading from the bottom of each testis. Sperm mature in these tiny tubes.

Vas Deferens - Two tubes that are a continuation of the epididymis. They transport sperm as far as the urethra.

Seminal Vesicles –They lie at the bottom of the bladder secrete a thick, milky substance which aids in transporting sperm.

Cowper's Glands (bulbourethral) -They are two small glands below the prostate that secrete an alkaline substance to protect sperm from vaginal and urethral acidity.

Prostate Gland -A structure about 3.5 cm in diameter that surrounds the neck of the bladder and the urethra and produces a fluid that accompanies sperm during ejaculation.

Semen - it is a thick, milky substance consisting of sperms plus secretions from the epididymis, seminal vesicles, prostate gland, and Cowper's glands. When a man ejaculates, 2 to 5 ml of semen is left in the vagina. Each ml of semen contains an average of 70.

3.3 The Female Reproductive Organs

The female reproductive organs consist of the external genitalia (also known as the vulva) and the internal organs. The internal female reproductive organs are shown below:

3.3.1 Characteristics and Functions of Selected Organs/Structures

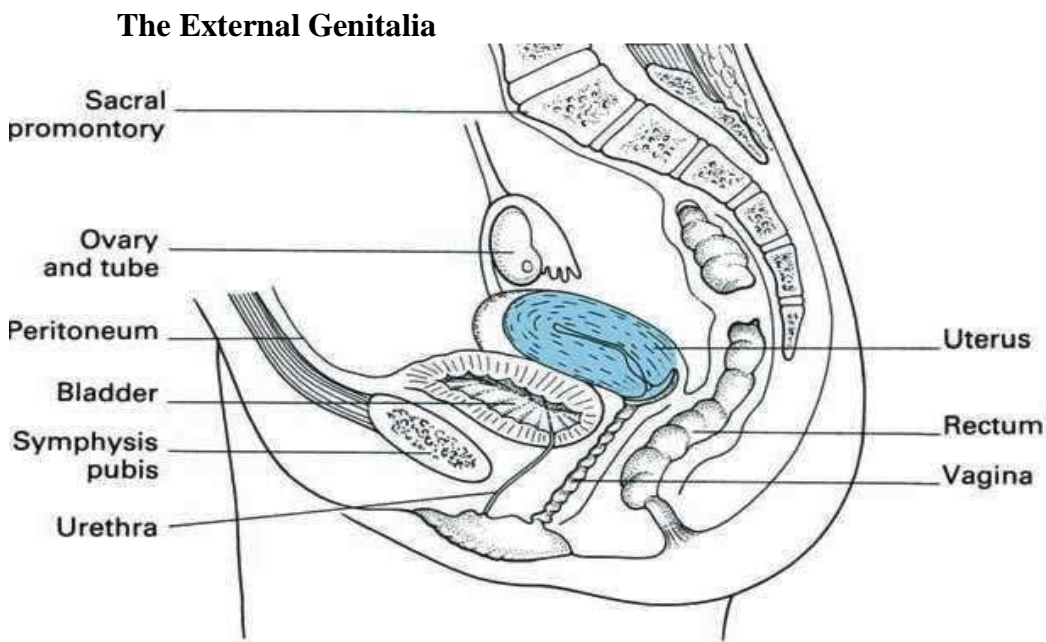


Figure 2: Female Reproductive Organ

Table 2: Meaning of terms that describe the female reproductive organs

Term	Meaning
Mons Pubis (Mons veneris)	A pad of fatty tissue is covered with hair directly over and above the symphysis pubis. The articulation between the pubis bones.
Clitoris	A small, elongated, sensitive body is situated above the labia minora. It becomes erectile during sexual excitement.
Labia Majora	Two long folds of skin (lips) extending from the mons pubis to the perineum. The outer part of the lips is covered with hair. Their size and appearance depend on the amount of fat within them. Both the labia majora and the labia minora help keep pathological organisms out of the vagina.
Labia Minora	Two thin folds of tissue between the labia majora. The bottom edges of the labia minora from the top edge of the perineum. Labia minora vary greatly in size and shape. It is common for one to be larger than the other.
Urethral Opening	A small opening below the clitoris through which urine passes. The opening is often invisible to the eye.
Vaginal Opening	The entrance to the vagina. It is located between the labia minora and below the urethra. It varies in size and shape.
Bartholin's Glands	The small glands are located about 4 o'clock and 8 o'clock on either side of the vagina. Their mucus secretion during sexual excitation helps lubricate the vagina. Gonococci species and other bacteria in the gland can cause an abscess.
Perineum	The area between the vagina and rectum. It stretches as the baby's head appears at the vaginal opening.
Vagina	A canal about 10-15 cms in length that has three functions:
Ovaries	<p>The ovaries are two organs up to 5 cm in length. They are usually found below each Fallopian tube. The ovaries are responsible for the development and expulsion of the ova and the production and release of ovarian hormones. Each ovary is close to the outer edge of the tube making it easy for the ovum to be picked up after ovulation.</p> <p>At puberty, there are between 200,000 and 400,000 egg cells in the ovary. Most of the time the ovary</p>

	releases only one egg each month. About 400 eggs are ovulated during the life of a healthy woman.
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Table 2: Meaning of terms that describe the female reproductive organs (Continued)

Term	Meaning
Uterus	<p>The uterus is a hollow, muscular organ that has three functions: It prepares itself monthly for the reception of the fertilized ovum. If the ovum is not fertilized, menstruation occurs. It holds the fetus during pregnancy. Its muscles contract to push the fetus through the birth canal during labor.</p> <p>The upper 2/3 of the uterus is known as the corpus or body and the lower 1/3 is known as the cervix. The part of the corpus above the Fallopian tubes is the fundus. The cervix is about 2.5 cm long. The top part of the cervix can be seen on speculum examination. The external os can be irregular in shape.</p> <p>The wall of the uterus has two layers: Endometrium An inner lining is lost each month during menstruation. Once pregnancy occurs, the endometrium is called the decidua. Myometrium The thick, smooth muscle layer of the uterus. In labor the contractions of the myometrium open the cervix and expel the fetus and placenta. They also control bleeding from the placental site. The cervix contains only about 10 percent muscle.</p> <p>The blood supply of the uterus comes from the uterine and ovarian arteries.</p> <p>The body of the uterus may tilt forward (anteverted), backward (retroverted), or it may not tilt at all.</p> <p>The position and height of the uterus depend on the uterine ligaments The main ones are the broad, round, and uterosacral ligaments.</p>
Fallopian tubes	<p>The Fallopian tubes are two hollow, muscular canals on either side of the uterus. They serve as a passageway for the ova to the uterine cavity. Each tube is divided into 4 parts: the interstitial portion (within the uterine wall), the isthmus (the narrow portion next to the uterus), the ampulla (the widest part), and the infundibulum (the funnel-shaped opening at the end).</p> <p>Within the tube are cilia (small hair-like projections) which direct the ova into the uterus. The muscles in the tube contract rhythmically to move the ovum along the tube.</p>

	Fertilization of the ovum by the sperm usually takes place in the ampulla portion. Rhythmic contractions of the tube are strongest and most frequent during transport of the fertilized ovum. The tubes are richly supplied with blood vessels.
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3.4 Menstrual Cycle

The onset of menstruation is also called menarche and is of great importance to the health worker because it signals the beginning of the fertile period in a woman's life. It is not known why the young girl's body begins to change. However, it is known that these changes are caused by chemicals produced in the brain, which induce the release of sex hormones. The two most important sex hormones are estrogen and progesterone. Oestrogen and progesterone produce changes in the following parts of the body: the breasts, the skin (appearance of pubic and axillary hairs), the uterus, the ovaries.

The breasts are stimulated by estrogen and progesterone to grow in size and become capable of producing milk. The skin is stimulated to grow hair in certain areas. The ovaries are stimulated to produce the eggs. Approximately once a month, the lining of the uterus is shed producing a "period" of bleeding which usually lasts 2 – 6 days. This is called a menstrual period. It is caused by the complete withdrawal of progesterone and estrogen from the blood. Shortly after the monthly bleeding period, the lining of the uterus begins to replace itself. At the same time, at about 12 – 16 days after the first day of the period, an egg is released into the uterus. The release of the egg is called ovulation. If sexual intercourse takes place close to the time when ovulation has occurred the egg can become fertilized by the man's sperm. This fertilized egg forms a new baby. The fertilized egg attempts to bury itself within the lining of the uterus. If the egg is not fertilized by a man's sperm, the endometrium is shed again, following by a menstrual period. Occasionally more than one egg is released and fertilized. In this case, twins or triplets may be produced.

Most women experience irregularity in their cycles as they approach the age of 50. Some women begin to experience changes as early as 35 – 40 and others as 55 – 60. The time during which the older woman is experiencing these longer cycles is called the climacteric. Menopause occurs when a woman has had her last bleeding episode,

3.5 Foetal Development

After puberty one egg (ovum) each month grows and matures. At ovulation, it is released from the ovary and falls into the abdominal cavity. Pregnancy begins when the egg traveling in the Fallopian tube is met by sperm. The male sperm and the female ovum contribute equally to the development of the fetus. The sperm is decisive in whether the baby will be a girl or a boy.

The growth and development of the fetus in the uterus are divided into two stages; the **embryonic stage and the fetal stage**. The embryonic stage starts at the moment of fertilization (when the sperm meets the ovum) and continues until all the body's systems have been developed (about 11 weeks after fertilization). The fetal stage is from the end of the embryonic stage to the birth of the baby.

Upon fertilization, the embryo is so small that it can barely be seen by the human eye. It begins to grow immediately. One cell becomes two, two become four, four become eight, eight become sixteen, sixteen become thirty-two, and so on. This early growth continues as the embryo moves through the tube and into the uterus. The embryo attaches to the new placenta by a small stalk which becomes the umbilical cord. Within the umbilical cord are three blood vessels that bring oxygen and nutrients from the mother's body to the embryo, and waste products are eliminated. During these first few weeks, groups of cells in the embryo begin to specialize. Each of the body's systems is formed by the specialization of certain cells. It is during this period that many birth defects begin to happen as a result of the abnormal growth of some of the specialized cells. If the birth defects are severe, many of these embryos die and are spontaneously aborted. This is also the period when some drugs can cause congenital defects in the fetus.

3.5.1 The Foetal Stage

The fetal stage of growth and development is a process of increase in size and weight. The organs that began developing in the embryonic stage continue to grow and mature, and there is less room in the uterus and the fetus is no longer able to stretch out. Instead, the fetus pulls its knees in toward the abdomen.

At the age of three months, the embryo is complete. All the organs and the arms, legs, feet, hands, and ears have formed, the embryo looks very much like a human baby. The fetal brain begins functioning early. At the beginning of the second trimester, the arms of the fetus reach their full length, and the sex of the baby is easily seen and mothers feel their

babies move inside them. This is because the movements of the fetus become stronger and the wall of the uterus thinner.

3.6 Birth Defects

Birth defects affect approximately six percent of all newborns. Drugs, hormones, radiation, environmental pollution, and infectious agents are among the factors that cause congenital anomalies. For example, German measles during the first trimester of pregnancy may cause birth defects. Drugs that may damage the developing embryo and fetus are known as teratogens. Hence, drugs in the first trimester should be avoided unless indicated. Research on smoking in pregnancy has consistently shown that infants of smoking mothers weigh less than infants of non-smoking mothers. The difference in weight is in direct proportion to the number of cigarettes smoked each day. Alcohol quickly enters the bloodstream and passes through the placenta. Chronic alcoholism can result in developmental delays and malformations of the heart, head, face, and extremities. Infants born to mothers who are alcoholics go through withdrawal symptoms once they are born.

SELF-ASSESSMENT EXERCISE

- i. Describe some birth defects
- ii. List and write the meanings of four terms that describe the female reproductive organs.

4.0 CONCLUSION

The menstrual cycle is the period between the first days of one period of bleeding to the first day of the next period of bleeding. Usually, this is between 4 – 6 days. Menstrual cycles are usually irregular initially at the onset of menstruation. Information about fetal growth and development is important so that the midwife can understand the origin of some birth defects and can be able to describe for the mother-to-be what her baby looks like at various times during pregnancy.

5.0 SUMMARY

The consequences of the menstrual cycle on a woman's life are extremely important. Fertility is based on the menstrual cycle and the woman's sexual activity. The hormones that influence the menstrual cycle are the same hormone produced by the placenta during pregnancy and the same hormones used in birth control pills.

6.0 TUTOR-MARKED ASSIGNMENT

1. With the aid of a diagram describe the anatomy and physiology of the uterus.
2. Explain the Menstrual Cycle.
3. Describe some birth defects.
4. List and write the meanings of four terms that describe the female reproductive organs.

7.0 REFERENCES /FURTHER READING

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UNIT 2 FERTILITY

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Factors Associated with Infertility
 - 3.2 Causes of Male Infertility
 - 3.3 Causes of Female Infertility
 - 3.4 Investigations
 - 3.4.1 History and Physical Examination
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 - 3.4.3 Radiological Studies
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 - 3.4.5 Basal Body Temperature
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- 6.0 Tutor-Marked Assignment (TMA)
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1.0 INTRODUCTION

Infertility is the condition in which matured male and female partners could not achieve pregnancy after regular unprotected sexual intercourse for at least one year. This problem may come from either the male or the female or both partners.

2.0 OBJECTIVE

By the end of this Unit, you will be able to:

- define infertility
- identify causes of infertility in the male and female Describe the treatment for both the male and female

3.0 MAIN CONTENT

3.1 Factors Associated with Infertility

These include; Cigarette smoking, alcohol consumption, sexual promiscuity, drug abuse, and sexually transmitted diseases. Central Nervous System (CNS) depressants and narcoleptic drugs are capable of causing erectile dysfunctions. Other diseases such as diabetes mellitus, renal failure, multiple sclerosis, spinal cord injury, and cardiopulmonary

disorders could be seen as causes capable of damaging the reproductive organs.

3.1 Causes of Male Infertility

The causes of male infertility can be classified into three categories: pre-testicular, testicular, and post-testicular causes.

1. Pre-testicular Causes:

These are primarily genetic, pituitary, and systemic metabolic disorders.

- i. Genetic disorders include Klinefelter's syndrome (chromosomal pattern XXY, gynecomastia, small testes, and eunuchoidism) or reifenstein's syndrome (chromosomal pattern 46 XY; reduced testosterone; gynecomastia; eunuchoidism; azoospermia; hypospadias).
- ii. Pituitary disorders; Such disorders include hypothyroidism, pan-hypopituitarism, and congenital adrenal hyperplasia.
- iii. Systemic disorders such as neoplasm, diabetes mellitus, hepatic and renal diseases. Other causes include fever, malnutrition, x-rays, tight pants, etc.

2. Testicular Causes:

These are the conditions in which the testes suffer direct damage. They include the following -

- i. Disorders of the testes such as cryptorchidism, varicocele, obstruction of the ducts
- ii. (due to infection).
- iii. Genital infections e.g. Gonorrhoea, Syphilis, warts
- iv. Immunologic disorders such as allergic orchitis, autoimmune infertility.
- v. Semen disorders such as volume / motility disturbances,
- vi. Formation of abnormal or immature sperm with variations in the size and shape of the head.
- vii. Chemicals and drugs that inhibit gonadotropin or disturb normal spermatogenesis include Nitrofurantoin, Methotrexate, Monoamine oxidase (MAO) inhibitors.

3. Post-testicular causes:

These include:

- i. Congenital and therapeutic destruction of the epididymis or vas deferens.
- ii. Sexual problems such as ejaculatory incompetence, erectile dysfunction, decreased libido, penile deformity, and extreme obesity.

3.2 Causes of Female Infertility

1. **Functional Causes:** these include any defects or malfunctions of the hypothalamic-pituitary-ovarian axis that alter the complex hormonal interactions which determine the normal functions of the reproductive tract. They are:
 - i. Gonadotropin insufficiency is caused by infections, neurological diseases, or tumors of the hypothalamus or pituitary gland.
 - ii. Hypothyroidism
 - iii. Endometrial adhesions
 - iv. Chronic cervicitis with abnormal mucus secretion.

2. **Anatomical Causes: These include:**
 - i. **Ovarian Factor:** Ovarian failure may be caused by premature menopause or ovarian dysgenesis.
 - ii. **Uterine Factors:** These include congenital absence of uterus, bi-cornuate, or double uterus.
 - iii. **Tubal Factors:** such as are abnormal tubal transport mechanism as seen in cases of the uterus- tubal obstruction, uterine fibroids, etc.
 - iv. **Cervical Factors:** Abnormal or excessive production of thick cervical mucus, which is impenetrable to sperm, thus making it difficult for the sperm to enter into the uterus.
 - v. **Psychological Factors:** as a result of stress and emotional instability.

3.3 Investigations

They include;

- i. Patient's history,
- ii. Physical examination,
- iii. Laboratory investigation, and
- iv. Radiological studies

3.3.1 History and Physical Examination

1. **If male patient, the following are assessed:**
 - i. Inquiry about psycho-sexual problems such as premature ejaculation, impotence, fear and anxiety during intercourse, etc.
 - ii. Previous operations, such as herniorrhaphy, orchidopexy, orchidectomy, prostatectomy, vasectomy,

- etc.
- iii. Past illnesses, such as varicocele, mumps, sexually transmitted diseases like gonorrhea, syphilis, venereal warts. Genital herpes, etc.
 - iv. Use of drugs like Nitrofurantoin, Cyclophosphamide, Monoamine oxidase (MAO)

2. Inhibitors

- If he indulges in smoking, alcohol intake, obesity, or work in a hot environment.

Also, find out if the patient wears tight pants and/or has hot baths very frequently.

3. If female patient, assess

- i. Is menses regular, irregular, painful, painless, etc.?
- ii. Views and reactions to sex?
- iii. Had she undergone surgeries in the past such as hysterectomy, uterine evacuation, tubal ligation?
- iv. Past medical history; Is there any history of sexually transmitted diseases (STD),
- v. HIV/AIDS, urinary tract infection (UTI), salpingitis, pelvic inflammatory diseases, etc.

Is he taking any family planning pills? Which of them? When did she start using such contraceptives? How often is she using them, etc?

3.3.2 Laboratory Investigations:

Semen analysis This is the major investigation in the male. Semen analysis includes measurement of sperm concentration, motility, and morphology. It also tells us about the measurement of seminal plasma and the presence of anti-sperm antibodies. It also determines the quantification and identification of non-spermatozoid cells. The problem here is that of oligospermia (lower sperm concentration) or azoospermia.

3.3.3 Radiological Studies:

This include; Hysterosalpingography (HSG), Rubbin's Insufflations Test, and Endoscopy

- i. Rubin's Insufflations Test: This of blowing air carbon (IV) oxide into the tube to establish patency. It irritates the phrenic nerve, causing referred pain to the shoulder if one or both tubes are patents. If the patient feels no pain, it indicates that the tubes are blocked.
- ii. Hysterosalpingography: This shows any obstruction or

abnormality of the fallopian tubes and uterine cavity. Die cannot pass through the tubes; the diagnosis of tubal blockage is confirmed.

- iii. Endoscopy: This is a visualization of the internal organs using special instruments called endoscopes.

3.3.4 Male – Female Interaction Studies:

These include post-coital tests (Sim’s Hohner Test) and immunologic or antibody testing.

Post-coital (Sim’s Hohner) Test: Helps to examine the cervical mucus concerning sperm motility and penetration. It is usually done 2-4 hours after coitus.

Immunologic or antibody testing helps to identify spermicidal antibodies in the sera of the female

3.3.5 Basal Body Temperature:

The Basal Body Temperature (BBT) is a graphical representation of the body temperature, usually in the mornings, to ascertain the time of ovulation. A sustained elevation in body temperature, post-ovulation until immediately before the onset of menses signifies the appropriate time of ovulation.

SELF-ASSESSMENT EXERCISE

Discuss the classification of infertility.

4.0 CONCLUSION

Infertility is the condition in which matured male and female partners could not achieve pregnancy after regular unprotected sexual intercourse for at least one year. This problem may come from either the male or the female or both partners, therefore both must be investigated before treatment is commenced.

5.0 SUMMARY

Infertility can be caused by a wide range of causes which can be classified as functional, anatomical, and psychological causes.

6.0 TUTOR-MARKED ASSIGNMENT

1. Explain the causes of infertility.
2. Discuss the classification of infertility.

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UNIT 3 HEALTH AND NUTRITION EDUCATION DURING PREGNANCY

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Exercise and Activity
 - 3.2 Personal Hygiene
 - 3.3 Care of the Breast
 - 3.4 Drugs
 - 3.5 Family Planning
 - 3.6 Danger Signs
 - 3.7 Preparation for Labour and Birth
 - 3.8 Preparation for Home Delivery
 - 3.9 Breast Feeding
 - 3.10 Beliefs and Practices
 - 3.11 Nutrition
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment (TMA)
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1.0 INTRODUCTION

The midwife has a great opportunity for helping women prepare physically and emotionally for the birth of their babies. The following information on health and nutrition should be given during pregnancy.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- identify appropriate physical activities
- describe personal hygienic measures that should be encouraged
- describe the care of the breasts during pregnancy to help the promotion and establishment of lactation breastfeeding.
- list six foods rich in proteins, two in calories, and five in iron
- give the reason why drugs of all kinds should be discouraged
- list five danger signs that pregnant women should be aware of.

3.0 MAIN CONTENT

3.1 Exercise and Activity

Most sporting activities can be continued to some degree. Some may need to be discontinued after the 20th week because falling on the abdomen could cause the placenta to separate from the wall of the uterus (abruption placenta). Pregnant women are often told to get 8 hours of sleep each night and minutes in the afternoon. However, sleep needs vary from person to person. Some women will need 6 hours of sleep while others will need nine. Pregnant women should be encouraged to sleep and rest as much as they need.

The fatigue felt in the first trimester of pregnancy is normal. It is probably caused by a change in the metabolic rate. The second trimester of pregnancy is often the one in which a woman is full of energy, but fatigue frequently returns in the last trimester. Women should be encouraged to rest in the side-lying position. This keeps the weight of the baby and the amniotic fluid off the inferior vena cava, the main blood vessel returning blood from the legs to the heart. The side-lying position also helps to prevent edema (swelling in the legs). Heavy physical work in pregnancy increases the requirements of energy and proteins.

3.2 Personal Hygiene

All women can be encouraged to take a daily bath when pregnant. However, water is scarce in many developing countries and this practice may not be possible. When a bath is taken soap can be used on all parts of the body including the genitalia. There is no reason for a woman to avoid washing her hair during pregnancy or in the first few weeks following the birth of the baby.

Washing one's hair does not give the mother colds, infections, or other sicknesses. Underwear should be changed daily. Loose cotton underwear should be encouraged since nylon keeps the area around the genitalia wet. This moisture encourages the growth of bacteria.

3.3 Care of the Breasts

During pregnancy, the breasts and nipples should be examined to detect retracted nipples. This is important in all primigravida and women who have had difficulty in establishing breastfeeding in the past. If the nipples are retracted the woman should be taught to pull out the nipples from the base of the areola with oil on her fingers.

3.4 Drugs

Some pregnant women take drugs while they are pregnant, such as, antenatal vitamins, iron pills, laxatives, pills to prevent nausea and vomiting, medicine for heartburn, analgesics for headaches, and medicine for colds or other illnesses. Drugs of all kinds should be discouraged during pregnancy, particularly during the first trimester when the organs of the baby are developing, and deformity may result. However, it sometimes is necessary to take medication for anemia, infections and to treat some diseases.

3.5 Family Planning

Towards the end of the pregnancy, it is almost always appropriate for the midwife to talk about family planning. The available methods should be discussed with women who wish either to space or limit the number of children in their families. The midwife should explain the effectiveness of each method; how each is used; common side effects and dangerous complications.

3.6 Danger Signs

At the first antenatal visit, the midwife should discuss the signs that can mean something serious may be happening with the pregnancy. Pregnant women should contact the midwife immediately if any of the following occur:

- Bleeding
- Severe headaches
- Sports before the eyes or blurred vision
- Swelling of the hands and face
- Fever or chills
- Severe abdominal pain
- Frequent vomiting or vomiting beyond the first trimester

In the first trimester, bleeding may be a sign of abortion (miscarriage), ectopic pregnancy, or vaginitis. Fever and chills usually mean infection. Any infection or fever should be investigated and treated unless it is thought to be caused by a virus. Viral infections are not helped by antibiotics. Vomiting that lasts beyond the first trimester of pregnancy may be a symptom of hyperemesis gravidarum or hydatidiform mole.

3.7 Preparation for Labour and Birth

The process of labor should be explained in words that the woman can understand. The use of diagrams or models may be helpful. Each woman should be helped to choose the place of birth that is safest for her. When any of the following conditions are present, the mother should be encouraged to deliver in an adequately equipped hospital or maternity unit:

- Adolescent or elderly primigravida.
- Weight of less than 38 kg.
- Complications such as heart disease, diabetes, or active tuberculosis.
- Past obstetrical complications including, Caesarean section or serious postpartum hemorrhage.
- Present obstetrical complications, such as pregnancy-induced hypertension, antepartum hemorrhage, hydramnios, malpresentation, or premature labor.
- Past fetal complications, including stillbirth or neonatal death.

3.8 Preparation for Home Delivery

The pregnant woman should keep the room clean for delivery. Where there is no electricity, a lamp should be kept ready for night delivery. In the absence of piped water, water should be stored for washing the hands, boiling the instruments, and cleaning the baby and mother. Clean utensils for boiling the water and instruments should be handy. Clothes for the baby and mother and some washed pieces of cloths should be ready. The TBA, relative, friend, or the person who is going to conduct the delivery should keep a delivery pack ready. The latter should contain a sterilized blade, tincture of iodine, sterilized string, cotton swabs, and gauze pieces.

3.9 Breast-Feeding

Breast-feeding should be encouraged in all women because it is important to the health and survival of the baby. Discussions about breastfeeding should begin in the antenatal period. The midwife should discuss any popular beliefs that would keep a woman from breastfeeding. Continued breastfeeding may lengthen the time between births. This benefits both mother and child.

3.10 Beliefs and Practices

All women hear stories about what may be harmful to them or their developing babies during pregnancy. For instance, some mothers believe that if they raise their arms above their heads while they are pregnant, a knot will form in the umbilical cord. This is not so. Fortunately, most of these beliefs are not harmful. However, some practices may be dangerous. There are also beliefs, practices, and taboos on certain foods considered to be harmful to the mother and fetal development. The midwife must be aware of these local beliefs and practices so that they may discourage mothers from participating in those that may be harmful.

3.11 Nutrition

Dietary habits and practices in families are time-old and based on beliefs, customs, taboos, and availability and purchasing capacity. However, better nutrition knowledge may change attitudes and practices if the family understands the benefits. The midwife should know the local food beliefs and practices before advising on a diet. In some societies, foods are considered “hot” and “cold”, while others view foods as good or bad for the baby or the establishment and continuation of lactation. Economically disadvantaged families should be told about local foods that are nutritious but cheap. All pulses, beans, legumes, milk, meat, and fish are good sources of proteins. Oils and butter oil are the best sources of calories. Green leafy vegetables, coarse sugar, cereals, and pulses provide iron, and yellow fruits (like mango and papaya), green leafy vegetables, carrots, liver, milk, and butter supply vitamin A. The midwife should arrange nutrition demonstrations and arrange mothers’ classes where locally available foods rich in protein, calories, vitamin A and iron are identified, discussed, and nutritive values vis-à-vis costs are explained.

SELF-ASSESSMENT EXERCISE

Explain the role of nutrition in pregnancy.

4.0 CONCLUSION

Pregnancy is a time when women are eager to the learner about their bodies and their developing babies. Giving information in a concerted manner can influence the health of both the mother and the baby.

5.0 SUMMARY

There are diverse beliefs and practices that may be harmful to the mother and fetal development. The midwives must be aware of these local beliefs and practices so that they may discourage mothers from participating in those that may be harmful. They should not discuss customs that are not harmful.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the importance of hygiene in pregnancy.
2. List the danger signs in pregnancy.
3. Explain the role of nutrition in pregnancy.

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MODULE 2 PREGNANCY

Unit 1	Signs of Pregnancy and Physiological Changes
Unit 2	Common Discomforts in Pregnancy
Unit 3	The Antenatal Visit
Unit 4	Abortion
Unit 5	High-Risk Women and Infants
Unit 6	Fetal Health

UNIT I SIGNS OF PREGNANCY AND PHYSIOLOGICAL CHANGES

CONTENTS

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2.0	Objectives
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3.4	Positive Signs
3.5	Physiological Changes
4.0	Conclusion
2.0	Summary
6.0	Tutor-Marked Assignment (TMA)
7.0	References /Further Reading

1.0 INTRODUCTION

When a woman becomes pregnant, changes occur in her body. These changes lead to signs and symptoms that help the midwife suspect or diagnose a pregnancy.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- give reason the following is only a possible sign of pregnancy
amenorrhoea, breast changes, discolouration of the cervix, nausea and vomiting, frequent urination, fatigue
- list three probable signs of pregnancy
- list three positive signs of pregnancy
- list two effects of pregnancy on the body.

3.0 MAIN CONTENT

3.1 Signs of Pregnancy

The signs and symptoms are classified as possible signs, probable signs, and positive signs.

3.2 Possible Signs

The following signs and symptoms are called possible signs of pregnancy because they are usually associated with pregnancy but are also signs and symptoms of other conditions. These are:

- 1 Amenorrhea
- 2 Enlargement of the breasts, breast tenderness, nipple pain
- 3 Discolouration of the cervix
- 4 Nausea with or without vomiting Fatigue

Amenorrhea, for example, is not a certain sign of pregnancy because it may occur during lactation. When a woman stops taking the birth control pill amenorrhea may occur, as well as in women under unusual stress, women who are obese, women who move to a different climate, or in women with chronic diseases such as severe anaemia. Also, certain women menstruate only three or four times per year. Therefore, the absence of menstruation is not a reliable sign of pregnancy in these women.

Early in pregnancy women often have tender breasts and pain in the nipples. Breasts frequently increase in size and the veins just beneath the skin are often visible. The nipples become large, more erect and colostrums can often be expressed by gentle massage. The glands in the nipples become larger and can be felt on the areola. These changes can also be found in women with certain kinds of pituitary tumours, in women taking certain tranquillisers and in women with imaginary pregnancies (pseudocyesis).

During pregnancy, the vaginal mucosa and cervix often have a blue or purple appearance. This is because of venous congestion. The vagina and cervix also appear this way when women take the birth control pill, and in the premenstrual period. (Women with irregular cycles can have amenorrhoea in addition to these changes).

Nausea and vomiting may occur in early pregnancy. They are not definite signs of pregnancy because they are symptoms of conditions, such as gastrointestinal disturbances, urinary tract infections, infective hepatitis, drug toxicity and imaginary pregnancy.

Frequent urination occurs in the first trimester of pregnancy because the enlarging uterus puts pressure on the urinary bladder. Frequent urination is also a symptom of urinary tract infection, nervousness or psychological disturbances. Fatigue is frequently found in pregnant women but is not a reliable sign since anaemia, malnutrition and other diseases are also associated with fatigue.

3.2 Probable Signs

Other signs that indicate a pregnancy may be present are:

- i. Enlargement of the abdomen
- ii. Changes in the size, shape and consistency of the uterus
- iii. Outlining the foetus

These signs, too, can mean a condition other than pregnancy and, therefore, are not called positive signs of pregnancy. For example, an enlarged abdomen can be due to abdominal tumours, ascites, obesity and pseudocyesis. A large tumour of the uterus can be mistaken for a baby. However, the probable signs usually mean pregnancy is present. For this reason, they are called probable signs.

3.3 Positive Signs

The positive signs of pregnancy are those that diagnose pregnancy with certainty. These are:

- i. The presence of foetal heart sounds
- ii. Foetal movement felt by the health care practitioner
- iii. Presence of a foetus shown on X-ray or ultrasound

Foetal heart sounds can usually be heard with a foetoscope at 18-20 weeks of pregnancy. Foetal movement is a positive sign only when felt by the health practitioner because women have occasionally identified intestinal activity as the movement of a baby.

3.4 Physiological Changes

i. The Hormones of Pregnancy

Hormones are chemicals produced by the body that cause changes in certain body tissues. The specific tissue that is changed by a hormone is called a target tissue. Pregnancy produces several hormones that cause the body to adapt to the pregnancy. Two of these are the same hormones that play important roles in the menstrual cycle: Oestrogen and

progesterone. Other hormones are involved in pregnancy, but oestrogen and progesterone are especially important. During pregnancy, oestrogen and progesterone are produced by the placenta and the ovaries.

ii. The Uterus

As the foetus grows, the uterus enlarges. During the course of pregnancy, it increases in length from about 10 to over 40 centimetres. The volume of the uterus increases from a few millilitres to several litres. As this enlargement occurs, the uterus moves from the pelvis into the abdomen.

iii. Skin

Changes in the skin during pregnancy are due to the effects of hormones and the enlarged uterus. Increased blood flow to the skin is due to the effect of oestrogen on the small blood vessels. This may cause the skin to feel warm to the touch. Areas of the skin (especially the palms of the hands) may appear reddened. Small red marks resembling spiders may appear in fair-skinned women on the upper parts of the body. These marks are called spider angiomas. A hormone called MSH causes the skin to become darker in some areas. The effect of this hormone is noticed more in women with light complexions. MSH stimulates certain cells to produce a dark pigment. This often occurs in the area around the eyes and cheeks (called chloasma) and in a line between the umbilicus and the symphysis pubis (called the linea Negra or “black line”). The nipples and the areola usually become darker. The genital area may also darken. These darkened areas of skin will lighten after pregnancy but may not go away completely.

iv. Digestive System

Of all the systems in the body, it is the digestive system that accounts for most of the common discomforts of pregnancy. Throughout the digestive tract, smooth muscle is responsible for moving food along. Progesterone is thought to cause relaxation of smooth muscle. The placenta produces large amounts of progesterone during pregnancy. Thus, the smooth muscle of the digestive system becomes considerably relaxed during pregnancy. This causes food to remain longer in the different parts of the digestive system. Constipation is common in pregnancy and may result from the decreased motility. Stool remains in the large intestine longer. This allows more water to be reabsorbed, making the stool harder to excrete.

Progesterone also affects smooth muscle in the oesophagus and may cause the food in the stomach to move back up the oesophagus. Since food in the stomach is mixed with stomach acid, the pregnant woman may experience a burning sensation, “heartburn”, when this occurs. On the other hand, the relaxation of smooth muscle may have a beneficial effect on food absorption throughout the digestive system. Since food moves at a slower rate, the pregnant woman may absorb more nutrients from the same amount of food. This allows the body to take greater advantage of all the food consumed.

Stomach secretions may be reduced during pregnancy. This may explain why peptic ulcers are rare in pregnancy or, if already present, may improve. Production of saliva in the mouth is usually unaffected by pregnancy. Occasionally, however, increased production of saliva is noticed. Sometimes the amount of saliva is so great (ptyalism) that the pregnant woman must carry a container with her. Ptyalism usually improves as pregnancy progresses. In general, both appetite and thirst are increased during pregnancy. Many women find themselves craving certain foods in particular. “Pica” is the term used to describe a craving to eat non-food items such as clay, coal, ice, soap and others.

v. **Renal System**

Pregnancy also affects many kidney functions. The blood flow to the kidneys is increased, as is the glomerular filtration rate (the time it takes to filter a substance out of the blood). The kidneys seem to save some sodium, calcium and water for the pregnant body. The pregnant woman tends to have a decreasing ability to excrete water. This is particularly true for the woman with pregnancy-induced hypertension. Glucose is more readily excreted by the kidneys, even in the absence of diabetes mellitus. For this reason, a trace of glucose in the urine can be a normal finding during pregnancy. During pregnancy, the position of the baby has a significant effect on urine flow, which is greatly reduced when a woman is lying on her back. This is probably due to compression of the renal blood vessels by the enlarged uterus. Women with oedema should be encouraged to sleep on their sides.

vi. **Blood system**

Pregnancy has a significant effect on the volume of blood circulating in the body, a woman’s haematocrit (the percentage of red blood cells to plasma) may fall without anaemia is present. This is a normal occurrence at about the 30th week of pregnancy.

The haematocrit usually rises again after the 34th week. The number of white blood cells is also increased. When a non-pregnant woman has a significant increase of white blood cells, it may be a sign of an infection somewhere in the body. However, during pregnancy, such an increase may be normal. The plasma contains several substances that enable the blood to clot in the event of injury. Some of these are present in increased amounts during normal pregnancy. This may be a safety measure to assure minimal blood loss after the delivery of the placenta.

vii. Cardiovascular System

Changes in the blood vessels, this is, the veins, arteries and capillaries, are the result of the hormones of pregnancy, the increase in blood volume and the enlarging uterus. Progesterone probably relaxes the walls of the blood vessels and the increase in blood volume “stretches” them even more. The enlarging uterus is known to have significant effects on the veins below the mid-abdomen. Some women develop varicosities or bulges in the veins of the legs and vulva. These varicosities may become large and twisted. When a pregnant woman lies on her back in the last trimester, the baby, amniotic fluid and uterus press on the large vein (vena cava) that carries blood from the legs to the heart. This prevents blood in the lower body from flowing to the heart at its usual rate. When this happens, the heart cannot fill properly, and the brain receives less blood. This may cause dizziness, nausea, and even fainting unless the woman rolls on her side. If she stands up suddenly from a sitting or back-lying position, the effect may be even greater.

The baby, amniotic fluid and uterus also press on veins in the lower abdomen. This additional pressure further decreases the flow of blood in the legs. This allows a portion of the blood to leak into other tissues. Thus, the feet and lower legs of a pregnant woman are often swollen, especially if the woman must stand or sit for long periods. Oedema in the lower legs and feet is usually a normal variation of a healthy pregnancy. Oedema may also occur in the hands and face. The midwife must determine whether oedema in the hands and face is normal or whether it is the result of high blood pressure.

viii. Respiratory System

Though the rate of respiration does not change during pregnancy, the total amount of oxygen consumed by the pregnant woman is increased, as is the oxygen-carrying capacity of the blood. This should not be surprising because new tissue needs more oxygen. It is not unusual for a pregnant woman to experience shortness of

breath. This may be due to the growing uterus decreasing the space in the abdominal cavity. However, some pregnant women experience shortness of breath long before the uterus becomes large. The cause may be anaemia, associated heart disease or respiratory tract infection.

ix. Breasts

The breasts change early in pregnancy. Both oestrogen and progesterone prepare the breasts for the nutritional needs of the baby. Some of the first signs of pregnancy may be a tingling sensation in the breasts along with an increase in size and fullness. Some women have breast tenderness or pain in the nipples. The veins in the skin of the breasts may be more easily seen. The nipple and the areola increase in size and may darken in colour. Small raised glands, called Montgomery's tubercles, may appear around the nipple. These glands secrete an oily substance that keeps bacteria away. The milk-secreting cells and the ducts that carry milk become fully developed during pregnancy. The breasts may secrete milk long before the baby is born.

x. Weight Gain in Pregnancy

Normal weight gain in pregnancy, vary from 5-17 kg depending upon the size of the mother, her diet and her health. Weight gain in pregnancy is due to the growth of the foetus and placenta as well as increases in amniotic fluid, blood volume, protein storage, breasts, uterus, and tissue fluids.

xi. Maternal Posture

As the foetus and uterus grow and the joints of the pelvis soften, the woman may naturally assume a lordotic posture, in which the shoulders are pulled back, the head lifted higher and the pelvis is further forward. Discomfort in the pelvic joints may cause or increase the walk with a side-to-side swing. This may cause or increase the lower back pain that many pregnant women experiences.

xii. Emotional Changes

The emotional changes of pregnancy are not as easily noticed as the physical changes, but they are just as important. These emotional changes are probably caused by a combination of factors.

Some of the factors which might influence a woman's emotions are:

- i. Body changes due to pregnancy
- ii. Social and personal circumstances of the pregnant woman

- iii. Acceptance of the pregnancy by the family and friends
- iv. Whether the pregnancy was planned or unplanned
- v. The hormones of pregnancy

Emotional changes in pregnancy vary from woman to woman and may they depend on social and cultural customs.

SELF-ASSESSMENT EXERCISE

Discuss the probable, possible and positive signs of pregnancy.

4.0 CONCLUSION

Knowing the signs of pregnancy, the midwife can provide the women with appropriate health care. They will also be able to suspect conditions other than pregnancy when the available information does not seem to “fit” the possible signs and symptoms of pregnancy.

5.0 SUMMARY

The probable, possible and positive signs of pregnancy help the midwife suspect or diagnose a pregnancy. The physiological changes in pregnancy are due to the hormones of pregnancy and the growing foetus. It also affects social relationships, financial conditions, and the health of the family as a whole.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the probable, possible and positive signs of pregnancy.
2. Explain the emotional changes associated with pregnancy.

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UNIT 2 COMMON DISCOMFORTS IN PREGNANCY

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- 3.0 Main Content
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 - 3.3 Difficulty in Breathing
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1.0 INTRODUCTION

Certain minor discomforts often disturb women during pregnancy. These discomforts are “minor” because they do not endanger either the mother or the fetus. Some discomforts that occur most often are discussed. Measures to prevent, minimize or relieve each discomfort are suggested.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

Explain why each of the following may occur during pregnancy:

- Backache
- Constipation
- Dizziness and Fainting
- Oedema

- Frequent urination
- Heartburn
- Nausea and vomiting
- Ptyalism
- Varicosities
- Identify measures that may give relief from each of these discomforts.

3.0 MAIN CONTENT

3.1 Backache (2nd And 3rd Trimesters)

1. Possible causes

Excessive lordosis (forward curving of the spinal column) to balance the weight of the foetus
Relaxation of the pelvic ligaments due to the effect of the pregnancy hormones

2. Treatment

- i. Low shoes
- ii. Periodic rest in the side-lying position
- iii. Decrease amount of walking
- iv. Avoiding strain particularly from bending and lifting

3.2 Constipation

1. Possible causes of constipation include:

- i. Decreased muscular contraction by the smooth muscle of the bowel due to progesterone
- ii. The pressure of the growing uterus on the lower l
- iii. Tension or anxiety
- iv. Insufficient foods high in roughage
- v. Lack of physical activity
- vi. Poor intake of fluids

2. Treatment

- i. Increase intake of foods high in roughage, and fresh fruits and vegetables
- ii. Increase fluid intake
- iii. Avoiding tension, anxiety
- iv. Good bowel elimination habits

3.2 Difficulty in Breathing (Dyspnoea; 3rd Trimester)

1. Possible causes

- i. Pressure on the diaphragm by the enlarged uterus
- ii. Anaemia

2. Treatment

- i. Propped-up or semi-sitting when resting or sleeping
- ii. Decrease physical activity
- iii. Treatment of anaemia with iron and folic acid

3.4 Dizziness and faintness**1. Possible causes**

- i. Anaemia
- ii. Malnutrition
- iii. Fatigue
- iv. The pressure of the enlarged uterus on the inferior vena cava when lying flat on the back (hypotensive syndrome)
- v. The inability of the blood vessel walls to respond quickly to position changes due to relaxation of the walls, because of the increased progesterone

3. Treatment**3.5 Nutrition Supplements**

- i. Avoiding prolonged standing/walking and physical fatigue
- ii. Keeping head low when dizzy or feeling faint
- iii. Avoiding lying flat on the back in the last trimester
- iv. Turning body to side-lying position before getting up after resting or sleeping.

3.6 Oedema of The Ankles (Not associated with pre-eclampsia; 3rd trimester)**1. Possible causes**

Fluid in tissue due to poor return of blood from lower extremities caused by the pressure of the uterus on the abdominal wall

2. Treatment

- i. Avoiding prolonged standing/walking
- ii. Bed rest for 24 hours (Elevation of the legs for 1-2 hours during the day is rarely enough when oedema is present)
- iii. Side-lying position for rest or sleep

3.7 Flatulence (“Gases” throughout pregnancy)**1. Possible causes**

- i. Undesirable bacterial action in the intestines
- ii. Anxiety or tension
- iii. Gas-forming foods

2. Treatment

- i. Small but frequent meals
- ii. Unhurried meals
- iii. Avoiding foods that are gas-forming, such as beans, corn and dairy products.

3.8 Frequent Urination (1st and 3rd trimester)**1. Possible causes**

Pressure on the bladder from the uterus

2. Treatment

Decrease fluid intake before going to sleep (Fluid intake should not be severely restricted as this practice can lead to bladder infections)

3.9 Heartburn (3rd trimester)**1. Possible causes**

Relaxation of the cardiac sphincter (the muscle between the stomach and the oesophagus) that allows gastric juices to enter the oesophagus

2. Treatment

- i. Eating balanced meals
- ii. Eating small meals frequently
- iii. Sleeping in a semi-sitting position

3.10 Haemorrhoids (“piles”; 3rd trimester)**1. Possible causes**

Constipation

2. Treatment

- i. Prevention or relief of the constipation
- ii. Gently push the haemorrhoids back into the rectum
- iii. Cold or warm compresses or analgesic ointment applied to the haemorrhoids

3.11 Itching Skin (3rd trimester)**1. Possible causes**

- i. Hormones present during pregnancy
- ii. Stretching of abdominal skin

2. Relief and prevention measures

- i. Daily bath
- ii. Local application of talcum powder
- iii. Increases fluid intake
- iv. Soft, cool clothes

3.12 LEG CRAMPS (2nd and 3rd trimesters)**1. Possible causes**

- i. The pressure of the enlarged uterus on a nerve in the lower extremities
- ii. Prolonged standing/walking
- iii. Insufficient calcium intake
- iv. High level of serum phosphorus, usually from processed milk.

2. Measures for prevention or relief

- i. Increase milk intake if the diet is low in calcium
- ii. Decrease in intake of processed milk if the mother is drinking 3 to 4 glasses of each day

3.13 Nausea and Vomiting (“morning sickness”; 1st trimester)**1. Possible causes**

- i. Emotional factors (in a majority of women)
- ii. Hormonal changes due to the pregnancy
- iii. Pyridoxine deficiency (Vitamin B₆)

2. Treatment

- i. Avoiding tea or coffee in the morning
- ii. Avoiding odour and sight of foods that cause nausea and vomiting
- iii. Eating small, frequent, light meals
- iv. Helping in the resolution of emotional problems

3.14 Pelvic Joint Pain (3rd trimester)**1. Possible causes**

Relaxation of the pelvic joints and ligaments due to the hormones of pregnancy
Separation of the symphysis pubis

2. Treatment

- i. Avoiding lifting heavy objects
- ii. Avoiding prolonged standing or walking
Maternity girdle

3.15 Ptyalism (“excessive salivation”; 1st and 2nd trimesters)

1. Possible causes: unknown
2. Treatment: unknown

3.16 Varicosities (legs and/or vulva; 2nd and 3rd trimesters)

1. Possible Causes

Relaxed blood vessel walls due to progesterone. The walls of the veins dilate so that blood return from the lower extremities is slowed Pressure of the uterus on abdominal veins.

2. Treatment (Leg varicosities)

- i. Avoiding long periods of standing
- ii. Wearing flat shoes
- iii. Wearing supportive stockings or bandages
- iv. Elevating the legs when sitting

3. **Treatment (vulva):** Put a menstrual pad inside panties to provide pressure and support

SELF-ASSIGNMENT EXERCISE

Explain the following in your own words:

- i. Frequent urination
- ii. Heartburn
- iii. Ptyalism

4.0 CONCLUSION

Most of the common discomforts of pregnancy occur in more than one trimester. Some occur throughout the pregnancy. The timing of the discomforts can be often related to what is happening in the mother’s body.

5.0 SUMMARY

While the discomforts do not endanger the life of the mother or the baby, they should not be ignored. They can affect the mother’s attitude toward the pregnancy and her ability to cope with it. The midwife should be able to anticipate the occurrence of the discomforts and provide guidance on preventing or minimizing their effect.

6.0 TUTOR-MARKED ASSIGNMENT (TMA)

Discuss briefly the causes and treatment for the following discomforts in pregnancy

- iv. Backache
- v. Constipation
- vi. Oedema
- vii. Frequent urination
- viii. Heartburn
- ix. Ptyalism

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UNIT 3 THE ANTENATAL VISIT

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- 2.0 Objectives
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 - 3.2 Other problems during the present pregnancy
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1.0 INTRODUCTION

The goal of antenatal care is the safe delivery of the baby. The components of a first antenatal visit are outlined below.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- give one reason why pregnant women should avoid; medications smoking, alcoholic drinks
- give three reasons why nutritional assessment is an important part of the first antenatal examination.
- State the value of eliciting each of the following: previous obstetric history, height, weight, anaemia, oedema on feet, the height of uterus, foetal heart sounds if heard.
- give 2 reasons why each of the following should be checked: blood pressure, weight, urine at each antenatal clinic.

3.0 MAIN CONTENT

3.1 Booking/Registration

On the first visit, a mother's record for the visit is filled in and general data is gathered. Basic information, such as the patient's full name, birth date, and address are obtained.

History Taking

The purpose of history taking is to identify any condition that puts the mother or baby "at-risk", that is, makes them more likely to become sick or die because of pregnancy or childbirth. The expectant mother should be helped to feel relaxed and welcome especially those that are shy or have difficulty in expressing themselves. When possible, information should be obtained in private. Technical terms which the woman does not understand should be avoided.

The following information should be obtained at the first visit;

Personal information

This information is obtained so that the midwife can better understand the patient and her family. Enquire about her residential address so that you can trace her home on your visit. If the patient has a telephone, ask for the phone number. Ask for the woman's age/birthdate to know whether or not age puts her in a high-risk group. Ask for the highest grade she has completed in school. This will help to identify the best way to communicate with her.

Ask for the name of her husband or the father of the baby. Identify the age of this person and whether or not the person is available for emotional and financial support.

Ask her about her occupation, and that of the baby's father. This information can identify possible social and financial problems as well as environmental factors that can be harmful to the growing foetus. For example, women who have a heavy physical workload during pregnancy are known to deliver lower birth weight babies than women who do not. Sometimes it is helpful to know for how long a couple has been married. This information may help to identify the stability of the father or how many children by other marriages.

Personal medical and surgical history

This is to identify previous illnesses and operations that may influence the present pregnancy. A history of serious illness may require referral to a physician.

Nutritional assessment

Malnutrition before and during pregnancy adversely affects the baby's birth weight and subsequently the infant's, as well as the mother's own, nutritional status. While enquiring about the diet it is important to find out about the food beliefs, practices, customs in the family. In some places, food taboos for cultural and religious reasons will cause women to avoid foods that might be helpful to them. Other questions that may be asked are; What food do you eat every day?

How many times do you eat each day?

Family medical history

This history identifies diseases or conditions that tend to run in families such as certain anaemias and bleeding disorders. A family history of twins should also be noted. Family history is also important for identifying areas for health counselling. For example, a woman whose family members have had much heart disease should be told about the importance of exercise, good nutrition, and not smoking to lessen her chances of having a heart problem.

Obstetrical history

Information obtained should include the number of times the woman has been pregnant, the number of full-term and premature babies, abortions, living children, the birth weight of each baby, the length of the labour and any problems that happened during the pregnancy, birth or puerperium. Babies with congenital abnormalities or mental retardation should be noted as well as the place of delivery. This information is important because many conditions in pregnancy are likely to recur each time a woman is pregnant.

The length of the first labour rarely predicts the length of later labours. Almost always, subsequent labours are faster and easier than the first one. A woman who has had a Caesarean section in her last delivery must have hospital confinement as there may be a danger of uterine rupture.

Drug history

This should include information about medications, smoking and alcohol intake. Medicines taken during the first 10 weeks of pregnancy can cause congenital anomalies. Women who smoke more than 10 cigarettes per day while pregnant have babies whose birth weights are

about 200 grams less than women who do not smoke. The more cigarettes smoked each day, the smaller the baby.

The safe level of alcohol that can be consumed during pregnancy is not known. However, the greater the exposure, the greater the risk.

Recent use of birth control

Ask about the birth control method used recently. The EDC can be difficult to identify if a woman does not have a spontaneous menstrual period after she stops taking the birth control pill. Careful examination should be made to check for the presence of an IUD. If a woman becomes pregnant with an IUD in place, the IUD should be removed. Pregnant women with an IUD in place should be told to be watchful for bad-smelling discharge, low abdominal pain and fever. These symptoms are associated with severe pelvic infection and foetal death and require immediate medical attention. The pregnancy may continue normally with an IUD in place, and it will be expelled with the placenta at delivery.

3.2 Other Problems During the Present Pregnancy

The midwife also needs to know what physical symptoms the patient has had.

Headaches

These occur often in the first trimester. They usually do not mean anything serious, but a referral to a physician may be needed. Headaches that are not serious are often caused by sinusitis, eye-sight problems, or everyday stress and strain. The midwife should ask the following questions to determine if a referral is needed:

- i. How long does the headache last?
- ii. Are they getting worse?
- iii. What medicine is being taken for relief
- iv. Are dizziness, nausea, spots in front of the eyes, or blurred vision present when the headaches occur
- v. Do they go away with bed rest?

Most headaches get better with mild, pain-relieving tablets. Whenever headaches are becoming worse, are not relieved with simple medicine, or are combined with other symptoms, the pregnant woman should be seen by a physician.

Nausea and vomiting

Many women have nausea and occasional vomiting in their first trimester of pregnancy. When it lasts beyond 20 weeks it should be considered abnormal. Severe nausea and vomiting may be a symptom of hyperemesis gravidarum, hydatidiform mole, infections of the gastrointestinal tract, hepatitis, and, rarely, intestinal obstruction.

Vaginal bleeding

Bleeding in the first trimester may occur in 10 per cent of normal pregnancies and is usually not significant when the amount is small, and no abdominal pain is present. Heavy bleeding, particularly associated with cramps in the abdomen or pain in the back, is often a symptom of abortion. If a woman is bleeding heavily but does not have any pain, she is said to be experiencing a threatened abortion. Abortion is inevitable when pain and dilation of the cervix are present along with the bleeding. Bleeding in the first trimester may also be a sign of ectopic pregnancy or hydatidiform mole. Bleeding in the last trimester is usually due to placenta praevia or abruption placenta.

Anaemia

Anaemia during pregnancy is often due to inadequate food supplies. Diseases like malaria, tuberculosis, hookworm and schistosomiasis also cause anaemia. Severe anaemia contributes to complications and deaths in both mothers and newborns. Stillbirths and low birth weight babies also occur more frequently with women that are anaemic.

Malaria

Malaria during pregnancy can endanger the life of the mother as well as cause intrauterine growth retardation, abortions, premature labour and intrauterine death. It is also a major cause of anaemia during pregnancy. In areas where malaria is always present (endemic), suppressive drugs may be given to prevent repeat attacks.

Rubella and other viral infections

Rubella Infection (German measles) during early pregnancy causes congenital anomalies. Enquire whether the woman had a rash, fever and painful small swellings at the back of the head. The midwife should record any episode of symptoms include fever, chills, diarrhoea, limb and joint pain and the like.

High blood pressure

Women with high blood pressure before pregnancy are more likely to deliver small babies and experience worsening of the disease process.

Heart disease

Certain kinds of heart disease worsen during pregnancy and may even threaten the mother's life. However, women with severe heart disease are likely to have low birth weight babies and premature labour.

Kidney disease

Kidney disease such as nephritis or pyelonephritis involves poor kidney function. Babies born to mothers with kidney disease are usually small. Pregnancy is not known to worsen kidney disease.

Venereal disease

The more serious diseases during pregnancy are syphilis, gonorrhoea and herpes simplex type II. Syphilis can cause stillbirth and congenital syphilis in the infant. Gonorrhoea can cause severe conjunctivitis in the newborn (ophthalmia neonatorum) which may result in blindness. Herpes can cause death or mental retardation. Gonorrhoea is harmful to the baby when the baby comes in contact with *Neisseria gonorrhoea* as it passes through the birth canal. Silver nitrate is the drug most often recommended to prevent newborn blindness from gonorrhoea (ophthalmia neonatorum) because it remains effective for a time and remains stable even in extreme temperatures as long as the ampule is not opened. Data is now available to show that erythromycin (0.5 per cent) and tetracycline (1 per cent) drops or eye ointment is also effective.

Phlebitis

Women who have a history of phlebitis and cord-like veins have a 12 per cent chance of having them reappear while they are pregnant. Sometimes blood clots can dislodge and cause the death of the mother.

Convulsions

Most convulsive disorders are caused by epilepsy. Epilepsy can worsen in pregnancy. Phenytoin, the drug most commonly used to treat epilepsy, has been known to cause mental retardation and developmental problems in babies who were in utero when their mothers took the drug.

Tuberculosis

While this disease has no bad effects on pregnancy when recognized and treated early, the active disease must be treated during pregnancy with drugs not known to be harmful to the foetus. If the mother is an active case the newborn should be put on Isoniazid prophylaxis till the time the mother is non-infective. Then the baby should be vaccinated with BCG.

Diabetes mellitus

Diabetes mellitus is dangerous for both the mother and her baby. Babies of diabetic mothers are likely to be large, sometimes weighing more than 4500 grams. These babies are likely to need delivery by Caesarean section. When vaginal delivery occurs, damage to both mother or baby

can result. After birth, these babies may have hypoglycaemia (low blood sugar) which if severe, can lead to brain damage and present incidence of congenital anomalies, particularly cardiac problems.

Immunisation with tetanus toxoid

Tetanus in newborns is common in many developing countries. Sometimes the woman also develops tetanus after delivery. The mortality rate in neonatal tetanus is very high. Prevention is possible with two injections of tetanus toxoid at an interval of two months during the second half of pregnancy.

Radiation

Exposure to X-rays or other radiation during early pregnancy may cause birth defects. Ask whether she visited the hospital during early pregnancy for an X-ray.

Drug addiction

Drug addicts deliver babies with the same drug addiction. These babies have an increased risk of being mentally retarded and developmentally delayed.

3.3 Physical Examination

A complete physical examination at the first antenatal visit is desirable but not always possible. The following elements are the most important.

Height

Short stature may be associated with a small pelvis. It is most important when chronic disease or malnutrition is also present, or the height is significantly different from that of the general population. Women with shorter height might produce low birth weight babies.

Weight

The pre-pregnant weight, when known, should be recorded at the first antenatal visit. Women who are underweight at conception should gain. Those with very low weight (chronically malnourished) before pregnancy, deliver low birth weight babies. In some countries, the figures are 38-40 kgs. Those whose weight gain is insufficient to deliver low birth weight babies.

3.4 Pelvic Examination

The size of the uterus can also be estimated in a pelvic examination. A pelvic examination in the first trimester is a valuable guide for identifying the age of the baby. The size is recorded in weeks as 8-week size or 10 to 12-week size. Later in pregnancy fundal height

measurement increase every week between the 18th and 36th week of gestation. The rate of growth depends on the weight of a full-term baby. Examination of the pelvis after 32 weeks of pregnancy should be performed at the antenatal visit to identify the woman who may need a Caesarean section. The cephalo-pelvic disproportion is a problem in many countries. Women who have cephalo-pelvic disproportion should have well-supervised labour in a hospital or maternity centre with a midwife in attendance.

3.5 Abdominal Examination

This examination is performed at each visit during the last trimester of pregnancy to identify the presenting part. The abdominal examination can also be used to identify the lie, position, and whether or not engagement has occurred. When the expectant mother does not know her last menstrual period, abdominal examination early in pregnancy can help identify the approximate age of the foetus. Relating the height of the fundus to finger breadths above the symphysis, or finger breadths above or below the umbilicus can help the midwife decide when the baby might be born.

3.6 Foetal Heart Sounds

The baby's heartbeat can usually be heard with a foetoscope between 18 and 20 weeks of gestation. Normal foetal heart sounds range from 120-160 beats per minute. They increase when the baby moves. The presence of foetal heart sounds in the normal range reassures the midwife that the baby is alive.

3.7 Laboratory Tests

Urine examination for albumin

More than a trace of albumin in the urine suggests pregnancy-induced hypertension (pre-eclampsia), kidney disease, or urinary tract infection.

Blood examination

Haemoglobin should be estimated when there are clinical signs of anaemia. When possible, tests for syphilis and the RH factor should be done. The blood should be examined for sugar if diabetes is suspected.

Pregnancy tests

Confirmation of pregnancy is possible through both urine and blood tests.

3.8 Health and Nutrition Education During Pregnancy

Health education can be done individually or in groups. Topics for discussion include diet, personal hygiene, discomfort, preparation for delivery, breastfeeding, care of newborn care and family planning.

Frequency of Antenatal Visits

The recommended frequency of return visits is as follows:

- i. Every 4 weeks until the 28th week of pregnancy
- ii. Every 2 weeks from the 28th to the 36th week of pregnancy
Weekly after the 36th week

3.10 Subsequent Antenatal Visits

Return visits for antenatal care are scheduled to evaluate the health of both the mother and the baby. These visits allow the midwife to identify problems, provide health education, and make referrals when necessary. Each expectant mother should come to the clinic at least once every trimester.

Maternal Assessment

Once the record has been carefully reviewed, an up-to-date assessment of the mother and foetus should be done. The assessment of the mother consists of four parts:

Evaluation of Blood Pressure

Compare all blood pressure readings with the mother's blood pressure at her first antenatal visit or recent non-pregnant blood pressure. Remember the criteria for identifying mild and severe pre-eclampsia as well as chronic and gestational hypertension. If a blood pressure evaluation occurs before the 20th week, think of a hydatidiform mole as well as chronic hypertension. Always recheck a blood pressure that is significantly elevated.

Evaluation of Weight Gain

Compare the weight today with the pre-pregnant weight to identify the total weight gain weight at the last antenatal visit so that sudden, excessive weight gain or poor weight gain can be noted.

Evaluation of Urine for Sugar and Protein

Glucosuria can be normal in pregnancy. It can also be a sign of diabetes. When glucosuria is present, blood sugar tests should be performed when possible. Proteinuria can also be normal or a sign of pathology. A trace of protein in the urine usually means that the urine is mixed with vaginal discharge and is not significant. When a trace of protein is present in

urine, but no symptoms of pregnancy-induced hypertension are present, the urine should be carefully examined again at the next voiding. If the amount of protein at the second testing is 1+ or greater, a diagnosis of pregnancy-induced hypertension is made. Proteinuria can also mean a urinary tract infection (bladder or kidney infection), kidney disease, or heart disease. A microscopic urinalysis can diagnose urinary tract infection.

SELF-ASSESSMENT EXERCISE

Explain the physical examination at the first antenatal visit.

4.0 CONCLUSION

The first visit is important for identifying women needing special antenatal care or referral for delivery. This visit also gives the midwife a chance to become acquainted with the expectant mother and convince her of the value of antenatal care. Good antenatal care can make the difference between life and death for both mother and baby.

5.0 SUMMARY

Return antenatal visits are important for continuing the evaluation of both mother and baby. The midwife must be alert to the development of new problems and a worsening of old problems. Care must be given in an atmosphere of kindness, concern and support.

6.0 TUTOR-MARKED ASSIGNMENT

1. Give two reasons why each of the following should be checked: blood pressure, weight, urine at each antenatal clinic.
2. Explain the physical examination at the first antenatal visit.

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UNIT 4 ABORTION

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Definition
 - 3.2 Types of Abortion
 - 3.3 Incidence of Induced Abortion
 - 3.4 Abortion Methods
 - 3.5 Other Techniques
 - 3.6 Sex Selective Abortion
 - 3.7 Unsafe Abortion
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Abortion has a long history and has been induced by various methods including herbal abortifacients, the use of sharpened tools, physical trauma, and other traditional methods. Contemporary medicine utilizes medications and surgical procedures to induce abortion. The legality, prevalence, and cultural views on abortion vary substantially around the world. In many parts of the world, there is prominent and divisive public controversy over the ethical and legal issues of abortion. Abortion and abortion-related issues feature prominently in the national politics in many nations, often involving the opposing "pro-life" and "pro-choice" worldwide social movements. The incidence of abortion has declined worldwide, as access to family planning education and contraceptive services has increased.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- define abortion
- enumerate the types of abortion
- discuss the methods of abortion.

3.0 MAIN CONTENT

3.1 Definition of Abortion

Abortion is the termination of a pregnancy by the removal or expulsion from the uterus of a foetus or embryo, resulting in or caused by its death. An abortion can occur spontaneously due to complications during pregnancy or can be induced, in humans and other species. In the context of human pregnancies, an abortion induced to preserve the health of the gravida (pregnant female) is termed a therapeutic abortion, while an abortion induced for any other reason is termed an elective abortion. The term abortion most commonly refers to the induced abortion of a human pregnancy, while spontaneous abortions are usually termed miscarriages.

3.2 Types of Abortion

Spontaneous abortion

Spontaneous abortion (also known as miscarriage) is the expulsion of an embryo or foetus due to accidental trauma or natural causes before approximately the 22nd week of gestation; the definition by gestational age varies by country. Premature births and stillbirths are generally not considered to be miscarriages. The most common cause of spontaneous abortion during the first trimester is chromosomal abnormalities of the embryo/foetus, accounting for at least 50% of sampled early pregnancy losses. Other causes include vascular disease (such as lupus), diabetes, other hormonal problems, infection, and abnormalities of the uterus. Advancing maternal age and a patient history of previous spontaneous abortions are the two leading factors associated with a greater risk of spontaneous abortion. A spontaneous abortion can also be caused by accidental trauma; intentional trauma or stress to cause miscarriage is considered induced abortion or feticide.

Induced abortion

Reasons for procuring induced abortions are typically characterized as either **therapeutic** or **elective**. Abortion is medically referred to as *therapeutic* when it is performed to:

save the life of the pregnant woman preserve the woman's physical or mental health terminate pregnancy that would result in a child born with a congenital disorder that would be fatal or associated with significant morbidity.

An abortion is referred to as an *elective* when it is performed at the request of the woman "for reasons other than maternal health or foetal disease."

3.3 Incidence of Induced Abortion

The incidence and reasons for induced abortion vary regionally. It has been estimated that in 1995 approximately 46 million abortions were performed worldwide. Of these, 26 million are said to have occurred in places where abortion is legal; the other 20 million happened where the procedure is illegal. Abortion rates also vary depending on the stage of pregnancy and the method practised.

3.4 Abortion Methods

Historically, pregnancies were terminated through several methods, including the administration of abortifacient herbs, the use of sharpened implements, the application of abdominal pressure, and other techniques. Gestational age often determines which abortion methods are practised.

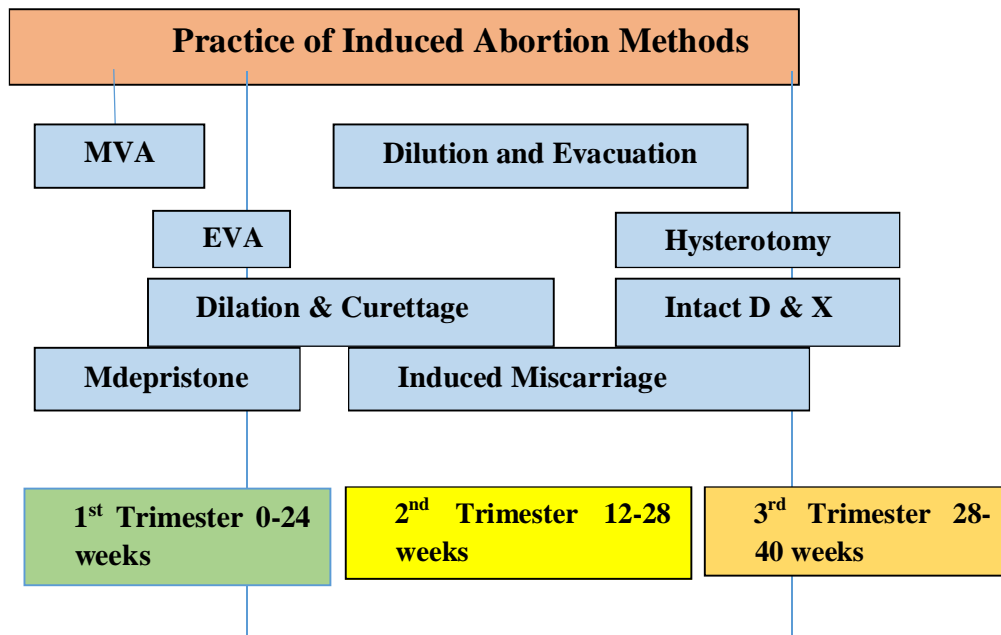


Figure 3: Abortion Methods

Medical abortions

They are non-surgical abortions that use pharmaceutical drugs and are only effective in the first trimester of pregnancy. Medical abortions comprise 10% of all abortions. Combined regimens include methotrexate or mifepristone, followed by a prostaglandin (either misoprostol or gemepros. Misoprostol can be used alone but has a lower efficacy rate than combined regimens. In cases of failure of medical abortion, vacuum or manual aspiration is used to complete the abortion surgically.

Manual Vacuum aspiration (MVA) / electric vacuum aspiration (EVA)

Manual Vacuum aspiration (MVA) abortion consists of removing the foetus or embryo, placenta and membranes by suction using a manual syringe, while *electric vacuum aspiration* (EVA) abortion uses an electric pump. These techniques are comparable and differ in the mechanism used to apply suction. In the first 12 weeks, suction-aspiration or vacuum abortion is the most common method of Dilation and evacuation (D&E).

Dilation and evacuation (D&E) are used from the 15th week until approximately the 26th, and it consists of opening the cervix of the uterus and emptying it using surgical instruments and suction.

Dilation and curettage (D&C)

The term *D and C*, or sometimes *suction curette*, is used as a euphemism for the first-trimester abortion procedure, whichever method is used. It is the second most common method of abortion and also is a standard gynaecological procedure performed for a variety of reasons, including examination of the uterine lining for possible malignancy, investigation of abnormal bleeding, and abortion. *Curettage* refers to cleaning the walls of the uterus with a curette. The World Health Organization recommends this procedure, also called *sharp curettage*, only when MVA is unavailable.

3.5 Other Techniques

These are:

- i. The use of prostaglandin to induce abortion in the second trimester.
- ii. Injecting the amniotic fluid with hypertonic solutions containing saline or urea. Abortions can be induced by this method after the 16th week of gestation,
- iii. Intact dilation and extraction (IDX) (also called intrauterine cranial decompression), which requires surgical decompression of the foetus's head before evacuation. IDX is sometimes called "partial-birth abortion.
- iv. Hysterectomy abortion is a procedure similar to a caesarean section and is performed under general anaesthesia. It requires a smaller incision than a caesarean section and is used during later stages of pregnancy
- v. Use of herbs with abortifacient properties has been used in folk medicine: tansy, pennyroyal, black cohosh, and the now-extinct silphium. The use of herbs in such a manner can cause

- serious side effects.
- vi. Trauma to the abdomen. The degree of force can cause serious internal injuries without necessarily succeeding in inducing miscarriage. Both accidental and deliberate abortions of this kind can be subject to criminal liability.
- vii. Forceful abdominal massage
- viii. Misuse of misoprostol,
- ix. Insertion of non-surgical implements such as knitting needles and clothes hangers into the uterus. These methods are rarely seen in developed countries where surgical abortion is legal and available

3.6 Sex-Selective Abortion

Sonography and amniocentesis allow parents to determine sex before birth. The development of this technology has led to sex-selective abortion, or the targeted termination of female fetuses. It is suggested that sex-selective abortion might be partially responsible for the noticeable disparities between the birth rates of male and female children in some places. The preference for male children is reported in many areas of Asia, and abortion used to limit female births has been reported in Mainland China, Taiwan, South Korea, and India.

In India, the economic role of men, the costs associated with dowries, and a common Indian tradition that dictates that funeral rites must be performed by a male relative have led to a cultural preference for sons. The Indian government passed an official ban on pre-natal sex screening in 1994 and moved to pass a complete ban on sex-selective abortion in 2002.

3.7 Unsafe Abortion

The World Health Organization (WHO) defines an unsafe abortion as being "a procedure ... carried out by persons lacking the necessary skills or in an environment that does not conform to minimal medical standards or both." Unsafe abortions are sometimes known colloquially as "back-alley" abortions. This can include a person without medical training, a professional health provider operating in sub-standard conditions, or the woman herself. Unsafe abortion remains a public health concern today due to the higher incidence and severity of its associated complications, such as incomplete abortion, sepsis, haemorrhage, and damage to internal organs.

WHO estimates that 19 million unsafe abortions occur around the world annually and that 68,000 of these result in a woman's death. Complications of unsafe abortion are said to account, globally, for

approximately 13 % of all maternal mortalities, with regional estimates including 12 % in Asia, 25 % in Latin America, and 13 % in Sub-Saharan Africa. A 2007 study published in *The Lancet* found that, although the global rate of abortion declined from 45.6 million in 1995 to 41.6 million in 2003, unsafe procedures still accounted for 48% of all abortions performed in 2003. Health education, access to family planning and improvements in health care during and after abortion have been proposed to address this phenomenon.

The abortion debate - Abortion debates, especially about abortion laws, are often spearheaded by groups advocating one of these two positions. In the United States, those in favour of greater legal restrictions on, or even complete prohibition of abortion, most often describe themselves as pro-life while those against legal restrictions on abortion describe themselves as pro-choice. Generally, the pro-life position argues that a human foetus is a human being with the right to live making abortion tantamount to murder. The pro-choice position argues that a woman has certain reproductive rights, especially the choice of whether or not to carry a pregnancy to term.

SELF-ASSESSMENT EXERCISE

Explain the conditions under which abortion is termed unsafe.

4.0 CONCLUSION

An abortion can occur spontaneously due to complications during pregnancy or can be induced, in humans and other species.

5.0 SUMMARY

In both public and private debates, arguments presented in favour of or against abortion focus on either the moral permissibility of induced abortion or justification of laws permitting or restricting abortion. The debate also focuses on whether the pregnant woman should have to notify and/or have the consent of others in distinct cases: a minor, her parents; a legally married or common-law wife, her husband; or a pregnant woman, the biological father.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss methods of abortion.
2. Describe are the complications of abortions.
3. Explain the conditions under which abortion is termed unsafe.

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UNIT 5 HIGH-RISK WOMEN AND INFANTS

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- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 High Risk Pregnant Women
 - 3.2 High Risk Women in Postpartum
 - 3.3 High Risk Infants
- 4.0 Conclusion
- 5.0 Summary
- 3.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

In pregnancy, certain women are more likely than others to develop complications. These women are said to be “at-risk”. The first pregnancy, multiple or frequent pregnancies, pregnancy early or late at the reproductive age, and malnutrition in women are among the risk factors which increase the chances of poor pregnancy outcome, (sickness or death for either mother or baby). Included in the “high risk” group are women with chronic disease, women who have a poor obstetrical history, and women who develop a serious complication in the present pregnancy. When more than one risk factor is present in the same individual, the chances of poor outcomes are increased. Babies born to women in this group are more likely to be born prematurely, sick, deformed, or retarded. The babies are also more likely to be stillborn or die in the neonatal period.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- define high-risk women and infants
- list eight conditions that identify pregnant women at high risk
- enumerate three conditions that identify women at high risk during labour
- discuss five factors that put the mother at high risk during the post-partum period
- explain five conditions in the newborn which are of high risk and how to manage them.

3.0 MAIN CONTENT

3.1 High-Risk Pregnant Women

A pregnant woman should be considered at high risk if one or more of the following conditions are present;

- i. Age - 17 years or under, or above 35 years of age.
- ii. Elderly primipara – above 30 years of age and multipara – more than four pregnancies.
- iii. Previous history of:
 - i. Abortion or stillbirth
 - ii. Loss of child within one month of delivery
 - iii. Caesarean section
 - iv. Prolonged labour lasting more than 24 hours
 - v. Baby weighs less than 2.5 kg
 - vi. Height 145 centimetres or less.
 - vii. Weight of less than 38 kg before pregnancy or less than 42 kg at 34 weeks of pregnancy.
 - viii. Severe anaemia.
- Toxaemia of pregnancy – signs such as oedema, high blood pressure and albumin in the urine
- Unusually large uterus
- Vaginal bleeding during pregnancy
- Abnormal presentation during the last month of pregnancy
- Diabetes, hepatitis or heart disease.

Age

Adolescent pregnancy before 17 years of age has bad effects on the health of the mother and baby. This is because the pelvic bones of girls below 17 years of age are neither still in the process of development, more importantly, they are not mature physically nor physiologically to undergo the stress and strain of pregnancy and labour. Labour may become prolonged or obstructed resulting in rupture of the uterus or vesicovaginal fistulae. These young mothers are prone to deliver low birth weight babies. When a woman is pregnant for the first time after the age of 30 years, she may experience difficult labour because of stiffness of the pelvic ligaments and rigid perineum. After 35 years of age, women are more prone to pregnancy-induced hypertension, postpartum haemorrhage and abnormal presentation.

Parity

The woman who already has had 4 deliveries (grand multipara) is more likely to get anaemia and malnutrition due to depletion of her nutritional

stores. The incidence of postpartum haemorrhage is high in multiparous women.

Past History

The previous obstetrical history should be carefully assessed critically, noting any conditions which can put her at risk during the present pregnancy. If a woman had a stillbirth in the immediate past pregnancy, perhaps due to foetal-pelvic disproportion or tight cord around the baby's neck, she may deliver a stillborn baby and need a Caesarean section. Such women are high risk and they should be examined often during the current pregnancy and advised to deliver in hospital. If three or more of the last pregnancies ended in abortions, then the causes of the abortions should be investigated and treated.

The death of an infant within one month of birth is generally due to feeding problems, birth trauma, infection, low birth weight or prematurity. Such conditions may occur again in the next infant; hence, such women who lost their babies within one month of delivery should be watched carefully during the present pregnancy. If the previous labour was prolonged for more than 24 hours, the cause for this should be determined.

Severe malnutrition

women. Measurements like the height and weight of women are utilized in screening high-risk mothers. Those women who are stunted, whose weight is very low before pregnancy, or whose pregnancy weight gain is poor are prone to delivering low birth weight babies. Nutrition supplementation during pregnancy can reduce the incidence of low birth weight babies of severely malnourished

Severe anaemia

Severe pallor can be detected at antenatal examinations. Anaemia in pregnant women causes growth retardation in the foetus and the baby is born with low birth weight. Severe anaemia in mothers leads to premature labour.

Toxaemia

Toxaemia is harmful to the foetus as well as to the mother. The foetus may be aborted or born with low birth weight. Oedema on the face and fingers may be associated with raised blood pressure and albumin in the urine. The mother can have developed convulsions. Anaemia and toxaemia must be being detected and treated to prevent adverse consequences to the mother and the baby.

Large abdomen

A large foetus, multiple pregnancies (twins) or hydramnios should be suspected when abdominal examination reveals an over-distended uterus.

Vaginal bleeding

Women with a history of antepartum haemorrhage are more prone to postpartum haemorrhage, hence these women must be managed in the hospital. First trimester bleeding may end in abortion. Bleeding after 20 weeks can be due to abruption placenta or placenta praevia.

Abnormal presentation

Abnormal presentation, such as brow, face or prolapse of the cord or a hand breech or transverse lie, predispose a pregnant woman to high risk, such woman should be advised to deliver in a hospital to avoid prolonged labour, rupture of the uterus or stillbirth. Premature rupture of membranes and prolapse of the cord can occur in abnormal presentations such as breech or shoulder.

Diseases

Heart disease and diabetes during pregnancy are hazardous to pregnant women and the growing foetus. A diabetic woman is more prone to pregnancy-induced hypertension. Her big-size baby can cause prolonged labour. An infant of a diabetic mother often suffers from metabolic problems after birth.

Labour

A woman with any of the following in labour; profuse vaginal bleeding, premature rupture of the membrane, prolonged labour (more than 24 hours) is in the high-risk group. Premature rupture of the membranes should be watched carefully as this can lead to infection of the amniotic fluid and thus infection to the baby and the mother. Premature rupture of membranes can occur in abnormal presentations such as breech or shoulder, and there are chances of prolapse of the cord.

3.2 High-Risk Women in The Postpartum Period

Any woman with any of the under-listed conditions is at high risk during the early postpartum period. Complications may occur in high-risk women immediately or sometime within a week of the delivery. These are:

- i. Premature rupture of membranes
- ii. Prolonged labour
- iii. Multiparity
- iv. Twin delivery

- v. Delivery of a large baby
- vi. Hydramnios
- vii. Postpartum haemorrhage in the previous delivery
- viii. Antepartum haemorrhage in the present pregnancy

3.3 High-Risk Infants

A new-born is at risk if he/she has any one or more of the following conditions:

- i. Pre-term birth
- ii. Low birth weight
- iii. Premature rupture of membranes
- iv. Asphyxia
- v. Intense jaundice
- vi. Hypothermia
- vii. Delivery conducted by an untrained attendant

Infants are at high risk when they are born before term or born at term but have a low birth weight. Their resistance to infections is low at such times. The newborn is prone to diarrhoea, pneumonia, conjunctivitis, or skin infections if the membranes ruptured early and the liquor amnii is infected. Prolonged labour, a cord around the neck and a heavy dose of sedatives given to the mother before delivery is the commonest cause of asphyxia. The foetal respiratory centres in the medulla are depressed due to the sedatives or lack of oxygen. Asphyxiated babies have a poor Apgar score and may develop cerebral palsy, mental retardation or epilepsy.

Jaundice by the third day of life is physiologically normal in the newborn. It is mild and lasts for a week. However, if there is blood group incompatibility such as Rh and ABO, or enzyme deficiency in red cells jaundice may occur on the first or second day. Babies who have jaundice from the first or second day are at risk. The newborn develops hypothermia when the room temperature is low and the baby is not sufficiently covered up. Rectal temperature below 36 degrees C is considered hypothermia. These babies should be well covered as they may die because of the very low body temperature.

SELF-ASSESSMENT EXERCISE

Explain the implications of postpartum haemorrhage in a previous delivery.

4.0 CONCLUSION

The midwife can reduce maternal and infant mortality and morbidity to a large extent by detecting high-risk women and infants and providing special care and referring them to the hospital in time.

5.0 SUMMARY

The first pregnancy, multiple or frequent pregnancies, pregnancy early or late at the reproductive age, and malnutrition in women are among the risk factors which increase the chances of poor pregnancy outcomes.

6.0 TUTOR-MARKED ASSIGNMENT

1. Enumerate four conditions each that might make a baby or the mother be at risk.
2. Discuss the factors that can make a new-born to be at high risk.
3. Explain the implications of postpartum haemorrhage in a previous delivery.

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UNIT 6 FETAL HEALTH

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 - 3.1.1. Unusual Growth Patterns
 - 3.1.2. Low Fundal Height
 - 3.1.3. High Fundal Height
 - 3.2 Management of Abnormal Growth Patterns
 - 3.3 Foetal heart Sounds
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 - 3.4 Foetal Movement
 - 3.5 Diagnosing Foetal Death
- 4.0 Conclusion
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1.0 INTRODUCTION

At each antenatal visit, the baby must be evaluated for health as well as for growth. The growth is measured using fundal height. Foetal health is evaluated by examining the abdomen to determine the position of the foetus before listening for the foetal heartbeat. **The foetoscope** is designed to be placed on or against the examiner's head so that the bones or his/her skull can help conduct the foetal heart sound. **Foetal movement**; is the activity of the foetus in the uterus.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- describe the procedure for measuring fundal height using a centimetre measuring tape
- know the usual time of quickening
- give the range of normal foetal heart sounds.
- state the gestational age when foetal heart sounds should be heard with a foetoscope. On a drawing of the maternal abdomen, mark the area where foetal heart sounds are most likely to be found early in pregnancy.

3.0 MAIN CONTENT

3.1 Fundal Height

The height of the uterine fundus is used for assessing foetal growth. However, the fundal height varies according to (i) the period of pregnancy (ii) the growth of the baby. The uterine fundus is known to grow approximately 1 cm per week between the 18th and 36th week. For example, at 28 week's gestation, the fundal height should measure between 26 and 30 cm (28 plus or minus 2 cm) from the pubic symphysis, if the baby is growing well. Abdominal landmarks can also be used to assess the period of gestation. A level of one centimetre or a finger above the pubic symphysis represents 3 months of pregnancy and every month after that its position increases by about the width of four reaching the level of the navel by the 5th month of pregnancy and xiphisternum on the 9th month.

The uterus is palpable after three months of pregnancy. Before measuring the height of the fundus ask the woman to empty her bladder. To measure the fundal height with a centimetre measuring tape, place one end of the tape directly over the symphysis until the top of the fundus is reached. The border of the symphysis must be felt each time a measurement is made because its location varies from woman to woman. It is important to be exact when locating the upper border of the symphysis and the top of the uterus.

3.2 Unusual Growth Patterns

If the height of the fundus is unusually large or small the midwife must first be sure of the gestational age of the baby. The following may be helpful:

Review the menstrual history, Is the mother sure of the date of her last normal menstrual period, Was the last menstrual period normal, When was the EDC (Expected Date of Confinement) Calculation of the EDC is as follows: (i) To the date of the last menstrual period (LMP) add 7 days and count forward 9 calendar months, e.g., if the last menstruation was on 3 March, add 7, which comes to 10 March and count 9 months ahead from 10 April: that will come to 10 December which will be the approximate date of delivery, or (ii) add seven days to the last menstruation date and count back three calendar months.

Review the birth control method history Has either partner used a birth control method since the last normal menstrual period? When was this method stopped? Was it used correctly and consistently?

Identify the date of quickening, when did the mother first feel the baby move? Movement is most likely to occur at 16-18 weeks' gestation.

3.2.1 Low Fundal Height

When the fundal height is consistently less than expected for a given period of gestation, or when it remains the same for a month (excluding the time after 8 months of pregnancy), the examiner should consider the possibility of the following:

Wrong dates- Intrauterine growth retardation (no growth or slow growth of the baby in the uterus). This is the most common cause of low fundal height.

Transverse lie -Transverse lie can often be found by examination and palpation of the abdomen. In many cases, the baby appears to be below the umbilicus (See Fig. 4.)



Figure 4: Palpation in transverse lie.

Oligohydramnios (decreased amniotic fluid) Decreased amniotic fluid is associated with urinary and gastrointestinal abnormalities in the foetus. When oligohydramnios is present, the midwife may not be able to feel amniotic fluid when palpating the abdomen.

Foetal death -The absence of foetal movement usually makes the expectant mother suspicious that something has happened to her baby. The midwife should listen carefully to foetal heart sounds. If they are not heard, the foetus is probably dead. However, there is a possibility of error when the patient is obese or when polyhydramnios is present. Foetal heart sounds should be confirmed by two different examiners.

The accuracy of the fundal height measurement is increased when the same person measures each time. Each midwife must perform the procedure using the same technique. There can be an incorrect recording if the bladder was full at the previous examination.

3.2.2 High Fundal Height

When the fundal height is consistently much higher than expected, the examiner must consider the possibility of the following:

Wrong dates

Polyhydramnios (too much amniotic fluid) Polyhydramnios is more likely to occur in pregnancies involving more than one foetus, major malformations, diabetes mellitus. The diagnosis is usually based on finding a large abdomen and a feeling of a larger than usual quantity of fluid around the foetus. It may not be possible to feel the foetus. Most of the time the cause of polyhydramnios is unknown, and the baby is born without problems. However, polyhydramnios is associated with:

Diabetes in the mother Foetal anomalies such as anencephaly, spina bifida, tracheo-oesophageal fistula Intrauterine infections such as syphilis

Severe and chronic anaemia in utero, such as erythroblastosis fetalis

Multiple pregnancies

Twins can be identified by finding two heartbeats. The examiner must listen for 60 seconds and should find at least ten beats' difference between the heartbeats. If two different foetal heartbeats are heard, two examiners should listen at the same time with a foetoscope on different parts of the mother's abdomen. As the foetal heartbeat is heard, each examiner moves a finger in rhythm with the heartbeat. If the fingers move together, one baby is present. If the fingers move at different intervals and if the foetal heart rate difference by two examiners is more than 10, more than one baby is present.

Maternal diabetes mellitus

This disease is frequently associated with large fundal heights because babies of diabetic mothers can be very large.

Large baby

Some babies are healthy yet much larger than average.

3.2.3 Management of abnormal Growth Patterns

The midwife must always be concerned when the growth of the foetus is not within the norm and refer the expectant mother to a centre where

special antenatal testing can be done. Expectant mothers should be encouraged to deliver in a hospital or clinic where special support for small or sick babies is available. Women with babies having growth problems should be seen more frequently. Special attention must be given to good nutrition. The plan of care should be written clearly on the mother's chart so that everyone involved is aware of the problems and the steps that are to be taken

3.3 Foetal Heart Sounds

Foetal health is evaluated by counting foetal heart sounds with a foetoscope. The normal foetal heartbeats from 120-160 times each minute. Bradycardia (slow heartbeat less than 90 times each minute) or tachycardia (fast heartbeat more than 160-170 times each minute) may mean that the baby is in distress. When the foetal back is found, the foetoscope is placed over it so that the heart sounds can be heard easily and clearly. It may be difficult to determine the foetal position when the pregnant woman is obese or has polyhydramnios.

3.3.1 Locating /Listening to Foetal Heart Sounds

(a) **At 18th- 20th week of pregnancy**

Foetal heart sounds can usually be heard by foetoscope between the 18th- 20th week of pregnancy. To listen, place the foetoscope directly above the upper border of the symphysis pubis. Listen for the foetal heartbeat. If nothing is heard, move toward the umbilicus slowly to the left side of the midline and move down toward the symphysis. If the heartbeat is still not heard, move one centimetre to the right of the midline and move up toward the umbilicus. Finally, listen in the middle of each lower quadrant. At this stage of pregnancy, the foetal heart sounds are rarely found far from the midline. (See Fig. 5.)

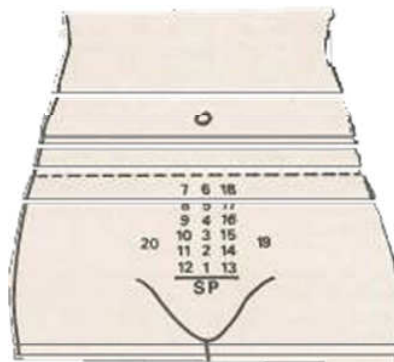


Figure 5: Foetal heart sounds at 18th- 20th week of pregnancy

(b) After the 24th week of pregnancy

Foetal heart sounds can be found on either the lower right or lower left side of the mother's abdomen. Place the foetoscope in the middle of one of the lower quadrants. (Position 1 or 2). If no heartbeat is heard, place the foetoscope in the middle of the other quadrant. If no foetal heart sounds are heard, place the foetoscope in the middle halfway between the umbilicus and the upper border of the symphysis pubis (Position 3). If the foetal heart tones are still not heard, place the foetoscope directly over the umbilicus (Position 4). Then try the left and right flanks at the level of the umbilicus (Position 5 and 6). Finally, place the foetoscope in the midline of each upper quadrant (Positions 7 and 8). See Fig. 6.)

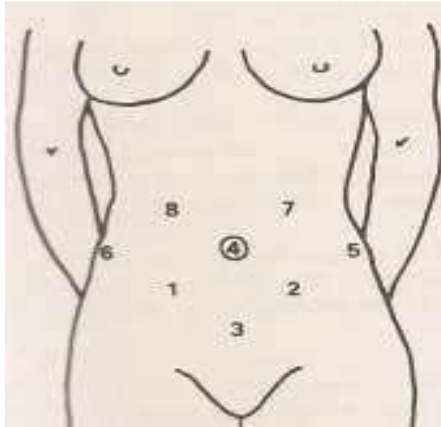


Figure 6: Foetoscope examination of the pregnant woman after the 24th week of pregnancy

Once the foetal heart sounds are located, count the beats for at least 15 seconds. Multiply this number by 4 to get the number of beats per minute. Record your findings. Listen for a full minute if you find an irregular heartbeat, bradycardia or tachycardia. The foetal heart rate should increase with foetal movement. Therefore, slowing of the foetal heart after the foetal activity is normal.

3.4 Foetal Movement

It is used to assess the viability of the baby. Decreased foetal movement is thought to be most important in women with high-risk pregnancies.

3.5 Diagnosing Foetal Death

When the baby dies, the mother is usually the first to know. She will often feel that “something is wrong”. If the baby dies early in the pregnancy, the symptoms of pregnancy disappear. Other signs are; the breasts go back to their normal size, the mother suffers nausea and vomiting, there will be no foetus movement. The mother loses weight or stops gaining weight. The midwife is unable to hear foetal heart sounds. When a foetal death occurs, most women will go into labour within one month of the death of the baby.

SELF-ASSESSMENT EXERCISE

Define Abdominal landmarks.

4.0 CONCLUSION

Assessment of the growth and health of the foetus is one of the main responsibilities of those who care for pregnant women. Accurate and continuous evaluation of the baby in utero provides the midwife with information that should lead to the best possible care for women and their infants.

5.0 SUMMARY

Abdominal landmarks can also be used to assess the period of gestation. A level of one centimetre or a finger above the pubic symphysis represents 3 months of pregnancy and every month after that its position increases by about the width of four reaching the level of the navel by the 5th month of pregnancy and xiphisternum on the 9th month.

6.0 TUTOR-MARKED ASSIGNMENT

On a drawing of the maternal abdomen, mark the area where foetal heart sounds are most likely to be found early in pregnancy.

7.0 REFERENCES/ FURTHER READING

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MODULE 3 THE PROCESS OF LABOUR

Unit 1	Abdominal Examination
Unit 2	Labour Process
Unit 3	Abnormal Labour
Unit 4	Postpartum Visit and Examination

UNIT 1 ABDOMINAL EXAMINATION

CONTENTS

1.0	Introduction
2.0	Objectives
3.0	Main Content
3.1	Palpation of the Abdomen
3.1.1	The Lie
3.1.2	The Presentation
3.2	Activities Involved in the Examination of the Abdomen
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	References/Further Reading

1.0 INTRODUCTION

The examination is the key to making the correct diagnosis of any problem in general. This is more important in pregnancy during labour. The abdominal examination is the examination that gives a direct idea of what is happening to the baby and the mother too. The process of examination still follows the IPPA (Inspect, Palpate, Percuss and Auscultate) mnemonic.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- define and explain the following:
 - i. Transverse lie
 - ii. Longitudinal lie
 - iii. Presenting part
 - iv. Identify two ways to diagnose a transverse lie.
 - v. Give two reasons for palpating the abdomen at each examination after the 32nd week of pregnancy.
 - vi. Describe the technique for palpating the abdomen (Leopold's Manoeuvre) in late pregnancy.

3.0 MAIN CONTENT

3.1 Palpation of the Abdomen

Before examining the abdomen, the woman is asked to empty her bladder to avoid discomfort and allow a better assessment of foetal parts. The examination of the abdomen of the pregnant woman to determine lie and presentation is called Leopold's Manoeuvres. This is done to identify

- (i.) The Lie
- (ii.) Presentation

3.1.1 The Lie

Lie refers to the relationship between the spine of the baby and the spine of the mother. The lie of the baby is either longitudinal or transverse. When the lie is longitudinal, the spine of the baby is parallel (in the same direction) to the spine of the mother. When the lie is transverse, the spine of the baby is perpendicular (at right angles) to the spine of the mother. The lie is longitudinal in both cephalic and breech presentation. In a transverse lie, the baby's shoulder is usually over the pelvic inlet. This condition is also referred to as a shoulder presentation. However, a baby in a transverse lie can also be resting with its back in the fundus. See Fig.4.

A transverse lie can result from any of the following:

- a. An unusual relaxation of the abdominal wall allows the uterus to fall forward and prevents the baby from entering the birth canal
- b. Prematurity
- c. Placenta praevia
- d. A contracted pelvis

Full-term babies cannot be delivered vaginally when they are in a transverse lie. Without intervention, both mother and baby will be at risk

3.1.2 The Presentation

This refers to the part of the baby that lies nearest the cervix during a vaginal examination. If the lie is longitudinal, the presenting part is either the head or the breech. Head presentation can be vertex, brow, or face. In the transverse lie, the presenting part is the shoulder. When the presenting part is the brow, the forehead appears at the internal cervical os. When the face comes first, the head is hyperextended so that the

back part of the baby's head (occiput) is in contact with the foetal back. The mouth, nose, cheekbones and ridges of the eyes can be felt. This presentation may resemble a breach since the anus resembles the mouth and the ischial spine resembles the cheekbones.

3.2 Activities Involved in the Examination of the Abdomen

Four activities are involved in the examination of the abdomen of the pregnant woman. These are; to determine lie and presentation. Each answers a different question. The activities may be performed in any sequence.

Identifying the presenting part

This is done by extending the thumb and middle finger of one hand and place them on the lower abdomen immediately above the symphysis pubis. Gently but firmly press into the abdomen and feel for shape, size, and consistency. This is to differentiate between the breach and the head. (See Fig. 7.)

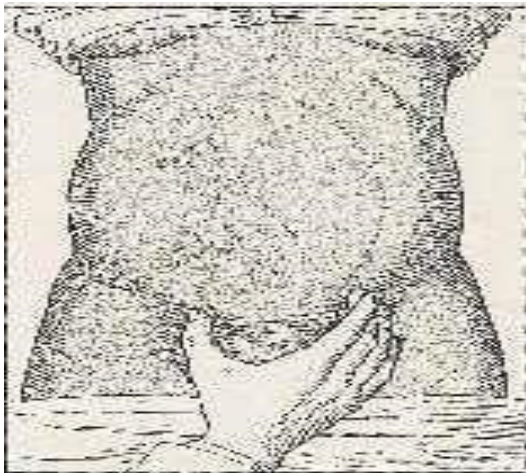


Figure 7: Identifying the presenting part

If the foetal part feels round and hard, the head is in the pelvis. When the head is found in the pelvis, the conclusion is that the lie is longitudinal, and the presentation is cephalic.

Identify the part of the baby's body that is in the fundus

This is done by placing the palms of both hands on either side of the fundus and palpate for shape, size, consistency and mobility. See Fig. 4. If the foetal part feels irregular and soft and is not readily moved from side to side between the two hands, the breech is in the fundus. If the foetal part feels round and hard and is easily moved from side to side,

the head is in the fundus. If neither is felt, the baby is probably in a transverse lie.



Figure 8: Identify the part of the baby's body that is in the fundus

Identify the back

This is done by placing the hands on either side of the abdomen at the level of the umbilicus. Support the uterus with one hand, gently palpate the other side with the other hand looking for the foetal back. The foetal back is smooth whereas the small parts are small, movable, and irregular. See Fig. 9.



Figure 9: Where is the back?

Has engagement occurred?

Facing the patient's feet, See Fig. 10) gently move your hands down the sides of the baby toward the symphysis pubis. Feel for the cephalic

prominence. The cephalic prominence is the forehead when the baby's head is flexed and the occiput when the head is extended.

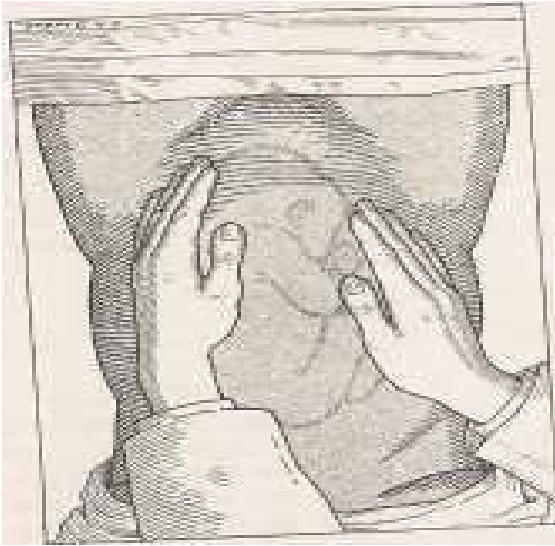


Figure 10: Has engagement occurred?

SELF-ASSESSMENT EXERCISE

Draw a diagram showing the types of abortion.

4.0 CONCLUSION

The midwife must be able to identify both the lie and the presenting part so that babies can be delivered under the safest possible conditions.

5.0 SUMMARY

The examination of the abdomen of the pregnant woman to determine lie and presentation is called Leopold's Manoeuvre. This is done to identify

- (a) The Lie
- (b) Presentation

6.0 TUTOR-MARKED ASSIGNMENT

1. Enumerate the four activities that are involved in the examination of the abdomen of the pregnant woman.
2. With a relevant diagram, discuss the signs that show that the baby has engaged.
3. Draw a diagram showing the types of abortion.

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UNIT 2 LABOUR PROCESS

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 The Course of Labour
 - 3.2 Signs of True Labour
 - 3.3 Mechanisms of Labour
 - 3.4 Assessment of Labour
 - 3.5 Stages of Labour
 - 3.6 Cares during Labour
 - 3.7 Use of Enema in Labour
 - 3.8 Support measures that may help relieve the pain of labour
 - 3.9 Pain Medication
 - 3.10 Positions for Labour
 - 3.11 Examination of the Placenta
 - 3.12 Immediate Care of the Newborn
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignments
- 7.0 References/Further Reading

1.0 INTRODUCTION

Labour is the process by which the baby and the placenta are pushed out of the uterus and brought into the world. Labour is an emotional experience as well as a physical one. Each culture has ruled that pregnant women are expected to follow during labour and birth. These rules include who can be present, what position the mother will deliver in, what sounds are acceptable, who will deliver the baby and what happens to the baby when it is born.

Definitions of terms

- i. Effacement is the process by which the cervical canal becomes short and thin.
- ii. Dilatation is the process by which the cervix opens so that the baby's head can pass through.
- iii. Braxton-Hicks contractions are usually irregular and painless uterus contractions

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- describe the assessment of a new patient in labour.
- list five factors to be considered before giving pain medication to women in labour.
- describe the mechanism of labour.
- explain the four signs of placental separation.

Before Labour Begins

Two to three weeks before labour begins, the cervix starts to efface and dilate. Effacement is the process by which the cervical canal becomes short and thin. Dilatation is the process by which the cervix opens so that the baby's head can pass through. The cervix also moves from a posterior position to an anterior position in the vagina. It can dilate as much as 5 cm before true labour begins. In most cases, however, the cervix will dilate true labour begins. In most cases, however, the cervix will dilate only one to 2 cm. Effacement before labour usually varies from 50-80 per cent.

Some mothers having their first baby will experience lightening, the dropping of the fetus into the true pelvis, about two weeks before labour begins. When this happens, the uterine fundus stops pressing against the diaphragm. Breathing becomes easier, but some discomfort may now be felt in the lower abdomen, groin and thighs. The urinary frequency may occur due to pressure of the baby's head on the urinary bladder.

Some mothers feel the uterus contracting during the last weeks of pregnancy. These contractions are called Braxton-Hicks contractions. They are usually irregular and painless, but may, on occasion, come every three to four minutes and can cause discomfort. However, the cervix does not dilate or efface with Braxton-Hicks contractions. For this reason, they are called "false labour" contractions.

"Bloody show", blood-tinged mucus coming from the vagina, often appears 24-48 hours before labour begins. Bloody show is a combination of mucus and blood from the cervix. As the cervix effaces and dilates, the mucus that "plugged" the cervix to help protect the baby from infection is torn away from the sides of the cervix, causing tiny blood vessels to rupture and bleed giving the mucus a pink or dark brown colour.

3.1 The Course of Labour

Several theories are explaining why and how labour starts. Investigators feel that when the baby reaches a certain point of maturity, it somehow signals the uterus to begin contracting. The signal is thought to be a chemical reaction that begins in the membranes. The contractions of labour push the baby toward the birth canal. These contractions are rhythmic and involuntary. At the beginning of labour, they often cause pain or discomfort in the lower part of the back. The midwife can feel the contractions by placing a hand on the abdomen of the labouring woman. When a contraction begins, the abdomen becomes hard. It softens when the contraction relaxes. Because most of the muscles of the uterus are in the fundus, the contractions are easiest to feel in the fundal area.

Contractions decrease the flow of blood of the placenta. Muscle fibres in the uterus are arranged around blood vessels in the uterus like the number "8". The blood vessels are in Between each contraction there is a period of relaxation that allows the blood to flow again through the blood vessels so that oxygen and nutrients can reach the baby.

As labour progresses, the contractions increase in frequency, duration (length) and intensity. The frequency of contractions (how often they occur) is determined by timing the beginning of one contraction to the beginning of the next one. The duration is measured from the beginning of the contraction. It is Intensity refers to the strength of the contraction. It is measured by touching the fundus of the uterus to feel how hard it is. A common practice for determining the intensity of the contraction is to compare by touch the firmness of the fundus with the firmness of your lips, nose, chin and forehead in that order. The intensity is labelled:

- 1+ firmness (comparable to the feel of your lips; a mild contraction)
- 2+ firmness (comparable to the nose)
- 3+ firmness (comparable to the chin)
- 4+ firmness (comparable to the forehead, a strong contraction)

Most labours begin with contractions occurring every 10-15 minutes, lasting approximately 30 seconds and of mild intensity. As labour progresses, the contractions become more frequent and last longer until, in the last part of the first stage of labour, the contractions may occur every two minutes and last as long as 90 seconds. Most, but not all women, experience labour in this manner. Some will at the very beginning have strong, three minutes contractions that last for 60 seconds. Others will begin with mild contractions every two or three minutes. Many variations exist and are considered normal. Progress toward birth is usually made when the contractions are frequent and

strong. Other signs of progress include an increase in a bloody show and spontaneous rupture of the membranes. When not ruptured artificially, the membranes are most likely to break at the end of the first stage of labour or early in the second stage. Sometimes, however, the membranes will rupture before labour begins or early in labour.

Many birth attendants feel that the bag of water should be left intact (membranes not ruptured) if possible, to protect the presenting part and the umbilical cord. Others believe that rupture of the membranes stimulates uterine contractions and, therefore, will artificially rupture membranes early in labour. However, contractions do not always increase after the procedure, nor is it always desirable to make the contractions stronger. Intact membranes also protect the fetus from infection.

3.2 Signs of True Labour

A vaginal or rectal examination to evaluate the dilatation of the cervix is the only way to know if a woman is in labour. False labour produces no changes in the cervix. True labour causes the cervix to dilate and efface. Below are some differences between true and false labour.

Table 2: Differences between True and False labour

False Labour	True Labour
Pain decreases or goes away with walking or after an enema is given.	Pain is not relieved with walking and increases after an enema is given
Contractions are irregular or do not get close together.	Contractions become stronger and longer, and more frequent
No bloody show.	Bloody show

3.3 Mechanisms of Labour

Before birth can occur, the fetus must fit through the bony pelvis. This involves seven changes of position:

Engagement

This occurs when the presenting part is almost at the ischial spines. In a primigravida, engagement may occur before the start of labour. A multipara engagement usually occurs during labour. Engagement occurs with the mechanisms of flexion and descent.

Flexion

As the baby pushes against the cervix and the pelvic floor, its chin touches its chest making its head as small as possible. If the baby does not put its chin on its chest, a wider part of the head must try to fit

through the pelvis.

Descent -

This occurs throughout labour. The baby moves down through the mother's pelvis. This is possible because of

- (1) fundal pressure on the presenting part and
- (2) contractions of the abdominal muscles when the mother pushes, descent occurs.

Internal Rotation

Internal rotation occurs when the baby's head reaches the level of the ischial spines.

Extension

The baby's head passes under the pubic arch as labour continues. When the baby's head reaches the perineum, it "extends". The occipital is born first; then the anterior fontanelle, forehead, eyes, nose, mouth and chin.

Restitution and External Rotation

After the baby's head is born, it turns 45 degrees (restitution) to the right or the left and then 90 degrees (external rotation). The shoulders turn to an anterior-posterior position so they can come under the public arch. Lateral flexion is the term that describes the way the baby's body is born. After the shoulders are born, the baby bends its head, chest and trunk upwards to fit through the birth canal.

3.4 Assessment of Labour

- a) **The assessment of the patient should include:**
 - i. Information about the progress of labour
 - ii. When did the contractions begin
 - iii. Have the membranes ruptured
 - iv. Was bloody show present
 - v. History of bright red bleeding since labour began.
- b) **Evaluation of the contractions now:**
 - i. Frequency
 - ii. Strength
 - iii. Duration.
- c) **Fetal heart sounds**
- d) **Blood pressure, pulse, respiration, temperature**
- e) **Abdominal examination to identify:**
 - i. presentation
 - ii. Position
 - iii. Engagement

- iv. Fundal height measurement
- v. Fetal size and estimating fetal weight
- f) **Vaginal or rectal examination to identify:**
 - i. Dilation
 - ii. Effacement
 - iii. Station
 - iv. Presentation
- g) **Urine examination for:**
 - i. Protein
 - ii. Glucose
 - iii. Ketone bodies (in cases with prolonged labour) (Urine the examination is not carried out routinely: only when indicated)
- h) **Haematocrit or haemoglobin**
- i) **Evaluation of the mother's emotional state:**
 - i. The reaction to pain
 - ii. Her response to the people presents to give her support
 - iii. Her feelings about the progress of labour

3.5 The Stages of Labour

Labour is divided into three stages:

- a. The first stage lasts from the first true contraction until the cervix is 10 cm (completely) dilated.

This stage is divided into three phases:

- i. Early phase (latent phase)
- ii. Active phase
- iii. Transition
- b. The second stage lasts from complete dilation to the birth of the baby.
- c. The third stage lasts from the birth of the baby to delivery of the placenta.

The first stage of labour

a) Early phase

The early phase of the first stage begins with the first true contraction and ends when the cervix is about 4cm dilated. In early labour contractions are usually mild to moderate in intensity. As time passes, they increase in both frequency and duration. During this period the midwife should listen to fetal heart sound every 30 to 60 minutes. In normal labor the blood pressure, respiration and pulse should be checked every two hours. The temperature should be checked every four hours. Vaginal examinations should be performed to be sure that labour is progressing normally. This is done on admission to the hospital or whenever the membranes rupture during labour to make sure that the

umbilical cord has not prolapsed. The vaginal examination provides information about cervical dilatation and effacement. It also allows the midwife to identify the station of the presenting part. Station refers to how far down the birth canal the baby has moved. It is measured by relating the presenting part to the ischial spines. If the presenting part has reached the spines, it is at a minus one (-1) station and so on. If the presenting part is one centimetre below the spines, it is at a plus one (+1) station. Whenever the presenting part is above the ischial spines, it is at a minus station. When below the ischial spines, it is at a plus station. Crowning occurs at a +5 station.

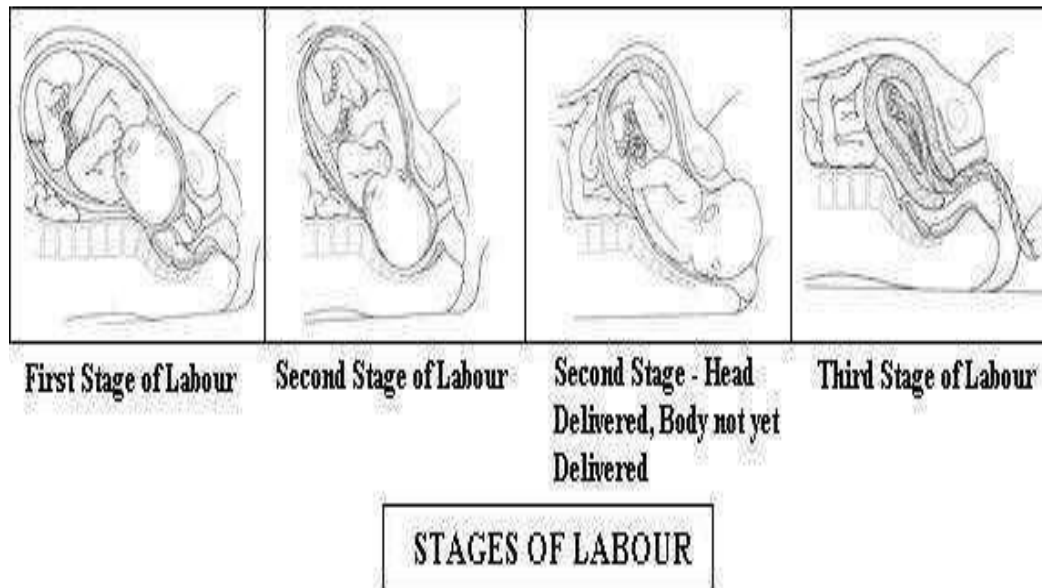


Figure 11: Stages of Labour

Active Labour

The active phase of labour begins when the cervix is about 4 cm dilated. At this time the contractions occur every three to four minutes, last 60 seconds and has increased in strength. Fetal heart sounds during the active phase should be checked every 15 minutes and the pulse is taken every hour. Physical and emotional support should continue.

Transition

Transition is the last part of the first stage of labour. It usually begins at 7 to 8 cm dilatation. At this time the contractions are very strong, may occur every two minutes and can last as long as 90 seconds. The transitional phase of labour is often easy to identify because of changes in the mother's behaviour. She may become restless, less talkative, or more irritable. An increase in bloody show, as well as spontaneous rupture of the membrane, is likely to occur.

Second Stage of Labour

The second stage of labour begins when the cervix is 10 cm dilated. At this time the mother often feels rectal pressure and wants to push with each contraction. In the second stage, the midwife must continue to evaluate the progress of labour and well-being of both mother and baby. Emotional and physical care must continue. Fetal heart sounds should be checked every five to ten minutes. Slowing of the heart rate is common at this time due to pressure of the baby's head or a knot in the umbilical cord around the baby's neck that tightens as the baby descends through the birth canal. If the baby has had no problems, the heart rate does not go below 90 beats per minute during a contraction and returns to normal soon after the contraction ends, there is no need to hurry the birth. If the heart rate is very slow and/ or does not return to normal between contractions or returns to normal slowly, it is often advisable to deliver the baby as quickly as possible. The second stage of labour should last no more than two hours. Progress toward birth is shown if the presenting part continues to descend. The appearance of the presenting part at the vaginal opening indicates that delivery is about to occur.

The Delivery Room

This is a room in the maternity clinic or hospital that is used for actual delivery purposes. Generally, primigravidas can be moved into this room when approximately 4 cm of the baby's head is visible. It is more difficult to know when to move multigravidas because of fast labours and should be moved at 8cm.

The Birth

The people allowed to be present at the birth should be chosen according to cultural norms and the wishes of the mother. As the baby's head appears at the vaginal opening, the midwife should tell the mother how much to push. The baby's head and shoulders should be delivered very slowly to decrease the risk of brain damage to the baby and to prevent lacerations to the mother. The midwife can encourage the mother to push, then to pant, alternating these activities until the head is delivered. The head can be supported as it turns to the side after it is born. The face can be wiped gently, and mucus can be aspirated from the mouth and nose with a soft rubber tube or bulb syringe, or with gauze wrapped around the little finger. As soon as the baby's head is born, feel at the neck for the umbilical cord. If the cord is around the baby's neck loosely, it can be left alone or slipped over the head. If it is tight around the neck, the cord should be clamped twice, cut between the clamps and unwound.

The shoulders are ready to deliver when the head turns to one side (external rotation). The mother can be asked to push down. First, one shoulder and then the other is born. Slow delivery of the shoulders is

important to avoid maternal tears. Great force should not be used on the baby since damage can be caused to nerves in the neck. The force that pushes out the shoulders should come from the mother bearing down and/ or from uterine contractions. Once the head and shoulders are born, the rest of the body slips out easily unless there is a major deformity of the baby's back or abdomen. Episiotomy is not performed routinely; it is most helpful when the fetal heart sounds are slow, and the baby needs to be delivered quickly. As soon as the baby is delivered it can be given to the mother, dried, and placed against her skin to minimize the loss of heat.

The Third Stage of Labour

This occurs when the placenta separates from the uterine wall. Signs of placental separation include:

A "gush" of blood from the vagina
Lengthening of the umbilical cord.
A rise of the uterine fundus in the abdomen
Firmness of the uterus

Many techniques have been suggested to encourage delivery of the placenta. These include massaging the fundus and gently traction the umbilical cord. While the mother pushes, the midwife can pull lightly on the umbilical cord. If the placenta does not deliver within thirty minutes, the mother can be asked to get into a squatting position to push, or the placenta can be removed manually. If the baby is put to the mother's breast immediately, this helps placental separation as the uterus contracts. Placental separation usually occurs within ten minutes of the end of the second stage. Occasionally, the placenta may not be expelled as expected in this case the placenta should be manually removed after a certain period because a large but invisible blood clot can form behind the placenta, leading to symptoms of shock.

Once the placenta has been delivered, oxytocic drugs are given to prevent haemorrhage. Two kinds of drugs are used: ergot drugs and oxytocin. Ergot drugs cause the uterus to contract continually. Oxytocin causes the uterus to contract and relax alternately. Both drugs can be given intramuscularly. Ergot drugs should not be given before the placenta is delivered because they have been known to cause the cervix to contract and "trap" the placenta. If the placenta does not deliver, oxytocin given intramuscularly will usually expel the placenta without the danger of "trapping".

The Fourth Stage of Labour

The fourth stage of labour is a name given to the two hours following the delivery of the placenta. Close observation of the new mother at this time is important. Care of the mother should include:

- a. Measurement of blood pressure, pulse and respiration every 15 minutes.
- b. Palpation of the uterus every 15 minutes to be sure that it is firm and at the proper location. Immediately after birth, the uterus can be found halfway between the symphysis and the umbilicus. However, shortly afterwards it rises to about the level of the fundus and usually descends one finger below the umbilicus in each of the first four postpartum days).
- c. Observation of the flow of blood from the vagina particularly during massage of the uterus to be sure that haemorrhage is not occurring
- d. Keeping the bladder empty so that the uterus can contract
- e. Offer nourishing liquids and/ or food
- f. Encouraging rest and sleep except for the mother who is excited about the birth and needs to relieve her labour and delivery by talking about it.
- g. Keeping mother and baby together when culturally appropriate.

3.6 Cares During Labour

The care given to women during labour should include:

- a Monitoring the condition of the mother
- b Monitoring the condition of the baby
- c Providing the mother with praise, encouragement and information
- d Preventing infection
- e Avoiding accidents/ complications
- f Providing physical comfort
- g Meeting physiological needs
- h Recording information
- i Ensuring adequate intake of fluids by mouth

The beginning of labour is often a time of both excitement and fear. This is particularly true for the mother who will deliver away from her home. A different environment, separation from her family in some instances, and the maternity centre's focus on technical aspects of care can be an extra source of stress. The midwife must do everything they can to decrease the labouring woman's anxiety and increase her ability to relax. A warm greeting, acceptance of the woman's feelings and behaviour, and concern for the kind of births she wants are important.

Throughout labour, the patient should be encouraged to empty her bladder at least every two hours. Adequate amounts of nourishment, particularly fluids, are important because the labouring woman is

working hard. Solid food is not digested well and maybe vomited as labour progresses.

3.7 The Use of Enema in Labour

In some palaces, it is common to give an enema to the woman early in labour.

The reasons for given enema:

- a. To hurry labour
- b. To give the baby more room as it passes through the birth canal
- c. To have a cleaner delivery

Enemas have never been proven to speed labour nor are the baby held back by a rectum full of faeces unless a faecal impaction from severe constipation is present. Studies show that labouring women are more likely to have more faecal material expelled at the time of birth if they have had an enema than if they have not had one. It must also be noted that:

- a. An enema is a very uncomfortable procedure for most labouring women
- b. Many women have diarrhoea or a bowel movement in early labour and do not need an enema because their rectums are already empty of faeces.

In some areas, it is also common to shave all or part of the mother's pubic hair before the baby is born. This practice is supposed to lessen the chance of infection and make it easier rather than decreased when the pubic hair is shaved because the superficial layer of skin that is removed with shaving is more susceptible to bacteria than intact skin. When the pubic hair grows back, it often itches and is uncomfortable. Pubic hair needs to be shaved only in unusual situations.

Throughout labour, the midwife should be a continual source of comfort and support to the expectant mother. All procedures should be explained and performed with gentleness. Information about the progress of labour, praise, reassurance and encouragement should be offered. Fear can cause both mental and muscular tension. This causes pain which causes fear and a circle repeats itself. The fear, tension, pain cycle should be avoided.

Women in labour have been shown to appreciate the following:

- a. Physical care
- b. The presence of a caring person
- c. Acceptance of their behaviour
- d. Information and reassurance of a safe outcome for themselves and their babies.

3.6 Support Measures That May Help Relieve the Pain of

Labour

The support measures that may help relieve the pain of labour include:

- a. Position change
- b. Relaxation and breathing exercises
- c. Fanning
- d. Back rubs
- e. Heat or cold to the lower back
- f. Abdominal rubs
- g. Leg massage
- h. Hand holding
- i. Change of soiled linen and clothing
- j. Cool clothes to the face
- k. Cleaning of the mouth
- l. Oral fluids

3.9.1 Pain Medication

Pain medication may be given to women. Most drugs for pain can cause respiratory depression. Therefore, drugs must be used carefully. Before giving pain medication to a woman in labour the midwife should think about the following:

- i. When delivery of the baby is expected
- ii. The effectiveness of the presence of support persons (family, friends, The midwife)
- iii. How much pain the mother has
- iv. The mother's wishes
- v. How much other medication has been given
- vi. The gestational age of the baby (Premature babies may be particularly depressed when pain medication is given)

No one knows for sure at what point in labour it is safest to give pain medication. Some people say that these drugs should not be given if the birth is expected within an hour. Most pain medication can be given intravenous or intramuscular. Some birth attendants feel it is best to give small, frequent doses of medicine intravenous because medicine given by this route is excreted faster.

3.7 Positions for Labour

The position that women assume in labour is often prescribed by culture. Some women lie down; others sit, squat or walk. As long as the patient is healthy, the pregnancy is at term, and the presenting part fits tightly against the cervix, there is no medical reason why the woman in labour should not use the position she finds the most comfortable.

3.8 Examination of the Placenta

Once the placenta is delivered it should be examined to see that no parts are missing. To examine the placenta, place it on a flat surface. Separate the membranes so that the maternal side of the placenta can be seen. Look for areas that seem to be missing a piece. Usually the cord is in the centre, but it is sometimes found at the side. Examine the cord for knots. Look at the end of the cord and count the number of blood vessels. There should be two arteries and one vein. When only one artery and one vein are present, the baby may have some internal abnormalities.

After the placenta is delivered the midwife should look for lacerations that may need to be repaired. Careful inspection of both labia, the area around the clitoris, the vagina and the perineum is necessary to avoid missing a bleeding laceration. Usually, lacerations are repaired only when they are bleeding.

3.9 The Immediate Care of the New-Born

Suction

As soon as the baby's head is born the nose and mouth are clear of mucus. Healthy newborns can clear both to mouth and the nasal passages by themselves and suction are done only when the baby is depressed, or the amniotic fluid is meconium stained (green in colour). Amniotic fluid is green when the rectal sphincter of the baby relaxes and faeces pass into the fluid. This happens when the baby is asphyxiated due to a lack of oxygen. If the newborn inhales the tiny pieces of faeces present in the meconium-stained fluid, severe pneumonia can occur.

The Apgar Score

The most frequently used system to assess the new baby at birth is the Apgar score. The scoring system was developed by an anesthesiologist who wanted all babies to be given attention as soon as they were born. Her scoring system puts babies into one of three categories: healthy, mildly or moderately depressed, or severely depressed. The baby is

given a score after its heart rate, respiration, muscle tone, reflex irritability, and colour are evaluated at one minute of age and again at five minutes of age.

Table 4: Scoring of baby health immediately after birth using Apgar Scoring System

Sign	0 point	1 point	2 points
Heart rate	Absent	100/minute	100/minute
Respirator effort	Absent	Slow or irregular	Good; crying
Muscle tone	Flaccid	Some flexion of extremities	Good flexion, active motion
Reflex irritability	Absent	Grimace	Cough, sneeze, cry
Baby colour	Blue or pale	Pink	Completely pink

Heart rate is the most important of the five signs. It should be evaluated first. The rate can easily be counted by feeling the pulsations in the umbilical cord, by placing the fingers under the baby's left breast, or by auscultating the heart. A heart rate of more than 100 beats per minute is reassuring. The baby receives 2 points when its heartbeat is more than 100. A heartbeat of below 100 beats per minute means that the baby needs stimulation and closes supervision. This baby would receive one point. When no heartbeat is present immediate cardio-pulmonary resuscitation should be given without any other evaluation. No points are given.

Respiratory effort is evaluated by watching the baby's chest for breathing movements. Respiratory effort is always good, 2 points, no points are given when respiration is absent.

Muscle tone is good, 2 points, when the baby resists, attempts to straighten its arms or legs. If muscle tone is weak, one point is given. No points are given when the baby is limp.

Reflex irritability can be tested by tickling the baby's nose. A grimace, slight movement of the muscles of the face, gets one point, while a cough, sneeze or cry gets 2 points.

Baby's body Colour is the least important item evaluated. Most babies are born with some cyanosis of the hands and feet. Therefore, even healthy babies are usually given only one point for colour. A baby that is blue or pale is given no points.

A baby with a score of 0 to 3 is severely depressed and needs resuscitation and constant supervision. If the Apgar score is 4 to 6, the infant is in fair condition and usually will do well with stimulation and constant supervision. The infant with a score of 7 to 10 is in good condition. A baby with a good heart rate and good respirations will almost always have good muscle tone, reflexes and colour. But a baby with a heart rate of less than 100 often has breathing problems and therefore will be limp, hyporeflexia, and pale or cyanotic. Stimulation is usually not necessary for babies with Apgar scores of 7 to 10. Babies with lower scores can be stimulated by vigorous rubbing of the baby's back or by flicking the soles of the baby's feet. Newborns with low Apgar scores at one and five minutes should be reevaluated at 10 and 20 minutes of life.

Warmth

After birth, the baby's body should be immediately dried with amniotic fluid. This is because a low body temperature in newborn babies can lead to death. It can also cause low blood sugar levels. The baby can then be handed over to the mother, placed in a warmer, or given to a relative to hold. Other techniques to keep the baby warm include:

- a. Covering the baby's head with a cap
- b. Avoiding drafts
- c. Waiting until the baby's temperature is stable (usually about four hours) to give the first bath.

Care of the Cord

Plastic clamps, rubber bands, and string are often used for tying the baby's cord. The cord should be tied or clamped about 2 cm from the umbilicus and cut about one centimetre beyond the tie or clamp. The material used to tie and cut the cord should be sterile. The umbilical cord need not be covered with a dressing or a binder since this delays drying of the cord and predisposes the baby to infection of the umbilicus. Warmth and moisture encourage the growth of bacteria. Good handwashing technique is particularly important.

Care of the Eyes

The baby's eyes should be cleaned with swabs dipped in clean water and then treated with an approved medication to prevent ophthalmia neonatorum. Silver nitrate is used for treating eye infections caused by gonococcus and other organisms.

Identification

Babies not born at home should be properly identified to prevent confusion.

SELF-ASSESSMENT EXERCISE

Explain the Apgar Score.

4.0 CONCLUSION

All infants need time to adjust to the physiological changes experienced in the move from the uterus into the world. As long as the baby is healthy, the mother can be encouraged to keep her baby with her unless other practices are required by the culture.

5.0 SUMMARY

Progress toward birth is usually made when the contractions are frequent and strong. Other signs of progress include an increase in a bloody show and spontaneous rupture of the membranes. The Apgar Score Is the most frequently used system to assess the new baby at birth.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss how you would examine the placenta.
2. Discuss the stages of delivery.
3. Explain the Apgar Score.

7.0 REFERENCES/FURTHER READING

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UNIT 3 ABNORMAL LABOUR

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Types of Abnormal Labour
 - 3.2 Causes of Prolonged Labour
 - 3.3 Management of Prolonged Labour
 - 3.4 Evaluation of Prolonged Labour
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignments
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1.0 INTRODUCTION

A vaginal birth usually depends on the ability of the uterus to contract often enough and strong enough to dilate the cervix and the ability of the mother to push down in the second stage, the size and shape of the mother's pelvis and the amount of resistance of the soft tissue (cervix, vagina and the muscles of the pelvic floor) and the size, presentation and position of the baby.

These three factors are often called the **powers, passage and passenger**: the three Ps. Abnormal labour would arise because of problems in the three.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- define prolong labour
- list five causes of prolonged labour after the latent phase.
- describe the role of the midwife in the management of prolonged labour.

3.0 MAIN CONTENT

3.1 Types of Abnormal Labour

- Precipitate Labour
- Prolonged Labour

Precipitate delivery also refers to an uncontrolled birth. Precipitate labour is defined as one that lasts less than 4 hours and is usually due to unusually strong contractions, a large pelvis and non-resisting soft tissue. They are dangerous because the mother may have serious tears of the cervix, vagina and perineum, or even a ruptured uterus. The baby may suffer brain damage because of the trauma to the head, or lack of oxygen. The lack of oxygen is due to the strong, frequent contractions that interfere with the blood supply in the uterus.

Prolonged Labour; this occurs when the latent phase is prolonged and there is little or no progress in cervical dilatation and effacement. It is characterized by contractions that are five or more minutes apart, and of mild-moderate intensity and the cervix is less than 4 cm dilated. The most serious cause is foetal-pelvic disproportion, the inability of the fetus to pass safely through the birth canal because of mechanical problems.

3.2 Causes of a Prolonged Labour

1. Too much sedation
2. An unprepared cervix (no dilatation or effacement when labour begins)
3. An abnormal fetal position
4. Foeto-pelvic disproportion - The fetus is too large to pass through the pelvis

3.3 Management of Prolonged Labour

Management of prolonged labour must include evaluation of the fetus and the mother in addition to the continued evaluation of the progress of labour. Active management of a prolonged latent phase involves stopping the contractions, to allow the mother to rest or augmenting the contractions with oxytocin. Often morphine sulfate or pethidine are given. Physical and emotional supports are given. The mother will wake up either in good labour or the contractions will have stopped altogether. The choice of rest or the use of oxytocin is based on the mother's physical and emotional condition, her wishes and local resources. The woman with a prolonged latent phase is usually discouraged and tired, when many hours of labour result in little progress. Both physical and emotional supports are needed. Nourishing fluids should be given. Sometimes intravenous fluids are needed. Artificial rupture of the membranes does not help a prolonged latent phase and is particularly dangerous if the mother is having false labour.

3.4 Evaluation of Prolonged Labour

Multiparas with prolonged labour must be evaluated frequently to prevent uterine rupture. The evaluation of the mother includes:

- a. **Checking frequently the following**
 - i. Blood pressure
 - ii. Pulse
 - iii. Respiration
 - iv. Temperature
- b. **Evaluating her emotional condition**
- c. **Observe her urine output:** a decrease in urine output often means dehydration. Urine should be tested for ketone bodies. Ketonuria is a sign of dehydration.
Evaluation of labour includes:
 - Monitoring contractions (frequency, strength and duration)
 - Vaginal examinations to determine changes in dilatation and descent

Prolonged labour may also begin in the active phase. Most often the cause of delay is a large baby, a malpresentation, a malposition or foetal-pelvic disproportion. Too much sedation or exhaustion can also slow labour.

SELF-ASSESSMENT EXERCISE

Explain how to evaluate prolonged labour.

4.0 CONCLUSION

Abnormal labours threaten two lives-the mothers and the baby. Early diagnosis and evaluation for foetal-pelvic disproportion can avoid unnecessary long labours.

5.0 SUMMARY

Management of prolonged labour must include evaluation of the foetus and the mother in addition to the continued evaluation of the progress of labour.

6.0 TUTOR-MARKED ASSIGNMENT

1. Enumerate and discuss the causes of prolonged labour.

2. Explain how to evaluate prolonged labour.

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UNIT 4 POSTPARTUM VISIT AND EXAMINATION

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Purposes of the Postpartum Visit
 - 3.2 Postpartum examination
 - 3.3 Postpartum Infection
 - 3.4 Causes of Postpartum Infection
 - 3.5 Other Problems
 - 3.6 Health Education
 - 3.7 Immunisation
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

The postpartum period begins with the delivery of the placenta and lasts for six weeks. During this time the reproductive organs return to their pre-pregnant state and the family begins adjusting to its new member. A lot of physically and emotionally changes occur during this period. Women are frequently encouraged to return to the clinic four to six weeks after delivery.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- list five purposes of the postpartum visit.
- give the reasons why information about the following is needed at the postpartum visit:
 - problems of mother and baby since delivery
 - mother's and baby's weight
- list the six childhood diseases that can be prevented with immunisation.
- define postpartum infection.
- list six factors that predispose to puerperal infection.

3.0 MAIN CONTENT

3.1 Purposes of the Postpartum Visit

1. To observe the newborn's growth and development
2. To observe the physical and the emotional state of the mother
3. To encourage continued breast-feeding
4. To advise on a birth control method for those women wishing to participate in family planning
5. To provide emotional support to the new mother to offer health education information

3.1 Postpartum Examination

The mother and the persons she brings with her must be warmly welcomed. Health information about delivery and in the weeks following the birth are reviewed. This information can have obtained from the home-based mother's card which is kept by the mothers. In the absence of such a record, the following form may be helpful.

1. History

- i. The mother's weight
- ii. pre-pregnant weight
- iii. Weight before the delivery
- iv. Present weight

2. Birth Information

Date of birth

Place of birth: Home or Hospital

- i. Type of delivery; Spontaneous vaginal or Forceps or Caesarean section Weight of baby:
- ii. Episiotomy/Laceration
- iii. Condition of the baby at birth:
- iv. Delivery conducted by: Doctor or midwife

3. Antepartum problems: Anaemia
Malaria
High blood pressure
Tuberculosis
Other (specify)
4. Intrapartum problems: Prolonged labour
Fever
Haemorrhage
Other (specify)

- | | |
|-------------------------|---|
| 5. Postpartum problems: | Fever
Excessive
bleeding Foul-
smelling lochia
Pain: Head
Abdomen
Back
Legs
Depression
Other (specify) |
| 6. Problems with baby | Fever
Diarrhoea
Cough
Poor eating
Other (specify) |
| 7. Breast-feeding | Yes/No Reasons |

This information will help the skilled birth attendant (health care provider trained to take a delivery) provide appropriate health education.

1. **Blood pressure**

Blood pressure was checked at the postpartum visit. Most women who have high blood pressure only during pregnancy will have normal blood pressure at the postpartum examination. Women with high blood pressure should see a physician for treatment.

2. **Urinalysis**

Urine is examined for the presence of protein and glucose. This can help detect urinary tract infections, kidney disease and diabetes.

3. **The baby's weight**

The weight of the baby at the postpartum visit should be compared with its birth weight. When no weight has been gained or the amount is small, the midwife should ask carefully about feeding practices. Babies with poor weight gain should be followed closely with frequent home visits. Mothers of these babies need practical nutritional advice and emotional support. Growth charts should be used for monitoring the baby's growth and development.

3.2 **Postpartum Infection**

The usual cause of fever in the postpartum period is a bacterial infection of the genital tract. However, an infection can also be present in the urinary tract, the lungs, the breasts and in surgical wounds. To make a diagnosis of postpartum infection, two temperature readings above 38

degrees must be recorded on any two of the first 10 postpartum days exclusive of the first 24 hours. A complete physical examination of the patient is done to determine the source of the infection. This includes a review of the mother's antepartum and intrapartum history, physical examination, and the review of any laboratory tests that have been performed.

3.3 Causes of Postpartum Infection

- i. Prolonged rupture of the membranes
- ii. Prolonged labour
- iii. Difficult delivery
- iv. Multiple vaginal examinations
- v. Retained placenta
- vi. Postpartum haemorrhage
- vii. Anaemia and surgical intervention such as caesarean
- viii. Predispose to infection

Uterine Infection

Uterine infection is characterized by pelvic pain and tenderness, an offensive vaginal discharge, a soft large uterus, headache and general malaise. Other symptoms include an increased pulse, a gradual temperature rise. The fever usually appears from 2 to 10 days after delivery. Antibiotic therapy is often prescribed. When the infection becomes more severe, the patient may present with, hypotension, low blood pressure, cold, moist skin and mental confusion. If the patient fails to respond after 2-4 days to antibiotic therapy, re-examination and further investigation are required. Uterine infections can be prevented by observing the rules of hygiene, particularly when membranes are ruptured.

Urinary Tract Infection

The patient with a urinary tract infection will usually have urinary frequency and burning or pain on urination. The diagnosis is best made by a microscopic examination of the urine for white blood cells. When white blood cells are present in numbers greater than 5-10 per high power field, infection is present. Urinary tract infections should be treated with sulphur drugs for 5 days or antibiotics for 5-7 days.

Mastitis

The causative organism is staphylococcus aureus; this is present in the baby's mouth. So breast infections are rarely found in women who bottle feed. Mastitis often presents with redness, pain, and warmth in the affected breast, fever and general malaise. The drug of choice is antibiotic therapy. A nursing mother with mastitis should continue to breastfeed.

Malaria

In areas where malaria is endemic, the newborns can be infected. Infection can occur with any of the four species of human malaria. The symptoms of malaria in infants are poor feeding, restlessness, sleepiness, pallor, vomiting, and diarrhoea. Fever is usually present. These symptoms are similar to any other infection occurring during the first weeks of life. The midwife should teach new mothers about good health practices. Family planning services should be offered at this time.

Diarrhoea infections

This can cause mortality in children due to the large loss of fluid and electrolytes. When large amounts are lost, death can occur. Diarrhoea can occur from infected feeding utensil pacifiers and toys that babies put in the mouth. A simple and inexpensive treatment for most cases of diarrhoea is Oral Rehydration Salts (ORS), a powder containing sugar and salt. When mixed with water and given to children, it replaces the lost of fluid and electrolytes. ORS contain water, sugar, and salt, and are necessary for life. ORS can also be made at home by filling a 5 ml teaspoon with salt. Level of the amount with a knife so the salt is not piled above the edges. Pour the salt into one litre of clean drinking water. Add eight level teaspoons of sugar to the water. Small amounts of fluid should be given frequently. Babies with diarrhoea should continue to be breastfed and given the prepared solution.

3.5 Other Problems**Poor attachment to the baby**

Occasionally, mothers will not develop good feelings toward their babies. These women need extra attention and loving care from the midwife. It may be appropriate to discuss adoption or some other culturally acceptable alternative with these women.

Problems with the Eyes

Mothers can be taught to protect the eyes of their children. Conjunctivitis, painful red eyes with swelling and a sticky discharge, is common in children. The spread of this illness can be limited by washing the baby's hands and face with soap and water. Trachoma is a serious disease of the eyes. It is spread by contact between one person and another, and by flies. Regular washing of face and hands, and keeping flies away from children's eyes, can prevent the disease. Some blindness is caused by a lack of Vitamin A. An early sign of the disease is night-blindness, the inability to see in the dark. When children eat orange coloured fruits, leafy green vegetables and red palm oil, the body can usually produce all the Vitamin A they need.

3.6 Health Education

Good nutrition makes a child healthy and able to resist some infections. Mothers should be encouraged to breastfeed. The advantages of breast milk should be highlighted, such include; it meets all the baby's nutritional needs, gives protection against infection and contributes to birth-spacing. From 4-5 months old, the infants should be started on solid food as they need a variety of foods in addition to the mother's milk. Mothers should be told the importance of making the feeding of infants and small children a priority within the family. Health education can also include important information about the nutritional needs of the mother, baby and the other members, and the importance of immunizations and the use of oral rehydration in cases of diarrhoea.

3.7 Immunisation

Mothers must be encouraged to immunise their children against the six killers' diseases such as measles, whooping cough, tuberculosis, diphtheria, tetanus and polio. Immunisations protect children against these dangerous diseases. Mother must be told the schedule of immunisation Table 1 shows the recommended immunisation schedule for children in Nigeria. This service is provided by local health authorities and is accessible to most individuals without cost. Records of immunisation received, and the date given should be kept by each individual for reference. Schedule for routine immunisations (www.nphcda.gov.ng).

Table 5: Schedule for Routine Immunisations

Vaccine	Age	
BCG, Oral polio vaccine & Hepatitis B vaccine	at birth	
Pentavalent 1, pneumococcal conjugate vaccine (PCV 1), Oral polio vaccine 1	6 weeks	1st dose
Pentavalent 2, pneumococcal conjugate vaccine (PCV 2), Oral polio vaccine 2	10 weeks	2nd dose
Pentavalent 3, pneumococcal conjugate vaccine (PCV 3), Oral polio vaccine 3	14 weeks	3rd dose
Vitamin A*	6 months	
Measles, Yellow fever	9 months	
Diphtheria, tetanus, polio, MMR	3–5 years	Booster
Tetanus, diphtheria, polio	13–18 years	Booster

Key: * = Supplement

SELF-ASSESSMENT EXERCISE

Enumerate the postpartum examination.

4.0 CONCLUSION

A careful observation at the postpartum visit will lead to early identification of problems. The lungs should be auscultated to make sure that normal breathing sounds are present; breasts observed for redness, tenderness, and warmth; the abdomen palpated for tenderness; surgical wounds examined for drainage. Good communication and emotional support will encourage patients to listen to the advice given. When puerperal infection occurs, the midwife must remember all the possible causes.

5.0 SUMMARY

Many puerperal infections could be avoided merely by observing fundamental hygiene practices.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the schedule for routine immunisations for children.
2. Explain the causes of postpartum.
3. Enumerate the postpartum examination.

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MODULE 4 SEX AND SEXUALITY

Unit 1	Sexuality
Unit 2	Sexually Transmitted Diseases
Unit 3	Counselling Adolescent in Reproductive Issues
Unit 4	Male Involvement in Reproductive Issues
Unit 5	Gender-based Violence

UNIT I SEXUALITY

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7.0	References/Further Reading

1.0 INTRODUCTION

All humans are sexual beings. Sexuality is expressed in a variety of ways regardless of gender, age, race, socio-economic status, religious beliefs, physical and mental health, or other demographic factors. Sexuality is a complex aspect of our personality and self. Our sexuality is defined by sexual thoughts, desires, and longings, erotic fantasies, and experiences. In many ways, sexuality is the force that empowers us to express and display strong emotional feelings for another person and is a natural stimulus for the procreation of our species. Sexuality is an individually expressed and highly personal phenomenon whose meaning evolves from life experience, influenced by physiologic, psychological, and cultural factors leading to a range of attitudes and behaviours seen in humans.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- explain the varieties of sexuality and sexuality Issues
- describe erotic preference
- discuss the factors influencing sexuality
- discuss the sexual response cycle
- explain what sexual disorders and sexual dysfunctions are.
- enumerate factors that influence sexual stimulation.

3.0 MAIN CONTENT

3.1 Varieties of Sexuality

There is a tremendous range of variations in how people experience and express their sexuality. Sexual varieties include sexual orientation, gender identity, erotic preferences, and sexual lifestyles.

Sexual Orientation

This is an attraction to people of the same sex or both sexes. Sexual orientation lies along a continuum with a wide range between the two extreme exclusively heterosexual attraction and exclusively homosexual attraction. Individuals who are attracted to people of both genders are referred to as bisexual.

Gender identity

Western culture is deeply committed to the idea that there are only two sexes.

Intersex: This has to do with gender ambiguity i.e. having some parts usually associated with males and some parts usually associated with females. Intersex anatomy may not be apparent at birth. Sometimes, it is detected until puberty, until the person is identified as an infertile adult, or until the person dies and autopsied.

Transsexuals: For the transsexual person, sexual anatomy is not consistent with gender identity. Those who are born physically male but are emotionally and psychologically female are called male-female (MTF) transsexuals. Those who are born female but are emotionally and psychologically male are called female-to-male (FTM) transsexuals. Their sexual orientation may be heterosexual, homosexual, or bisexual.

Cross Dressers

These are typically males who cross-dress to express the feminine side of their personality. Cross-dressing is a conscious choice and may occur at home or in public settings.

The frequency of the activity ranges from rarely to often.

3.2 Erotic Preference

This deals with the various method of having sexual pleasure by a person or group of persons (lesbian and bisexual persons).

This includes:

Masturbation: This is the process of giving oneself pleasure by rubbing your sexual organs.

Oral-genital Sex (cunnilingus): this involves kissing, licking, or sucking of the female genitals including the pubis, vulva, clitoris, labia, and vagina sucking.

Anal stimulation: This has to do with the stimulation of the anus with finger, mouth, or sex toys such as vibrators to have sexual pleasures. This is possible because the anus has a rich nerve supply.

Genital Intercourse: This can be described as penile-vaginal actions involving the introduction of the penis into the vagina for both physical and sexual pleasures.

3.3 Sexuality Issues

- i Sex change
- ii Gay issues
- iii Lesbianism

i. Gay and Lesbian Family

Homosexual adults from gay and lesbian families are based on the same goals of caring and commitment seen in a heterosexual relationship. Legal issues for same-sex couples are significant and constantly changing. Domestic partner policies extend the same rights and privileges to the partner of a non-married employee of the same or opposite gender as would be offered to spouses. It can be a challenge for the nurse to keep current on how such legislation affects health care issues such as insurance coverage and the right to consent for health care.

3.4 Factors Influencing Sexuality

Many factors influence a person's sexuality. Some of these factors are family, culture, religion and personal expectations, and ethics.

Family

Families are the fabric of our day-to-day lives and shape the quality of our lives by influencing our outlooks of life, our motivations, our strategies for achievement, and our styles for coping with adversity. It is within our families that we develop our gender identity, body image, sexual self-concept, and capacity for intimacy. Through family interactions, we learn about relationships and gender roles, and our expectations of others and ourselves. Children observe their parents and model themselves after these role models. If a parent can share affection and other family members children will most likely become adults who can give and receive affection. The following are some common sexual messages children get from their families.

- i. Sex is dirty
 - Premarital sex is sinful
 - Masturbation is disgusting
 - Sex is mainly for procreating

There is great variety in sexual behaviour

Culture

Sexuality is also regulated by the individual's culture. For example, culture influences the sexual nature of the dress, rules about marriage expectations of role behaviour and social responsibilities, and specific sex practices, societal attitude vary widely. Gender role behaviour also varies from culture to culture. Culture differs concerning which body parts they find to be erotic. In some cultures, legs are erotic, and breasts are not, body weights may also be a determinant of sexual attractiveness.

Female Circumcision, also known as female genital cutting, is a dangerous practice in parts of Africa. Some of the cultural beliefs behind the practice include the following:

Female genitals are offensive to men, if not removed; the clitoris will become the size of a penis.

The labia get in the way of intercourse.

The cutting enhances fertility and prepares the woman for childbirth.

Removal of the clitoris may or may not be accompanied by removal of the labia and closure of the vagina/entrance except for a small opening. The complications include; Vesico-Vaginal Fistula, urinary incompetence, vaginal scarring, and sexual dysfunctions, etc.

Religion

Religion influences sexual expression. It provides guidelines for sexual behaviour and acceptable circumstances for the behaviour, as well as prohibited sexual behaviour and the consequences of breaking the sexual rules. The guidelines or rules may be detailed and rigid or broad and flexible. Many religious values conflict with the more flexible values of the society that have developed during the last few decades (often labelled the “sexual revolution”) such as the acceptance of premarital sex, unwed parenthood, homosexuality, and abortion. These conflicts create marked, anxiety and potential sexual dysfunction in some individuals.

Personal Expectations and Ethics

Ethics is the body of moral practice; it enables the public to distinguish between good and bad or right and wrong. It borders on the signs or moral which deals with human character or conduct. What one person or culture views as bizarre, perverted, or wrong may be completely natural and right to another. Examples include values regarding masturbation and or oral intercourse and cross-dressing. Many people accept a variety of sexual expressions if they are performed by consenting adults. Couples need to explore and communicate clearly about various types of acceptable sexual expression to prevent domination of sexual decision-making.

3.5 Sexual Response Cycle

The human sexual response follows a similar sequence in both females and males regardless of sexual orientation. The phases are;

- Desire Phase
- The Excitement Phase is the Orgasmic Phase.
- The Resolution Phase.

Desire Phase The response cycle starts in the brain, with conscious sexual desire called the desire phase. Sight, hearing, smell, touch, and imagination (sexual fantasy) can all invoke sexual arousal. Sexual desire fluctuates within each person and varies from person to person. Although psychological issues are the more common causes of lack of sexual desire, medications, drugs, and hormone imbalances can also interfere.

The Excitement Phase involves physiologic effects of vasocongestion increasing the blood flow to various body parts. This results in erection of the penis and clitoris, and swelling of the labia, testes, and breasts. Vasocongestion stimulates sensory receptors within the body parts that in turn transmit messages to the conscious brain where they are usually interpreted as pleasurable sensations. When stimulation is continued,

vasocongestion increases until it either is released by orgasm or fades away. Simultaneously there is an increase in the tension in the muscle, orgasm occurs.

- i. **The Orgasmic Phase** is an involuntary climax of sexual tension, accompanied by physiologic and psychological release. This phase is considered the measurable peak of the sexual experience. Although the entire body is involved, the major focus of the orgasm is felt in the pelvic region. Male orgasms usually last 10-30 seconds while female orgasms last 10-50 seconds. Men usually have ejaculation and expel semen as part of their orgasm.
- ii. **The Resolution Phase** This is the period of return to the unaroused state and may last 10-15 minutes after orgasm, or longer if there is no orgasm. This phase in females is quite varied as some women experience multiple successive orgasms followed by a long period of resolution.

3.6 Sexual Disorders/Sexual Dysfunctions

Sexual dysfunction can be defined as a persistent impairment of sexual interest or response. In males, the most frequent sexual dysfunction is the inability to achieve an erection (impotence) or the delay of ejaculation until both partners achieve a sense of satisfaction (premature ejaculation). This erectile dysfunction affects 50% of men between 40 and 70 years of age. Women may have problems of inhibited sexual excitement that result in an inability to maintain a swelling lubrication response. For women, a problem that often brings them to clinics is anorgasmia – the frequent inability to achieve orgasm. Many individuals experience problems with their ability to respond to sexual stimulation or to maintain the response.

3.7 Factors Influencing Sexual Stimulation

Socio-cultural factors include a very restrictive upbringing accompanied by inadequate sex education. Some people believe that sex is only for procreation. Also, parental punishment for normally exploring one's genital is a contributing factor. Psychological factors may include negative feelings, such as guilt, anxiety, or fear that interfere with the ability to experience pleasure and joy. Adults who have been sexually abused at any time of their lives may experience overwhelming anxiety when faced with the decision to engage in sex. Other psychological factors include fears of pregnancy, sexually transmitted infections, or pain. Cognitive factors include the internalization of negative expectations and beliefs. Those with low self-esteem may not understand how another person could value and love them and also find them sexually attractive.

Loss of intimacy and feeling like a sex object may inhibit the feeling of communion and connection that is an important part of love-making. Another factor is expecting one's partner to read one's mind about sexual needs. Failure to communicate may result in one or both partners not knowing how to please the other. Health factors can interfere with people's expression of sexuality. Physical changes brought by illness, injury, or surgery may inhibit full sexual expression. Some diseases such as heart disease, diabetes mellitus, joint disease, cancer can interfere with sexuality. Surgeries such as hysterectomy, prostatectomy, and radical surgeries that alter a person's body image also interfere with sexuality. The presence of STI in one's partner induces fear of transmission in the other, often resulting in abstinence of sexual contact.

3.8 Management

The threat posed by disease or loss of those body parts depends on:

- i. Their meaning to the individual
- ii. The stage of development of body image and self.
- iii. The reactions of the social group, including the spouse

The ability to reproduce is seen by many as a criterion of usefulness and sexuality. The loss of function may be followed by feelings of uselessness or of being only half a person, this is particularly distressing to the man with erectile dysfunction. The inability to obtain an erection may make him feel less of a man and he may fear that his partner sees him as less a man.

Most people have been culturally conditioned to the idea that some areas of the body should not be discussed, much less exposed to examination. Such experience may disturb the individual and produce shame that may be enhanced by a lack of privacy and exposure of the body in examinations or during care. Sexually transmitted infections and cancer arouse the guilt feeling of being punished for past deeds.

Interventions

Assess the degree of threat posed by loss of function or body parts to the individual and plan, give and evaluate nursing care for that individual based on the assessment.

Other interventions may include;

- i. Resolving dysfunctional sexual problems
- ii. Helping the individual to achieve a sense of self-worth
- iii. Helping the individuals to verbalise fears and anxiety
- iv. Showing an understanding of health problems
- v. Helping the individual to adapt to changes in the sexual role

- and/or function
- vi. Helping the individual to be aware of and avoiding risk factors in sexual activity.
- vii. Give physical nursing care that promotes feelings of dignity and self-worth by attention to personal hygiene and grooming.
- viii. Promotes the return of health, control over body functions, and independence

Reduce fear and guilt by

- i. Acknowledging and discussing feeling
- ii. Anticipating the need for explanations and interpretations.
- iii. Clarifying and correcting misinformation about causes of illness, physiology, and the consequences, if any, of treatment on present function.
- iv. Maintaining a confident, non-judgemental approach to the patient.
- v. Obtaining appropriate additional sources of spiritual or emotional help for the patient. Offering information and support for relatives

3.9 Youth Sexual Issues

Youth sexuality is a great concern for many, sexual health issues facing the youths are:

- i. Premature sexual intercourse
- ii. Sexually transmitted infections
- iii. Unwanted and unsafe pregnancies and abortions
- iv. Sexual diversity,
- v. HIV/AIDS and cybersex.

3.10 Factors That Lead to Risky Sexual and Reproductive Health Behaviour

These are:

Lack of sexual and reproductive health information and skills in negotiating sexual relationships and the inaccessibility of youth-friendly sexual and reproductive health services, growing peer pressure of pre-marital sex plays a major role in sexual and reproductive health-related decision-making among youths.

Another factor is the issue of sexuality education which is still considered a sensitive topic. Some cultural and religious constraints are impinging on its implementation. Misunderstanding and a lack of information on sexual diversity have caused concern for many, as there

is a tendency for judgments, stereotypes, discriminations, and prejudices towards homosexuality in society.

SELF-ASSESSMENT EXERCISE

Describe the sexuality issues we have.

4.0 CONCLUSION

Sexuality is an individually expressed and highly personal phenomenon whose meaning evolves from life experience, influenced by physiologic, psychological, and cultural factors. Sexual varieties include sexual orientation, gender identity, erotic preferences, and sexual lifestyles. Health workers have a significant role to play most importantly in the area of creating awareness.

5.0 SUMMARY

Misunderstanding and a lack of information on sexual diversity have caused concern for many, as there is a tendency for judgments, stereotypes, discriminations, and prejudices towards homosexuality in society. Healthy youths are fundamental to the prevention initiatives. Sexual and reproductive needs and the rights of youths must be promoted.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the factors that can influence a person's sexuality.
2. Explain the factors that lead to risky sexual and reproductive health behaviour.
3. Describe the sexuality issues we have.

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UNIT 2 SEXUALLY TRANSMITTED INFECTIONS (STI)

CONTENTS

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 - 3.6. Human Papilloma Virus Infection (HPV)
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1.0 INTRODUCTION

Sexually transmitted infection is the most common form of reproductive tract infection. Some Sexually transmitted infection is easily treatable and can be cured, some are more difficult, and some are non-curable such as AIDS and herpes. The WHO estimates that each year, there are over 333 million new cases of curable STIs. In addition, UNAIDS calculates that in 2000 alone, 5.3 million people became infected with HIV. Nearly a million people acquire a sexually transmitted infection (STI) including human Immunodeficiency Virus (HIV), every day (WHO, 2010).

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- discuss reproductive tract infections (RTIs)
- explain sexually transmitted diseases (STDs)

- discuss the management of Trichomoniasis
- explain the effects of sexually transmitted infections.

3.0 MAIN CONTENT

3.1 Reproductive Tract Infections (RTIs)

These are an infection that affects the reproductive tract. The three types of reproductive tract infections are endogenous infection, iatrogenic infections. Endogenous Infection results from an overgrowth of organisms normally present in the vagina. They include bacterial vaginosis and candidiasis. Iatrogenic Infection occurs when the cause of infection (bacterium or another micro-organism) is introduced into the reproductive tract through a medical procedure such as menstrual regulation, induced abortion, the insertion of IUD, or during childbirth.

3.2 Sexually Transmitted Infections (STIs)

STIs are caused by viruses, bacteria, or parasitic micro-organisms that are transmitted through sexual activity with an infected partner. About 30 different sexually transmitted infections have been identified some of which are easily treatable, many of which are not.

3.1.1 Common Bacterial Infections

- i. Neisseria gonorrhoea (causes gonorrhoea or gonococcal infection)
- ii. Chlamydia
- iii. Treponema pallidum (causes syphilis)
- iv. Haemophilus ducreyi (causes chancroid)
- v. Klebsiella granulomatis

3.1.2 Common Viral Infections

- i. Human immune deficiency virus (causes AIDS)
- ii. Herpes simplex virus type 2 (causes genital herpes).
- iii. Human papilloma virus (causes genital warts and certain subtypes lead to cervical cancer in women)
- iv. Hepatitis B virus (causes hepatitis and chronic cases may lead to cancer of the liver Cytomegalovirus (causes inflammation in several organs including the brain, the eye, and bowel.
- v. Molluscum contagiosum virus (MCV) caused molluscum contagiosum).

3.1.3 Parasitic Organisms

- i. Trichomonas vaginalis (causes vaginal trichomoniasis)
- ii. Candida albicans (causes vulvovaginitis in women; inflammation of the glans penis and foreskin (balanoposthitis) in men.
- iii. Crab louse, colloquially known as “crabs” (phthirus pubis)
- iv. Scabies (scarcotes scabiei)

3.3 Gonorrhea

Gonorrhea is a common STD that affects men and women causing cervicitis in women and arthritis in men. In women, it can easily ascend to the uterus and fallopian tubes if untreated. Symptoms appear 2-10 days after the initial contact.

1. Clinical manifestations

- a. Asymptomatic in women
- b. Mucopurulent vaginal discharge
- c. Cervical tenderness on bimanual examination

In the Male

- i. Suppurative urethritis
- ii. Itching and burning about the meatus
- iii. The urethral meatus is red and edematous
- iv. Rectal infection in gay men, infection of the pharynx may occur due to unprotected oral-genital sex

2. Diagnosis

Smears and culture were taken from the site of infection (s)

3. Treatment

1. Uncomplicated gonococcal infections can be treated with a single dose of antibiotics such as Cefixime (Suprax) 400mg orally.
2. Ceftriaxone (Rochepin) 124mg intramuscularly
3. Ciprofloxacin (Cipro) 500 mg orally

4. Complications

- i. PID
- ii. Ectopic pregnancy
- iii. Infertility
- iv. Disseminated infection
- v. Ophthalmia neonatorum in new-born delivered through the infected birth canal.

4. Management

- i. Administer antibiotics as prescribed, explaining the side effects to patients.
- ii. Monitor for relief of pains, discharge, discharge, and other symptoms.

- iii. Explain the importance of sexual abstinence until symptoms are resolved and until therapy is complete in the patient and partner.
- iv. Encourage follow-up for routine women's care and periodic STD screening.

3.4 Chlamydia Infections

Chlamydia Infections are a common STD that occurs in both women and men, particularly adolescents and young adults. Women are symptomatic.

1. Clinical Manifestations

- i. May be asymptomatic
- ii. Or have vaginal discharge (clear, mucoid, or creamy)
- iii. Dysuria
- iv. Mild pelvic discomfort

2. Diagnosis

- Antigen detection, test on cervical smear
- Chlamydia culture for cervical exudates.
- Screening urinalysis in males for leucocytes;
- if screening is the positive result; confirmed by antigen detection test.

3. Management

- i. Obtain a history of sexual activity and symptoms of infection in a partner.
- ii. Patient education
- iii. The antibiotic regimen includes:
- iv. Zithromax 1g orally and a single dose of
- v. Doxycyclin 100mg orally twice for seven days
- vi. Erythromycin 500mg twice daily for five days
- vii. Floxacin 400mg twice daily for five days

The current most recent sexual partner should be tested and treated despite the results. Because Chlamydia infection and gonorrhoea frequently co-exist especially in teens and young adults. Treatment of both

4. Complications

- i. PID
- ii. Ectopic pregnancy or infertility secondary to untreated or recurrent PID
- iii. Transmission to neonate born through the infected birth canal

3.5 Syphilis

1. Causative organism

Treponema pallidum bacterium:

The treponema pallidum bacterium enters the body through the mucous membrane, such as that of the vagina, or mouth, or the skin. Within hours the bacterium reaches the lymph nodes, then spread throughout the body via the blood. Syphilis may also infect a fetus during pregnancy, causing birth defects and other problems.

2. Symptoms

Symptoms of syphilis usually begin 1 to 13 weeks after infection; the average is 3-4 weeks.

3. Incubation varies between 10-90 days.

Three stages of syphilis:

The stage may overlap or be widely separated.

The Primary lesion: Is a small, painless chancre or ulcer. It is deep and has indurated edges. Usually, this chancre heals spontaneously, giving a false impression that the disease is cured. The primary lesion appears most commonly on the penis of the male. In the female, it may appear on the labia, vagina, or cervix.

The secondary stage: Is characterized by a rash appearing flat, grey, or called vulva warts. The rash is usually accompanied by malaise and fever. The rash regresses later and the patient enters the latent phase. Latency refers to an absence of symptoms in the infected individual. Pregnant women can still infect their fetuses in-utero.

The Tertiary stage: The patient proceeds immediately or after a delay of 10-30 years to the third stage. The bones heart and central nervous system including the brain can be affected, personality disorders arise, and the typical ataxic gait of the tertiary syphilitic stage appears. A large, ulcerating necrotic lesion known as gummer now occurs. This is seen in the genital tract, but it may occur on the vulva or in the testes. At this stage, the disease may be arrested but not reversed.

4. Diagnosis

- i. Careful history
- ii. Culture or biopsies from the lesion
- iii. Blood serology
- iv. Early diagnosis is made from scrapings from the lesions. Scraping is made before antibiotic therapy is initiated so that the diagnosis can be confirmed.

5. Treatment

Antibiotic therapy -penicillin is the drug of choice

3.6 Human Papilloma Virus (HPV)

HPV is the causative organism in condylomata acuminata or genital warts. The incubation period is up to 8 months. Warts can be confused with those of syphilis but are different. They are less flat and more cauliflower-like. Some attain a large size.

1. Clinical Manifestations

- i. Single or multiple soft, fleshy, painless growths on the vulva, vagina, cervix, urethra, or anal area.
- ii. Vaginal bleeding or discharge,
- iii. Odour
- iv. Dyspareunia

2. Individual Risk of Infections

- i. Sex at an early age less than 17 years' old
- ii. Multiple sex partners
- iii. History of STDs
- iv. Poor personal and sexual hygiene
- v. A sexual partner with a similar history
- vi. A history of anal intercourse

3. Diagnosis

- i. Pap smear
- ii. Colposcopy examination
- iii. Anoscopy or urethroscopy to identify anal and urethral lesions.

4. Treatment

- i. The partners of infected patients should also be examined and treated if necessary.
- ii. External warts are treated with podophyllin 10-25% in tincture of benzoin.
- iii. This caustic agent is applied with a cotton applicator and washed off in 4 hours.
- iv. The surrounding skin is coated with petroleum jelly before application of the podophyllin.
- v. Cervical and vaginal warts may be a bath in
- vi. 85% solution of trichloroacetic acid.

5. Complications

- i. Cervical neoplasia
- ii. Neonatal laryngeal infection if an infant born through the infected birth canal

- iii. Obstruction of anal canal or vagina by enlarging lesions
- iv. Scarring and pigment changes if treatment not employed properly

3.7 Acquired Immune Deficiency Syndrome (AIDS)

HIV/AIDS pandemic is the greatest health problem threatening the human race as of now. The disease affects the lives of every Nigerian family directly or indirectly. It affects the community, family, children, pregnant women and hence reduces life expectancy. It increases the burden on medical facilities, and drastically increasing the number of orphaned children.

1. Aetiology

HIV/AIDS is a pandemic disease occurring virtually in all countries. Acquired immune deficiency syndrome (AIDS) is caused by human immunodeficiency virus types I & II. Pneumocystis Carinii Pneumonia is one of the opportunistic infections in HIV/AIDS. HIV- Human immunodeficiency virus is the causative agent of AIDS. It is a virus of the lentivirus group (those that caused the lifelong infection) and of the retrovirus family (stores genetic materials as RNA and not DNA) It is an RNA dinner (2 single standard DNA genome) and is characterized by reverse transcriptase enzyme (allows viral RNA to be transcribed into DNA).

2. Definition

AIDS-Acquired Immunodeficiency Syndrome is a syndrome diagnosed when at least two major signs and one minor sign are present in the absence of known causes of immunosuppression such as malnutrition.

4. Major Signs:

- i. Fever for more than one month
- ii. Weight loss of more than 10% body weight
- iii. Diarrhoea for more than one month

5. Minor Signs:

- i. Cough for more than one month
- ii. Generalized pruritic dermatitis
- iii. Recurrent herpes zoster or shingles
- iv. Oropharyngeal candidiasis or thrush
- v. Chronic or aggressive ulcerative herpes simplex
- vi. Persistent generalized lymphadenopathy
- vii. Skin changes
- viii. Kaposi sarcoma

In 1993, the centre for Disease control in the United States extended the definition of AIDS to include all people who are severally immunosuppressed i.e. (CD4 count $<200 \times 10^6/L$) irrespective of presence or absence of an indicator disease. But for surveillance purposes, the definition has not been accepted within the UK and Europe where AIDS continues to be a clinical diagnosis defined by one or more of the indicator diseases.

6. Routes of Transmission

- i. Through Sex – Occurs in both heterosexuals and homosexuals
- ii. Blood Transfusion – Transfusion of infected and un-screened blood poses a great danger to our health Care Delivery System. Both National and State blood transfusion policies are needed to curtail quacks.
- iii. Exposure to Infected Fluids – Common in un-sterile needles and re-usage of needles and other sharp cuts, abrasions, and different types of wounds.
- iv. Vertical Transmission – Infected mother to her unborn baby and through breast milk.

7. W.H.O Staging System for HIV Infection and Diseases – Clinical Classification

Stage 1

- a. Asymptomatic i.e. when a person has HIV Infection and is quite healthy.
- b. Signs of persistent generalised lymphadenopathy (PGL)

Stage 2

- a. Weight loss $< 10\%$ body weight
- b. Minor mucocutaneous lesions, seborrhoeic dermatitis, prurigo, fungal nail infections, recurrent oral ulcerations, angular stomatitis, or cheilitis.
- c. Herpes zoster within the last 5 years
- d. Recurrent upper respiratory tracts infections.

Stages 3

- a. Weight loss $> 10\%$ body weight
- b. Unexplained chronic diarrhoea for > 1 month
- c. Unexplained prolonged fever intermittent/constant > 1 month
- d. Oral Candidiasis (thrush)
- e. Oral hairy leucoplakia
- f. Pulmonary tuberculosis within the past year
- g. Severe bacterial infections (pneumonia & Pyomyositis)

Stage 4

- a. HIV wasting syndrome
- b. Pneumocystis carina pneumonia (PCP)
- c. Toxoplasmosis of the brain
- d. Cryptosporidiosis with diarrhoea > 1 month
- e. Cryptococcus's extra pulmonary
- f. Cytomegalovirus disease of an organ other than the liver, spleen, or lymph nodes
- g. Herpes virus infection > 1 month (Mucocutaneous or visceral)
- h. Progressive multifocal leukoencephalopathy
- i. Disseminated endemic myosis
- j. Candidiasis of the oesophagus, trachea, bronchi, or lungs
- k. A typical mycobacteriosis
- l. Non-typhoid salmonella septicemia
- m. Extra pulmonary tuberculosis
- n. Kaposi Sarcoma
- o. HIV encephalopathy
- p. Invasive cervical cancer

8. Diagnoses

- a. **Clinical** - HIV/AIDS is diagnosed with the observation of at least two major signs and one minor sign.
- b. **Laboratory Diagnosis of HIV**
 - i. Elisa: The second generation of ELISA's uses recombinant DNA proteins of synthetic peptides of the virus as antigens.
 - ii. Confirmatory
 1. Western Blot identifies antibodies specific to viral proteins
 2. immunofluorescence assay
 3. Radioimmuno – precipitation assay
 - iii. Viral Demonstration

Assay for circulating viral protein (p24 core antigen)
Infected patient's cells are cultured with, nitrogen-activated peripheral blood blast cells from normal subjects.
 - iv. Viral Load

This is the total number of viral nucleic acid molecules present in the serum of patients with HIV/AIDS and predicts progression.
 - v. CD4 Cell Count

Measurement of CD4 cell count is used as a measure of disease progression and classification. It was also used to determine

when anti-retroviral therapy should be instituted (e.g. CD4 count <500 cells $\times 10^6/L$). However, the current strategy is to treat any person diagnosed with HIV despite the viral load.

c. **Incubation Period:**

Unlike other sexually transmitted diseases, AIDs had a long incubation period of 6-10 years before the disease become manifest as opportunistic infection with *Pneumocystis carinii* pneumonia, Tuberculosis, Neurological disease, Bone marrow depression, and Cancers e.g. Kaposi's sarcoma death usually occurs within 2 years of the manifestation of full-blown AIDs.

The cells that are most susceptible to HIV infection have CD4 surface proteins (helper T-cell, macrophages, dendritic, and neuroglia cells). A glycoprotein on the virus called gp120 binds to CD4 protein on host cells and this complex enters the cells by endocytosis.

d. **Treatment**

- i. Current approaches to the treatment of AIDs include:
- ii. Drug treatment of opportunistic infections and malignancies
- iii. Inhibition of replication of the HIV
- iv. Immune reconstitution or immune potentiation

e. **Drugs used in the treatment of AIDS**

These drugs are expensive and well beyond the reach of many AIDs patients in tropical countries of the world. There is no cure for infection caused by the human immunodeficiency virus (HIV), but several drugs have been found to slow or halt the progression of the disease. Anti-retroviral drugs are aimed at reducing the plasma viral load as much as possible and for as long as this can be achieved. There are;

- i. Nucleoside Analogues e.g. Zidovudine (AZT), Didanosine (DDI) Zalcitabine (DDC4T), Lamivudine (3TC). This interferes with HIV viral RNA-dependent DNA polymerase resulting in inhibition of viral replication.
- ii. Protease inhibitor decreases the viral load. Examples are Saquinavir, Ritonavir, Indinavir, and Nelfinavir.
- iii. Non-Nucleoside Reverse transcriptase inhibitors. Examples are Nevirapine, Delaviridine, Loviride.

3.8 Effects of Sexually Transmitted Infections

Pregnancy-related complications congenital infections
Pelvic inflammatory disease resulting in infertility, entropic pregnancy, and chronic pain Certain RTIs can increase the chance of HIV

transmission. Unfortunately, symptoms and signs of many infections may not appear until it is too late to avoid such consequences and damage to the reproductive organs.

3.9 Universal Blood and Blood Fluid Precautions

There are three routes by which healthcare workers may acquire blood-borne viruses occupationally:

- i. inoculation of infected blood through the skin on a contaminated needle or other sharp instrument
- contamination of mucous membranes with infected body fluid
- contamination of cut or abraded skin with infected body fluid.

The concept of universal precautions has caused some controversy. It has been suggested that where the prevalence of blood-borne viruses is low the precautions are unnecessary and should be used only with individuals known or suspected to be infected. Others have argued that it is often difficult to identify infected individuals, and healthcare workers frequently do not detect those who practice high-risk behaviours. Universal precautions can confer other advantages. If applied consistently they also protect the patient from other pathogens since these are most likely to be found in body fluid and transmitted between patients on the hands of staff. The use of the same level of precaution with every patient helps to maintain patient confidentiality, which could otherwise be compromised with the use of precautions directed only at those suspected to be infected.

Universal precautions are aimed at avoiding direct contact with body fluids from all patients at all times. Universal blood or body fluid are geared to prevent the transmission of blood-borne viruses. They incorporate routine infection control measures. The precautions are as listed

- i. Wash hands before and after patient contact and if the skin is contaminated with body fluid.
- ii. Cover cuts and abrasions with a waterproof dressing
- iii. Wear gloves for direct contact with body fluid and mucous membranes
- iv. Wear eye protection and a mask where there is a risk of body fluid splashing into the face
- v. Wear a plastic apron to protect clothing from contamination with body fluid
- vi. Use sharps safely: place directly into a sharps container, never sheathe, do not overfill container, and close securely before disposal
- vii. Discard contaminated waste safely, either directly into the

- drainage system or into a clinical waste bag.
- viii. Decontaminate equipment safely between patients
 - ix. Disinfect spills of blood with hypochlorite and clear up using gloves and a plastic apron.

3.10 Safer Sex Guideline

- i. Responsible sexual conduct, based on a healthy understanding of human sexuality, should be taught at every opportunity.
- ii. Reduce the number of sexual partner's abstinence is safe. Adolescents and adults should be encouraged to avoid casual sexual encounters.
- iii. Avoid the exchange of fluid by
- iv. Using a condom during vaginal and oral intercourse. Use each condom only once
- v. Never using saliva as a lubricant use spermicidal or water-soluble jelly
- vi. Not following or preceding anal intercourse with vaginal penetration without a change of condom
- vii. Using gentle sexual practice which avoids trauma to mucous membrane or skin
- viii. Avoiding other sexual practices such as oral-anal, oral-gentle sex. Gonorrhoea hepatitis and other viruses can be transmitted in these ways.
- ix. Avoiding prolonged wet (French) kissing unless with a partner you consider to be safe.

3.11 The Global Strategy for the Prevention and Control of STIs

The control of STIs remains a priority for WHO. The World Health Assembly endorsed the global strategy for the prevention and control of STIs in May 2006 (WHO, 2006). The strategy urges all countries to control the transmission of STIs by implementing several interventions, including the following.

- Promoting safer sexual behaviour
- General access to quality condoms at affordable prices.
- Promotion of early recourse to health services by people suffering from STIs and by their partners.
- Inclusion of STI treatment in basic health services
- Special services for populations with frequent or unplanned high-risk sexual behaviours such as sex workers, adolescents, long-distance truck drivers, military personnel, substance users, and prisoners;
- Proper treatment of STIs i.e. use of correct and effective

- medicines, treatment of sexual partners, education, and advice.
- Screening of clinically asymptomatic patients, where feasible (e.g. syphilis, Chlamydia)
- Provision for counselling and voluntary testing for HIV infection
- Prevention and care of congenital syphilis and neonatal conjunctivitis and
- Involvement of all relevant stakeholders, including the private sector and the community, in the prevention and care of STIs.

SELF-ASSESSMENT EXERCISE

Explain the universal blood and blood fluid precautions.

4.0 SUMMARY

Most cases of sexually transmitted diseases are treated on an outpatient basis, and the person should be taught how to protect themselves and others. The patient may experience guilt feelings and marital difficulties may arise when one partner infects the other.

5.0 CONCLUSION

The disease carries a social stigma. For this reason, confidentiality must be maintained by the nurse at all times. Contacts must be identified and discretely followed by the contract tracer.

6.0 TUTOR-MARKED ASSIGNMENTS

1. Discuss the concept of universal precautions.
2. The global strategy for the prevention and control of STIs.
3. Explain the universal blood and blood fluid precautions

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UNIT 3 COUNSELLING ADOLESCENTS ON REPRODUCTIVE HEALTH ISSUES

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Principles Of Counselling
 - 3.2 Qualities Of A Good Counselor
 - 3.3 Types Of Counselling
 - 3.4 Basic Steps In The Counselling Process
 - 3.5 Youth Friendly Services
 - 3.5.1 Barriers to the Provision And Utilisation of RH Services by Adolescents
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 - 3.6 Effective Management of a Youth-Friendly Clinic
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1.0 INTRODUCTION

Counselling is a form of interpersonal communication in which a counsellor (service provider) helps the client to identify, clarify and resolve problems: make an informed decision and act on those decisions. It is important to emphasize that counselling is not advising.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- define counselling
- give an informed counselling
- help clients to make informed decisions and choices about available RH options.
- help clients with special problems or questions.
- discuss barriers to the provision and utilization of RH services by adolescents
- vi. explain strategies to overcome barriers to the provision and utilisation of RH services by adolescents
- list steps to effective management of youth-friendly clinics.

3.0 MAIN CONTENT

3.1 Principles of Counselling

The principles of counselling are as follows:

- i. Mastering the subject matter
- ii. Providing correct and complete information
- iii. Being honest and non-judgmental
- iv. Supporting the expressed feelings of the client
- v. Realizing the limits of counselling
- vi. Keeping culturally acceptable distance between the counsellor and client
- vii. Client's right to decide the high degree of confidentiality.

3.2 Qualities of A Good Counsellor

1. Possess knowledge of the subject matter.
2. Knowledgeable about cultural values and their influence on individuals.
3. Being non-judgmental.
4. Aware of own attitudes, values, emotions, and limitations (values' clarification).
5. Respectful and tolerant.
6. Honest and truthful
7. Recognise the worth of each client.
8. Allow the client to feel more in charge.
9. Possess good interpersonal communication skills.
10. Empathic and patient.

3.3 Types of Counselling

Individual counselling – Often takes place in a clinic setting or during home visits. In individual counselling, the establishment of rapport is prompt and ensures confidentiality and the expression of deeper feelings.

Group counselling – This is especially important for individuals with similar problems or persons in a similar profession. For example, adolescents, antenatal clients, postnatal clients, high-risk groups, HIV-positive individuals, and persons living with AIDS.

The couple – Counselling on sensitive issues that affect both partners

3.4 Basic Steps in The Counselling Process

The steps in the counselling process are described as: **GATHER, G** – Greet client warmly and politely.

- A** – **Ask** the client about his or her sexual and reproductive health information or service needs.
- T** – Tell the client the RH services available related to his/her needs at the service delivery points and elsewhere
- H** – **Help** the client makes decisions about health behaviour (including medical procedures or methods) that he/she should follow.
- E** – **Explain** how to effectively keep to the chosen behaviour.
- R** – **Return** or follow-up visit should be planned before the client leaves. (“R” also stands for Repeat, Reflect and Refer).

3.5 Youth Friendly Services

Characteristics of Youth Friendly Service

- (a) **Provider Characteristics**
 - i. Specially trained staff
 - ii. Respect for young people
 - iii. Privacy and confidentiality honoured
 - iv. Adequate time for the client and provider interaction
 - v. Effective management of a youth-friendly clinic.
- (b) **Health Facility Characteristics**
 - i. Separate space and special times set aside
 - ii. Convenient hours
 - iii. Convenient location
 - iv. Adequate space and enough privacy
 - v. Comfortable surroundings
- (c) **Program Design Characteristics**
 - i. Youth involvement in the design and continuing feedback
 - ii. Drop-in clients were welcomed and appointments were arranged rapidly
 - iii. No overcrowding; short waiting time
 - iv. Affordable fee
 - v. Publicity and recruitment that inform and reassure youth
 - vi. Boys and young men welcomed and served
 - vii. Wide range of services available
 - viii. Necessary referrals available
- (d) **Services available are grouped into 3 types namely:**
 - i. School-based services

- ii. Facility-based services
- iii. Others

(e) Components of youth-friendly services

- i. Sexual and reproductive education and counselling
- ii. Physical examination
- iii. STI screening, counselling, and treatment
- iv. Contraceptive method clinic
- v. Career counselling and others

3.6 Barriers to the Provision and Utilisation of Rh Services by Adolescents

- i. Barriers that prevent health services from being provided for adolescents
- ii. Barriers preventing adolescents from seeking the help they need from the health services
- iii. Barriers preventing adolescents who want help from reaching organizations that provide the health services, even when they know which organizations provide them and can reach them

3.6.1 Strategies to overcome these barriers include:

- i. Parental involvement
- ii. Peer education
- iii. Advocacy
- iv. Provision of RH services by skilled providers

3.7 Effective Management of a Youth Friendly Clinic

A youth-friendly clinic should be managed with the following points:

- i. Ensure that there is a functional strategic plan with a target
- ii. Indicators for measuring achievement
- iii. Ensure that youth are actively involved in the design, implementation, and evaluation of programs
- iv. Be responsive to youth needs
- v. Ensure that the needed resources are available and accessible to youth
- vi. Ensure that youth are served, and their rights respected
- vii. Ensure all staff is carried along in the management of ARH and mechanisms for referral/ networking and follow-up of youth is in place and operational.
- viii. Proper documentation of all activities and management information system.

SELF-ASSESSMENT EXERCISE

Enumerate the barriers to the provision and utilisation of RH services by adolescents and the strategies to overcome them.

4.0 CONCLUSION

Youth-friendly services are meant to help the adolescent to identify, clarify and resolve problems: make an informed decision and act on those decisions.

5.0 SUMMARY

Youth-friendly services are mainly School-based services and Facility-based services.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the concept of a youth-friendly clinic.
2. Enumerate the barriers to the provision and utilization of RH services by adolescents and the strategies to overcome them.

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UNIT 4 MALE INVOLVEMENT IN REPRODUCTIVE HEALTH SERVICES

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- 2.0 Objectives
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 - 3.1 Importance of Male Involvement in Sexual and Reproductive Health
 - 3.2 Factors That Affect Male Involvement in Reproductive Health
 - 3.3 Male's Own Sexual and Reproductive Health
 - 3.4 Benefits of Male Involvement in Reproductive Health
 - 3.5 Barriers to Male Involvement in Reproductive Health
 - 3.6 Strategies that Improve Male Involvement in Reproductive Health
- 4.0 Conclusion
- 5.0 Summary
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1.0 INTRODUCTION

Male involvement, an all-encompassing term that refers to the various ways in which men relate to reproductive health problems and programs, reproductive rights and behaviour. Involvement of men in reproductive and health has been described as a process of social and behavioural change that is needed for men to play a more responsible role in reproductive and maternal health to ensure women and children wellbeing. It also refers to the need to change men's attitude and behaviour towards women's health to make them more supportive of women using health care services and sharing childbearing activities. Interventions to promote the involvement of men during pregnancy, childbirth, and after birth are recommended to facilitated and support improved home care practice for the women and the newborn, and improved use of skilled care during pregnancy, childbirth, and the post-natal period.

According to the recent global estimates by the World Health Organization (WHO), more than half a million women lose their lives from pregnancy-related complications worldwide every year, ninety-nine per cent (99%) of which occur in the less developed world. In Sub-Saharan Africa, one out of every thirteen women dies of pregnancy-related causes compared with one in 4,085 women in industrialized countries. For every maternal death, many more women suffer short-

term injuries, infections, and disabilities during pregnancy or childbirth each year.

The tendency to view reproductive health as a woman's issue has contributed to a narrow focus of targeting mostly women, particularly mothers in intervention efforts. Most reproductive health programs seek to address the health needs of women and children by engaging and educating pregnant women and mothers in care-seeking practices for themselves and their children. This has contributed to men being sidelined as far as reproductive health and maternal and child health matters are concerned.

The developing world accounts for 99% of global maternal death, men in developing countries are the chief decision-makers and determine to a great extent women access to maternal health services and influencing the health outcome and other aspects of their lives. This is due to the patricidal nature of the societies. Male involvement, as stated refers to the various way in which men relate to all reproductive health issues, directly and indirectly. This includes reproductive programs. Reproductive rights and reproductive behaviour are considered and important interventions for improving maternal health.

Nevertheless, very few men participate in maternal health, especially in developing countries. A health campaign is one of the tools for health promotion and behavioural change; such as increased couple communication and equitable decision –making which contribute to improved health and care-seeking outcomes. Men can provide substantial, practical, financial, and emotional support to women and children to overcome demand-side barriers to accessing health services.

The need for male involvement in maternal care can be traced back to the 1994 international conference on population and Development in Cairo that emphasized the inclusion of men as partners and role players in maternal health care. The International Conference on Population and Development advocated for the active inclusion and shared responsibility of men in reproductive health. Existing systematic reviews of the effect of male involvement on maternal health and related topics have identified male involvement as a promising intervention, but with evidence of effectiveness for mortality and morbidity outcomes.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- explain the importance and benefits of male involvement in Sexual and Reproductive Health
- list the factors that affect male involvement in reproductive health.
- Explain male's sexual and reproductive health needs
- describe the strategies that improve Male involvement in Reproductive Health.

3.0 MAIN CONTENT

3.1 Importance of Male Involvement in Reproductive Health

In the 1980s, there was a gradual recognition within health promotion, that men were an important factor in the health of women and children. In 1994, the International Conference on Population and Development (ICPD) Program of Action in Cairo highlighted the importance of encouraging and enabling men to take responsibility for their sexual and reproductive health behaviour. This was followed by other intergovernmental declarations, particularly the Beijing Platform for Action in 1995 and the 48th session of the Commission on the Status of Women in 2004. Together, these provided a clear mandate for work on men's SRH, within a human rights framework. These developments took place alongside an increasing recognition of reproductive rights and more recently sexual rights for women and girls, following the work of many activists and organizations calling for women to have greater agency over their bodies and choice over reproductive decisions. Many of these feminist activists and organizations called for greater male involvement in SRH.

Despite this international mandate for work on men's SRH, the programmatic response has been limited, except for a focus on the involvement of men to support the SRH outcomes of women and children. Initially, the way to deal with what increasingly had come to be regarded as 'the problem of men' was thought to be to foster women's empowerment through working directly with women. Men, often identified as uncaring and unconcerned about the well-being of their partners, were ignored, and as a result, many health promoters began working directly with women in the communities to empower them and protect them from the impact of men's behaviour on their lives. This strategy was focused mostly on sexual and reproductive health.

By the end of the 1980s, the women's empowerment approach became an important driving force within health promotion and, more particularly, within sexual health promotion. However, this strategy of women's empowerment without the active involvement of men was described as a partial solution which could alienate men further. These fears, together with an understanding of the gender power relationships in the society brought about a firm belief about male participation in health promotion. Although most would now agree that men's involvement is important, the introduction of programs that aim to involve men pose some serious questions about the effects of involving men in areas that have traditionally been considered the domain of women, such as childcare, pregnancy, and fertility control. Moreover, there is a fundamental question, as far as the strategy is concerned, about whether men's involvement increases men's power over their female partners or whether it will help empower women.

Notwithstanding, research suggests that efforts to engage men can positively influence birth spacing and use of contraceptives, maternal workload during pregnancy, birth preparedness, postnatal care attendance, and couple communication and emotional support for women during pregnancy. In addition, research into the influence of husbands and fathers on health-related behaviours suggests that building men's knowledge regarding maternal and child health may be beneficial in terms of care-seeking for pregnancy and birth, infant feeding practices, childhood immunization, and care-seeking for childhood illness. This review reflects the need to involve men in SRH programs.

3.2 Factors That Affect Male Involvement In Reproductive Health Services

1. Lack of knowledge about maternal health poses a significant challenge to positive male partners' involvement.
2. This is because women themselves considered childbirth as a preserve for women only, then rarely do male partners accompany their partners to reproductive clinics a fact attributed to low awareness.
3. Lack of male reproductive health education.
4. Misconception as a majority of men regarded delivery as a natural phenomenon (low-risk event) and hence saw no need of being involved.
5. Poor knowledge of male partners in choice of delivery site and negative perception of male partners involved in reproductive health services.

Socio-cultural factors

Cultural belief: men do not seek information and services due to traditional notions of masculinity. The cultural belief by men, especially in the rural areas that pregnancy and childbearing is the responsibility of women alone also leads to low involvement of men in maternal health. It is not common in most African societies for men to decide as to when and how a woman should seek care.

Poverty: men's involvement in maternal health services has been influenced by poverty and leading to an increase in maternal mortality and morbidity. When men cannot afford the antenatal costs for their spouses, they allow them to stay at home and adopt the traditional methods.

Health system: the structure of the health system where men are not encouraged and allowed into the antenatal clinics, delivery rooms, and health services which are mainly targeted at women influences male participation in maternal health outcomes negatively. The male unfriendly environments of hospitals and maternity services, which are designed principally for women alone lead to low male involvement in maternal health.

Inadequate Knowledge: inadequate knowledge and awareness of maternal health services exclude men from participating in maternal health services. Inadequate Knowledge: inadequate knowledge and awareness of maternal health services exclude men from participating in maternal health services. A study was done in Mombasa County; Kenya shows a lack of adequate knowledge on male partner involvement in the choice of delivery site.

Socio-Economic: some men feel they have to facilitate their wives in terms of transport and if they do not have means of transport, they see no point in escorting them while both of them are walking. In a situation where a man is economically in a position to provide the necessities of life, he tends to have more than one wife, which also affects his willingness and ability to escort the wife to seek care.

3.3 Men's Own Sexual and Reproductive Health Needs

Although policymakers are beginning to focus on men's roles as fathers and husbands, little attention is being paid to men's sexual and reproductive health needs. All service providers must have a good understanding of the SRH issues of different men, as not all men are the same. For instance, younger men, older men, men living with HIV, men

who have sex with men, married men, and others, all have additional or slightly different SRH needs.

Conceptually, men's needs are simple. Men need to avoid the potential negative consequences and achieve the desired, positive outcomes of their sexual and reproductive behaviour. Men need to prevent unintended pregnancies, within or outside of marriage. They need to protect themselves and their partners against acquiring STDs, including HIV, and they need to be screened and, if necessary, treated for such diseases. Furthermore, men need to be able to father children when they and their partners choose, overcome fertility problems and help ensure that their partners' pregnancies are healthy. More generally, men need the self-esteem, self-awareness, and skills to avoid violent and coercive relationships, to engage sexually in ways that are respectful of themselves and their partners, and to be part of strong, fulfilling relationships that can help them meet their other objectives.

During teen and young adult years, men's sexual and reproductive health needs require less medical intervention, except for STD screening and treatment. Instead, younger men primarily need information, counselling, and skills-building services that can help them to resist peer pressure, make informed, positive decisions, take responsibility for their actions and communicate effectively with their partners about personal and sexual matters. As men grow older, they are more likely to need medical reproductive health care, such as infertility services, vasectomy, and diagnosis and treatment for cancers of the reproductive tract.

However, it is essential to involve men throughout program design and implementation to ensure that services and information materials address their concerns and needs. Many programs also use men to implement programs as part of its staff members, health educators, and peer motivators. While a few programs have established successful clinics that serve men only, integrating men's services into existing services is likely to be easier and more cost-effective for most programs.

Reasons Sexual and Reproductive Health needs for men are often unmet

- i. Low utilization of SRH services due to services that are not seen as "male-friendly" and due to poor health-seeking behaviour among men
- ii. Available policies, access, and availability of services as well as addressing structural stigma so that men regardless of sexual orientation can be successfully reached.
- iii. Lack of focus on men and adolescent boys' sexual and reproductive health including a limited articulation of what these services are, to whom they should be delivered, and how to do so in a way that is inclusive of men in a meaningful way.

- iv. Insufficient evidence about large-scale and implementable approaches to address SRH needs of men, both as supportive partners as well as clients.
- v. Lack of training of reproductive health care providers about men's reproductive health needs on male genital exams, vasectomy, counselling, and interpersonal communication skills.

3.3 Benefits of Male Involvement in Reproductive Health Services

Evidence suggests that increased men's involvement in Maternal and child health care (MCH) is important and would yield considerable health and other benefits for families. Men have a cultural role in decision making regarding access to MCH care which highlighted the benefits of giving men reproductive health information to inform their decision-making about family matters in their roles in providing finances and transportation to increase the use of clinic services by women and children. These benefits include –

A potential benefit of male involvement in childbirth and men's understanding of the physical toll that pregnancy and childbirth take on a woman leads to increase understanding of the importance of longer birth intervals and smaller family size.

Male participation serves as an important avenue to support healthy behaviours and seeking health care for children, such as exclusive breastfeeding and childhood immunization and the opportunity for health services to engage with men to provide both health education and services related to men's health.

Men also need screening and clinical care, counselling and education about sexual health, safer sex behaviours, shared responsibility for contraception and parenting, and the rights of both men and women to have volitional and pleasurable sexual experiences. These services are more accessible to males if they accompany or are involved in their spouses' SRH.

Women tend to have higher knowledge of SRH Care service access points than men and men with a regular source of health care had a higher knowledge of SRHC service access than men who do not have access to SRHC. Thus, men benefit when they participate in their spouses' SRH.

Male involvement was significantly associated with reduced odds of postpartum depression in women and with improved utilization of maternal health services. In addition, male involvement during

pregnancy and at post-partum appeared to have greater benefits than male involvement during delivery.

Male participation in sexual and reproductive health leads to improved Home-Based Life Saving Skills with a net intervention effect of up to 41%. There is also usually an improvement in the knowledge of danger signs during pregnancy, childbirth, and postpartum periods the proportion of men who accompany their wives to antenatal and delivery also improved.

Male involvement in decision-making with their partners for the place of delivery improved when there is male involvement or participation.

When men partner with women to encourage and support prenatal and postnatal visits, as well as healthy pregnancy, women's maternal health outcomes, improve greatly.

Men's active involvement has significant benefits for their newborn health and throughout the child's development and into adolescence, in addition to promoting gender-equitable views.

When men participate in prenatal visits and receive maternal health education, they can provide life-saving support to their partners, such as noticing the danger signs during pregnancy or delivery and getting their partners the necessary emergency care.

Men's involvement during and after pregnancy provides psychological and emotional support and is associated with reducing the likelihood of developing post-partum depression.

Fathers can improve child health by encouraging immunization, seeking care for childhood illnesses, and supporting infant nutrition.

Positive father involvement is associated with children's emotional and social development, such as empathy, lower rates of depression and behavioural and psychological problems, cognitive and language development, better academic performance and protection from risky behaviours.

3.5 Barriers to Male Involvement in the Use of Reproductive Health Services

Benefits of male involvement are documented, however, the lack of time and overall limited awareness regarding the specific role of men in reproductive health was also thought to deter men's participation in issues related to fertility regulations well as effective development and implementation of male involvement in family planning initiatives

which should address barriers to men's supportive participation in reproductive health that includes perceived side effect of female contraceptive methods which disrupts sexual activity, limited choices of available male contraceptive, including fear and concerns relating to vasectomy, perceptions that reproductive health was a woman's domain due to gender norms and traditional family planning communication geared towards women, preference for large family sizes which are uninhibited by prolonged birth spacing and concerns that women's use of contraceptives will lead to extramarital sexual relations.

a. Socio-demographic factors

Age and marital status: Increased male involvement was reported to be associated with older age and partners that live together. Male involvement is 1.2 times higher among men whose female partners were 25 years or older. Monogamous partners and cohabiting men were twice and 1.6 times respectively more likely to be involved in their partners' reproductive health.

Education: men who are educated were twice more involved in reproductive health services compared with those with less educated.

Profession: those that spend more time outside the home are more likely not to have taxi drivers and motorbike taxi riders were less likely to participate than men with other professions such as farmers or construction workers also respondents from rural villages have to struggle to look for money to provide for their family which hindered from participating. Also, persons with an occasional job were less likely to participate in Maternal and child health (MCH) services unlike persons with a well-paid job who were more likely to participate in Prevention of mother to child transmission (PMTCT) interventions.

b. Sociological factors

Cultural factors: In numerous studies, cultural ideals were identified as barriers to male involvement. Several researchers have reported negative perceptions towards men attending antenatal care services. In a report, men who accompanied their wives to ANC services were perceived as being dominated by their wives or weaklings by their peers. Regularly, men perceive that ANC services are designed and reserved for women, thus are embarrassed to find themselves in such female places. Moreover, certain women do not like to be seen with their male partners when attending ANC service.

Male attitudes and beliefs: Fear of receiving an HIV positive result and confidentiality concerns and fear of stigma and discrimination prevent some men from coming for HIV/AIDS voluntary counselling and testing. Several research reports that men were mentioned as being concerned about HIV-associated stigma and disclosure. In another study, women said that engaging their partners in the Prevention of mother-to-child transmission (PMTCT) would be particularly challenging if men were unaware of their status, refused to be tested, or were in denial about their HIV status. There also seems to be a gap in knowledge related to discordancy. Some men questioned the need for testing if their partners had already been tested, believing that they would have the same test results as their partners. In societies where sexual matters are not discussed openly, men may feel uncomfortable talking about their family planning needs and sexual concerns with their partner and with health counsellors.

Female attitudes and considerations: Women victims of gender-based violence may be afraid to ask their partner to test for HIV, this results in low male involvement. It has been shown that women at ANC clinics fear violence from their partners who attend ANC clinics with them. These women are concerned that the discovery of a positive HIV test result may lead to abandonment, rejection or being perceived by their husband as being responsible for contacting HIV into their relationship. Male partners of women with higher income were more likely to participate in HIV testing and counselling. Also, women with higher education were more likely to have discussed HIV and reproductive health issues with their male partners.

- c. **Communication:** Partners with poor communication was found to be associated with poor male involvement. On the other hand, good couple communication was associated with high seropositive status disclosure and support between husband and wife. It is reported that concerning men involvement in antenatal care, readiness to provide support to their female partners which include counselling, testing, use of prophylaxis antiretroviral drugs and choice of baby's feeding options is core to PMTCT intervention. Male participation increases spousal communication about sexual risk and behaviour change, especially in discordant couples. When men are involved in testing it enables couples to address condom use, decrease sex with outside partners and thus help to prevent HIV and other STI transmission to the uninfected partner. Studies also have shown an association between men's involvement and better contraceptive use.

d. Health services factors:

The attitude of health care providers Harsh and precarious language directed at women from skilled health professionals serves as a barrier to male involvement. Harsh treatment of men by health care providers discouraged them from returning or participating in PMTCT activities. Moreover, some health care providers did not allow men access to ANC settings. In the study, men mentioned the negative attitudes of staff members and lack of common courtesy, the way they care for pregnant women and healthcare workers not allowing men to enter the antenatal clinic with their partners. However, healthcare workers who were reluctant to encourage male attendance in antenatal care make men feel unwelcome and disrespected due to health care services were designed without considering their needs.

Financial constraints: Financial constraints of male clients have been identified as a barrier to men participating in the uptake of reproductive health services. Health providers who charged extra beyond the official ANC fees and low salaries as limiting factors for male involvement.

Facility and space constraints: These results suggest that more friendly and convenient venues for men are needed. The lack of space to accommodate male partners in ANC clinics was also reported to adversely impact male involvement. Clinics are often unable to concurrently accommodate pregnant women and their partners because of a lack of space. Gender-specific services to address uniquely male issues do not exist. Targeted interventions for men, such as tailored messages, specific health education sessions, and innovative strategies to identify male-friendly venues would be valuable for increasing male involvement.

Waiting time: Regularly, women must wait for long before receiving ANC services because of burdensome administrative procedures which result in prolonged waiting time by the patient throughout the health facilities. Men, who are in the paid workforce, are often not able to spend virtually the entire day participating in ANC and other SRH services.

Quality of care: Health care service providers are often overworked, stressed and must work in a facility with severely limited resources. In such context, the quality of services is compromised and taking care of participating male partners is considered an additional burden.

Time of day for providing prevention of mother-to-child transmission services: Most health facilities offer these services only on weekday mornings when most the men are at work. Yet several studies have identified ANC opening hours as a limiting factor for male involvement. Geographical constraints impact health services uptake and male participation. Lack of decentralized services is a reason for low health services uptake and limited male involvement. The distance that the male partners have to travel to the clinics to participate in comprehensive sexuality education, HIV tests and counselling, the costs of transportation and the amount of time per appointment at the clinic were identified as barriers to male involvement. Most of the male partners and men, in general, wanted the health services to be implemented and extended to their villages or close to their homes to save them the costs of time and travel fees.

3.6 Strategies to Improve Male Involvement in Sexual and Reproductive Health

SRH Services that are reported to be of particular interest to men should be used as the entry point for any intervention to encourage male involvement from the male point of view.

Sexual and Reproductive Health Services of particular interest to men include:

- i. Family planning information and services,
- ii. Diagnosis and treatment of STDs
- iii. Information on male and female anatomy and physiology,
- iv. General medical care,
- v. Physical exams needed for employment,
- vi. Treatment of urological problems,
- vii. Counselling about sexuality,
- viii. Sexual dysfunction, and
- ix. Discussing sexual needs with partners,
- x. Screening for prostate and testicular cancer,
- xi. Evaluation of male infertility

The four strategies health care workers could employ to invite husbands to participate in maternal health include

- i. Asking pregnant women to bring their husbands the next time they come to the health facility
- ii. Sending invitation cards to men
- iii. Male peer education initiative
- iv. Use of incentives to encourage communities

Other interventions include distribution of information, education and communication materials; community meetings outreach activities and workshops or Seminars are some of the interventions to promote men's engagement in maternal health despite all these men are still largely missing

Interventions effective in encouraging male involvement in SRH include -

Targeted women and men in reproductive health education have shown to increase their knowledge about maternal and child health outcomes, increase health-seeking behaviour among pregnant women, raise awareness and use of family planning in the postpartum period and increase awareness of dual protection for STIs.

Effective strategies to reach men and involve them in SRH programs are provided by health facilities, couples and communities. These strategies encourage men to attend antenatal and postnatal consultation where information on maternal health care provided to couples.

The community mobilisation used methods like male peer initiative, incentives and community sensitisation.

The coupling strategy was the most appropriate but was mostly used by educated and city residents, the male peer strategy was effective and sustainable at the community level. However, the fact that few interventions have targeted heterosexual men and have been the subject for detailed evaluation suggests that there is a need for more interventions and better evaluations, which would examine not only the process of men's involvement but also their impact on the lives of both the men themselves and their families.

SELF-ASSESSMENT EXERCISE

Enumerate the factors associated with male involvement in reproductive health services.

4.0 CONCLUSION

There is a need to develop and apply strategies to enhance male involvement in reproductive health, which is fundamental to improving sexual and reproductive health.

5.0 SUMMARY

Despite the acknowledged importance of male involvement in reproductive health in improving access to services and improving

maternal and child health indices, the level is low especially in the developing world. This is associated with a lot of sociocultural factors.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the barriers to male involvement in reproductive health issues.
2. Explain the strategies that encourage male involvement in maternal health.
3. Enumerate the factors associated with male involvement in reproductive health services.

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UNIT 5 GENDER-BASED VIOLENCE

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Classification of Gender-Based Violence
 - 3.2 When and Where Gender-Based Violence Occurs
 - 3.3 Factors Associated With Gender-Based Violence
 - 3.4 Consequences of Gender-Based Violence
 - 3.5 Principles And Requirements of Control of Gender-Based Violence
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Gender-based violence is any harm or suffering that is perpetrated against a woman or girl, man or boy and that harms the physical, sexual or psychological health, development or identity of the person. The cause of the violence is founded in gender-based power inequalities and gender-based discrimination.

Because gender-based violence mostly affects women and girls, the terms gender-based violence and violence against women (VAW) are often used interchangeably. However, men and boys can also be subject to gender-based violence, and women can be perpetrators. Sida's definition is in line with the UN definition of violence against women but has a wider scope to include men and boys as potential survivors. Gender-based violence against women and girls is linked to gender inequalities and gender norms according to which the 'female' and the 'feminine' is associated with weakness, inferiority and victimisation. Likewise, gender-based violence against men and boys often builds on different norms for masculinity and femininity. For instance, men and boys who are subject to gender-based violence can be punished for not being 'real men, not complying with social expectations on manhood and masculinity norms, for example as gay, trans, bisexual and/or being identified as belonging to a low-status masculinity identity.

While gender inequality, unequal power relations and discrimination based on gender are the overarching causes of gender-based violence, and this violence is not limited to specific regions or socioeconomic, religious, or ethnic groups but occur everywhere, the interplay between

other causes and contributing factors influences the prevalence of gender-based violence. These factors may include the normalisation of violence in the wake of armed conflict, an ineffective criminal justice system.

Violence against women and girls is a major health and human rights issue, as at least 1 in 3 of the world's female population has been physically or sexually abused at some time in her life. Many, including pregnant women and young girls, are subject to severe, sustained, or repeated attacks. Worldwide, violence against women is as serious a cause of death and incapacity amongst women of reproductive age as cancer, and a greater cause of ill-health than traffic accidents and malaria combined. According to a WHO study in rural Uganda, one in three women is subject to verbal or physical threats from their partners, and 50 per cent of those who have been threatened subsequently receive injuries. It also revealed that beating a female partner was viewed as justifiable in certain circumstances by 70% of males & 90% of females in Uganda. It is also revealed that domestic violence may be an important factor in women's susceptibility to acquiring HIV.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- explain the meaning and forms of gender-based violence
- discuss the consequences of gender-based violence
- enumerate the barriers to effective control of gender-based violence and
- describe the strategies, principles and requirements for control of covid-19.

3.0 MAIN CONTENT

3.1 Classification of Gender-Based Violence

Gender-based violence is classified into different forms. However, the forms are interrelated as victims suffer more than one form at a time and one form could lead to another form. They are classified as follows -

1. Sexual violence
2. Emotional violence
3. Physical violence
4. Economic violence
5. Harmful traditional practices
6. Others – forceful HIV transmission

Examples of Sexual gender-based violence include –

- i. Rape
- ii. Sexual assaults
- iii. Sexual harassment
- iv. Sexual exploitation
- v. Sexual abuse

Sexual harassment is defined as “Any unwelcome, usually repeated and unreciprocated sexual advance, unsolicited sexual attention, demand for sexual access or favours, sexual innuendo or other verbal or physical conduct of a sexual nature, display of pornographic material, when it interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment”

Sexual exploitation is “Any abuse of a position of vulnerability, differential power, or trust for sexual purposes; this includes profiting monetarily, socially or politically from the sexual exploitation of another; Sexual exploitation is one of the purposes of trafficking in persons (performing sexually, forced undressing and/or nakedness, coerced marriage, forced childbearing, engagement in pornography or prostitution, sexual extortion for the granting of goods, services, assistance benefits, sexual slavery)”.

Sexual exploitation can also be defined as any abuse of a position of vulnerability, differential power, or trust for sexual purposes; this includes profiting monetarily, socially or politically from the sexual exploitation of another. Sexual exploitation is one of the purposes of trafficking in persons (performing sexually, forced undressing and/or nakedness, coerced marriage, forced childbearing, engagement in pornography or prostitution, sexual extortion for the granting of goods, services, assistance benefits, sexual slavery)”

Abuse/humiliation: the examples of these are a non-sexual insult, degrading, demeaning, compelling humiliating acts or confinement e.g. isolate from friends, restrict movement, deprive liberty.

3.3 Factors Associated with Gender-Based Violence

1. The power play between gender
2. Women empowerment
3. Cultural believes
4. Social status of women
5. Insecurity

Ecological framework explanation: The so-called “ecological framework” is based on evidence that no single factor can explain why

some people or groups are at higher risk of interpersonal violence, while others are more protected from it. This framework views interpersonal violence as the outcome of the interaction between many factors at four levels – individual, relationship, community, and societal.

1. Societal

- i. Conflict and crisis
- ii. Rapid social change
- iii. Gender, social and economic inequalities
- iv. Poverty
- v. Weak economic safety nets
- vi. Poor rule of law
- vii. Cultural norms that support

2. Community

- i. Poverty
- ii. High crime levels
- iii. High residential mobility
- iv. High unemployment
- v. The local illicit drug trade
- vi. Situational factors

3. Relationship

- i. Poor parenting practices
- ii. Marital discord
- iii. Violent parental conflict
- iv. Low socioeconomic household status
- v. Friends that engage in violence

4. Individual

- i. Victim of child maltreatment
- ii. Psychological/personality disorder
- iii. Alcohol/substance abuse
- iv. History of violence

Perpetrators of Gender-Based Violence

1. Anyone in the position of power, authority, control
2. Husband / Intimate partner
3. Some trusted by victim e.g. teacher, relations
4. Soldiers and paramilitary (IDP camp/war)
5. Employer
6. Family members including parents

3.2 When and where gender-based violence incidents occur

Informants reported common instances where the risk of GBV is particularly severe:

- i. At markets people not only trade goods but also gather to socialize and to drink. Many girls skip school on market days to sell alcohol in bars and discos, exposing themselves to risks of sexual abuse.
- ii. Around water sources or boreholes, low water yields force girls and women to wait late into the night to fetch water. If not accompanied by a security guard, they are vulnerable. Girls who spend long hours at the borehole are said to get involved in 'bad company'.
- iii. When women go out to collect firewood or to do casual labour to supplement family incomes they may be abused. Women have had to consent to sex before being paid by employers.
- iv. When boys and girls gather together for church attendance and choir practice, many linger and do not immediately return home.
- v. At schools many teachers have sexual relationships with students, luring girls into relationships by promises of gifts and high marks.
- vi. When girls are forced by poverty to work as maids in local houses male householders may sexually abuse them or coerce them into marriage.
- vii. When a woman loses her husband, one of his male relatives may demand sexual favours or steal her property.
- viii. In marriages where the age difference is great, levels of domestic violence also tend to be high

3.4 Consequences of Gender-Based Violence

While women are usually the immediate victims of gender violence, the consequences of gender violence extend beyond the victim to society as a whole. Gender violence threatens family structures; children suffer emotional damage when they watch their mothers and sisters being battered; two-parent homes may break up, leaving the new female heads of household to struggle against increased poverty and negative social

repercussions. Psychological scars often impede the establishment of healthy and rewarding relationships in the future. Victims of gender violence may vent their frustrations on their children and others, thereby transmitting and intensifying the negative experiences of those around them. Children, on the other hand, may come to accept violence as an alternative means of conflict resolution and communication. It is in these ways that violence is reproduced and perpetuated

All health components of the victim & beyond are affected

1. Physical
2. Psychological / mental
3. Economic
4. Social for example stigma and parenting role

These acts of violence can lead to serious consequences to physical and psychological health and social well-being. WHO is working to strengthen the health sector's response to Sexual gender-based violence as part of a comprehensive approach to prevention of and response to this health and human rights concern?

3.5 Principles and Requirements for Control of Gender-Based Violence

The social response to gender-based violence

Over the last few decades, gender-based violence has been recognized and discussed as a public, rather than a private problem. As a result, a multitude of potential responses has been identified within the state and civil society. There is a variety of approaches to gender-based violence (i.e. human rights, health, development) and they are being integrated to address the problem. Through the participation of multiple sectors and entire communities in addressing gender-based violence, it is possible to achieve effective prevention and create social networks to ensure that victims of gender-based violence receive the care and protection they need. The Pan American Health Organization points out that creating these networks involves integrating gender-based violence prevention and care into existing systems and services, as well as designing new responses. Social responses to gender-based violence fall under several categories:

- i. Health care services
- ii. Victim assistance services
- iii. Working with perpetrators
- iv. Exploring masculinities
- v. Media information and awareness
- vi. Campaigns
- vii. Education
- viii. Legal responses

- ix. Community interventions
- x. Faith-based programs
- xi. International conferences and conventions

Control Implies the following

1. Awareness-raising, training, and refresher courses on gender-based violence is a key strategy
2. Having a code of conduct for staff
3. Coordinated activities amongst stakeholders, which enables effective response and to reduce gender-based violence incidence
4. Adopting Holistic strategies that extend to all sectors
5. Having trained personnel and facilities
6. Have a legal framework (adapted)?
7. Availability of effective reporting channel

SELF-ASSESSMENT EXERCISE

Explain the root causes of gender-based violence.

4.0 SUMMARY

Gender-based violence continues to be a huge challenge in Nigeria and other parts of the world. The challenge is worst in Nigeria and other tropical countries where there is poor due to cultural factors and weak systems for reporting and management. The root cause of gender-based violence lied in unequal power relations between women and men. However, a variety of factors on the individual level, the family level, and at the level of community and society, often combine to raise the likelihood of violence occurring. The effects of gender-based violence are far-reaching and extend beyond the individual survivor, to the family and society as a whole. Potential social and other responses to gender-based violence are most effective when there is a common understanding of the nature and causes of gender-based violence and it is addressed from all angles, through the participation of multiple sectors and entire communities. There are barriers to effective control of gender-based violence despite recognizing it as a challenge.

5.0 CONCLUSION

Pending the removal of barriers to reporting gender-based violence, such as culture, poor system, lack and/or poor empowerment of women, very little could be achieved in the control of gender-based violence.

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the barriers to control of gender-based violence in Nigeria.

2. Explain the root causes of gender-based violence.

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MODULE 5 FAMILY PLANNING

Unit 1	Hormonal Contraception
Unit 2	Injectable Contraception
Unit 3	Intrauterine Devices
Unit 4	Condoms and Sterilisation

UNIT I HORMONAL CONTRACEPTION**CONTENTS**

1.0	Introduction
2.0	Objectives
3.0	Main Content
3.1	Oral contraceptives (The pills)
3.2	Uses of Oral Contraceptives
3.3	Side Effects
3.4	Advantages and Disadvantages
3.5	Contraindications
3.6	Taking the Pill
3.7	The Complication of Oral Contraceptive
4.0	Conclusion
5.0	Summary
6.0	Tutor-Marked Assignment
7.0	References/Further Reading

1.0 INTRODUCTION

Hormonal contraceptives are two types; oral and injectable.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- state the three ways that oral contraceptives prevent pregnancy.
- list four advantages of the birth control pill.
- enumerate three disadvantages of the birth control pill.
- Explain the reason why pregnant women should not take the birth control pill.
- describe four medical reasons for not giving a woman the birth control pill.
- list the points that should be discussed with a woman who is starting to take the birth control pill.

3.0 MAIN CONTENT

3.1 Oral Contraceptives (The Pills)

It contains the hormones oestrogen and progesterone, and prevent pregnancy in three ways by:

- a. Preventing ovulation
- b. Changing the cervical mucus so that it acts as a barrier to sperm
- c. Making the endometrium thin and unable to support the fertilized egg The pill is theoretically over 99 per cent effective. This means that when one hundred women take the pill for a year, not even one of them should become pregnant.

d. **Uses of Oral Contraceptives**

- i. To preventing unwanted pregnancies
- ii. Decrease painful menstruation
- iii. Prevent iron deficiency anaemia, and
- iv. Provide some protection against ectopic pregnancy and pelvic inflammatory disease.

e. **Side Effects**

These side effects include nausea/vomiting, changes in skin colour, weight loss, weight gain, swelling, headache, fatigue, depression, enlargement of the breasts, decrease in desire for sex, increase in desire for sex, breast tenderness, loss of hair, skin rashes, itching, dizziness, feelings of faintness, spotting/bleeding between periods, and numbness/tingling in the arms and legs. These side effects are usually called “minor” because they do not threaten the life of the women. Most disappear when the oral contraceptive is stopped. Others include an increase in birth defects and death from a disease of the circulatory system.

f. **Advantages and Disadvantages**

The advantages of birth control pill include:

- a. It is easy to use
- b. It is self-administered
- c. It does not interfere with the sexual act
- d. It can be stopped at any time

The disadvantages are:

- a. It is easy to forget to take the pill regularly
- b. It requires a regular supply of pills
- c. Many side effects, both major and minor, can occur

3.5 Contraindications

Oral contraceptive is contraindicated in women with the following:

- a. Stroke or a heart attack since these are likely to occur again
- b. Cancer cancer may grow because of increased oestrogen in pregnant women as birth defects may occur
- c. Kidney or liver disease since the birth control pill is excreted by the kidney thrombophlebitis

The pill should be given cautiously to women with the following:

- a. Diabetes or thyroid disease as the birth control pill may worsen the disease
- b. High blood pressure, particularly if the woman had high blood pressure during pregnancy or has kidney disease
- c. Depression. Women who are severely depressed may find this condition worsens if they take the birth control pill.
- d. Women with varicose veins are predisposed to get blood clots.
- e. Epilepsy as convulsions may increase while on the birth control pill
- f. Irregular menstrual cycles.

3.6 Taking The Pill

The pill should be started on any of the first five days of the menstrual cycle. (The first day of spotting or bleeding is considered day 1.) If one pill is missed, the pill should be taken as soon as the woman remembers that she has not taken it. If two pills are missed on 2 consecutive days, the woman should take 2 pills on each of the next 2 days. She should also use contraceptive foam or cream and her partner use condoms each time sex occurs until the next menstruation because ovulation can occur when 2 pills are missed.

3.7 The complication of Oral Contraceptive

Elevated Blood pressure

Blood pressure should be checked whenever the woman taking oral contraceptives comes to the clinic. Women who have systolic blood pressure between 140 and 160 or diastolic pressure between 90 and 105 should be advised to return to the clinic once a month to have their blood pressure checked. A systolic level of 160 mm Hg or a diastolic level of 105 mm HG means that the pill should be stopped. The blood pressure usually returns to normal within 30 days.

Headache

Headache can mean high blood pressure. The pill should be stopped when a woman has headaches that are getting worse, are associated with other symptoms or do not stop after having taken medication.

Blurred vision or temporary loss of vision

Visual problems can also mean high blood pressure. The pill is stopped if a woman has visual problems, especially when a headache or weakness in an arm or leg is present.

Chest pain

Chest pain can be a sign of lung or heart problems.

Abdominal pain

Abdominal pain can be a sign of liver tumours or gall bladder problems.

Leg pain

Leg pain may be a sign of thrombophlebitis (blood clot). Pain, swelling, warmth and redness on the legs are symptoms of thrombophlebitis. An immediate referral to a physician is necessary. If a woman has frequent leg pain without other symptoms, of thrombophlebitis she is advised to stop the pill.

SELF-ASSESSMENT EXERCISE

A person suffering from depression should take pills. Discuss.

4.0 CONCLUSION

Oral contraceptives are used by women throughout the world. Guidelines for their use, including medical history that could contraindicate their use and the schedule for “check-up”, this is because of the risk to a woman who takes the birth control pill.

5.0 SUMMARY

Oral contraceptives contain the hormones oestrogen and progesterone and prevent pregnancy in three ways: preventing ovulation, changing the cervical mucus so that it acts as a barrier to sperm, making the endometrium thin and unable to support the fertilized egg.

6.0 TUTOR-MARKED ASSIGNMENT

1. What advice would you give a woman that forgot to take her pill?
2. Discuss the complications of oral contraceptives.
3. A person suffering from depression should take pills. Discuss.

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UNIT 2 INJECTABLE CONTRACEPTION

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Types of Injectable Contraception
 - 3.2 Advantage of Injectable Contraception
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

The injectable contraceptive is effective, long-lasting and not related to sexual intercourse. Injectable contraceptives are more than 99 per cent effective. They prevent pregnancy by preventing ovulation. They also change the cervical mucus, which becomes thick and sticky, and thus prevents sperm from entering the uterine cavity.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- list three ways in which injectable contraceptives prevent pregnancy.
- list two advantages injectable contraceptives have over oral contraceptives.
- list four advantages injectable contraceptives have over IUDs.
- list three disadvantages of injectable contraceptives.

3.0 MAIN CONTENT

3.1 Types of Injectable Contraceptive

Two injectable contraceptives are available. They are Depo-Provera and Noristerat. They prevent pregnancy by preventing ovulation, change the cervical mucus, which becomes thick and sticky, and thus prevents sperm from entering the uterine cavity. Depo-Provera is usually given one 150 mg dose every three months. Noristerat should be given in five 200 mg doses every 8 weeks. All of the drugs must be withdrawn from the container, otherwise, the dose may be insufficient. Because Noristerat comes in a thick, oily solution, the container may need to be warmed so that the solution is easier to take into and expel from a

syringe. The medication must be injected deep into the muscle and the injection site should not be massaged. If these instructions are not followed, the medication may be absorbed more rapidly by the body and the length of time the woman is protected from pregnancy will be shortened.

3.2 Advantages

Injectables Compared with oral contraceptives has the following advantages:

- a. More convenient if the woman has easy access to the drug.
- b. Not associated with the risks associated with the use of oestrogen.

Injectables Compared with IUD has the following Advantages:

- a. Greater effectiveness
- b. No pelvic examination is necessary
- c. No concern over uterine perforation or pelvic infection

General Disadvantages are:

The disadvantages of the injectable contraceptive compared with the oral contraceptive are:

1. Disturbances to the menstrual cycle. Many women experience changes in their cycles after receiving the injectable contraceptive. Cycles may be longer or shorter. Flow may be increased or decreased. Bleeding between periods may occur.
2. Delay in return for fertility. It may take a woman up to 24 months to become pregnant after discontinuing use.
3. More expensive than oral contraceptives or IUDs.
4. Not usually available in several countries.
5. Side effects include weight gain, nausea, dizziness, skin pigmentation, acne, dysmenorrhea, discharge from the nipples and a decrease in the desire for sex.
6. Side effects cannot be stopped until the drug is excreted.

SELF-ASSESSMENT EXERCISE

Discuss the relationship between ovulation and injectable contraceptives.

4.0 CONCLUSION

Oral contraceptives are safe and effective and offer advantages over other methods.

5.0 SUMMARY

Oral contraceptives are Depo-Provera and Noristerat. They prevent pregnancy by preventing ovulation, change the cervical mucus, which becomes thick and sticky, and thus prevents sperm from entering the uterine cavity.

6.0 TUTOR-MARKED ASSIGNMENT

1. Enumerate the advantages of Oral contraceptives.
2. Discuss the relationship between ovulation and injectable contraceptives.

7.0 REFERENCES/FURTHER READING

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UNIT 3 INTRAUTERINE DEVICES (IUDS)

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Advantages and Disadvantages
 - 3.2 The technique of Insertion and Removal
 - 3.3 Time of Insertion
 - 3.4 Contraindications
 - 3.5 Complications
 - 3.6 Counselling for Sterilisation as a method of Birth Control
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Intrauterine devices (IUDs) are devices placed in the cervix and uterus to prevent pregnancy.

2.0 OBJECTIVES

By the end of this Unit, you will be able to:

- list five advantages of the IUD as a method of birth control.
- list six disadvantages of the IUD as a method of birth control.
- list three contraindications to insertion of an IUD.

3.0 MAIN CONTENT

3.1 Advantages and Disadvantages of The IUD

Advantages

The IUD is effective, convenient, and relatively safe. It does not require repeated insertion, nor does it interfere with sexual activity. Fertility returns soon after the device is removed. Pregnancy rates are reported to be one to six for every one hundred women who use the device for a year.

Disadvantages

The disadvantages of the IUD are:

- i. Pain, ranging from mild to severe, on insertion
- ii. Occasional fainting during or immediately after insertion

- iii. An increase in painful menstruation
- iv. An increase in menstrual flow if the device does not contain copper
or progesterone
- v. Bleeding/spotting between periods
- vi. Fairly high expulsion rates. Although expulsion can happen at any time, it is most likely to occur in the first month after the device is inserted
- vii. An increase in the incidence of severe pelvic infection
- viii. The possibility of perforation of the uterus when the device is inserted.

3.2 Technique of Insertion and Removal

The device should be placed high in the fundus. The IUD and instruments inserted into the cervix and uterus should be sterile. Perforation, expulsion, and other medical problems are decreased when proper insertion technique is observed. IUDs are removed without difficulty. The threads of the device are grasped with forceps or with two fingers and pull steadily, if the device does not come out readily, the patient may need to be referred,

3.3 Time of Insertion

IUDs can be inserted at any time during the menstrual cycle, immediately after delivery or after an abortion. The advantage of insertion post-delivery or post-abortion is that the patient motivation is high and a return visit for insertion is eliminated. Others prefer to insert them during menstruation. At such time the cervical os is dilated so that insertion is usually easy and any bleeding that occurs is assumed to be normal menstrual flow.

3.4 Contraindications

- i. Any infection of the genital tract
- ii. Pregnancy is known or suspected
- iii. A history of previous ectopic pregnancy
- iv. Unexplained vaginal bleeding
- v. heavy periods (menorrhagia)

3.5 Complications

- 1. Bleeding
The most frequent problems are pain and spotting or bleeding. These often go away after two to three months when the body

becomes accustomed to the device. If the problems continue, the IUD may be removed.

2. Infection

Severe pelvic infections lead to abscesses. Infection is often caused by bacteria from the vagina that has attached themselves to the thread of the device. The treatment of pelvic infections in women using IUDs varies. In some places, the device is removed immediately, and the woman is given antibiotics. In others, the device is left in place and removed only if symptoms do not disappear after antibiotic therapy. Signs of pelvic infection are

- i. Fever
- ii. Pelvic pain or tenderness
- iii. Severe cramping
- iv. Unusual bleeding
- v. Unusual vaginal discharge

3. Perforation may occur at the time of insertion. When perforation occurs, pain and bleeding may or may not be present. Immediate treatment depends on the symptoms. The device is removed surgically.

4. Pregnancy with an IUD in situ is common and is more likely to be an ectopic pregnancy when the pregnant woman is an IUD user. The symptoms of ectopic pregnancy; pain and bleeding may be missed because these symptoms are similar to the side effects of the IUD itself.

3.6 Counselling

Any woman using IUD must be counsel on the following;

1. The mechanism, how the device will be inserted and how it may affect her.
2. Shown how to check for the thread attached to the IUD.
3. Advised to come back for care if she misses a period or cannot feel the thread of the device All available birth control methods should be discussed with women wishing to use any method of family planning.

4.0 CONCLUSION

IUDs are safe and effective and offer advantages over other methods. Cultural beliefs about vaginal bleeding and concerns over how the device prevents pregnancy must be respected.

5.0 SUMMARY

The IUD is effective, convenient, and relatively safe. It does not require repeated insertion, nor does it interfere with sexual activity.

6.0 TUTOR-MARKED ASSIGNMENT

1. Enumerate the advantages of IUDs.
2. Differentiate between contraindications and complications in the use of IUDs.

7.0 REFERENCES/FURTHER READING

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UNIT 4 CONDOM AND STERILISATION

CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 The Condom
 - 3.2 Sterilisation
 - 3.3 Advantages of Sterilisation
 - 3.4 Counselling for Sterilisation as a Method of Birth Control
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Reading

1.0 INTRODUCTION

Condoms are a safe and effective method of birth control when used regularly and correctly. Condom is best used by couples that are motivated and experienced. Condoms also provide some protection against gonorrhoea, syphilis, herpes and Chlamydia. Because condoms are often linked to prostitution and venereal disease, they are unacceptable to some people.

2.0 OBJECTIVES

By the end of this unit the learner will be able to:

- list five advantages of condoms as a birth control method.
- list six disadvantages of condoms as a birth control method.
- describe the procedure for correct use of the condom.

3.0 MAIN CONTENT

3.1 The Condom

All condoms are approximately the same length, circumference, and thickness. They come in lubricated and non-lubricated forms. They also come in colours, including pink, red, yellow, blue and black. Heat is damaging to condoms; therefore, condoms should not be stored in hot places.

How to use a Condom

Proper use of the condom is needed for its effectiveness. It is rolled over the tip of the erect penis and then unroll down the penis. It is advised

that the condom being put on before the erect penis touches the genital area so that sperm present in the fluid that comes from the man's urethra before ejaculation will not get into the vagina. After ejaculation, the penis is withdrawn immediately before it becomes soft and the condom slips off. The man should grasp the ring of the condom firmly when he withdraws his penis from the vagina so that the sperm does not spill out. Condoms should never be reused. Most condoms have a reservoir or tip at the end to catch the sperm and avoid bursting. When a condom does not have that tip, one centimetre of space can be left at the tip to create a reservoir before the condom is put on so that there will be room for the semen. It is wise to check a condom immediately after use to make sure that it did not break. A condom that breaks during intercourse carries the same risk as unprotected intercourse. The effectiveness of the condom is increased when the woman uses contraceptive foam or cream at the same time.

The advantages of condoms are:

- a. Convenience
- b. Ease of use
- c. No side effects
- d. Prevention of some infections
- e. No. medical examination is necessary before use
- f. Readily available

The disadvantages are that condoms:

- a. Interrupt lovemaking
- b. Can be difficult to put on
- c. Don't always stay on
- d. Can cause embarrassment to either partner
- e. Can break
- f. Reduce sensation for some men and women
- g. May increase anxiety because of fear of slipping off
- h. It May be associated with decreased pleasure in lovemaking since the immediate withdrawal is usually advised after ejaculation

3.2 Sterilisation

Sterilization is a procedure that gives permanent protection from pregnancy. This unit discusses the advantages and disadvantages of sterilization as well as the complications of the procedure and the kind of counselling that should be given to interested people.

Female Sterilisation

Two surgical procedures are used for female sterilization. These are

- (a) Hysterectomy, a major operation that involves removal of the uterus.

- (b.) Bilateral tubal ligation (BTL), an operation in which both Fallopian tubes are cut or tied (ligated).

Bilateral tubal ligation (BTL), BTL can be performed by:

- a. Laparotomy (surgical incision through the abdomen)
- b. Colpotomy (surgical incision through the vagina)
- c. Mini laparotomy (a tiny, surgical incision through the abdomen)

Laparotomy is considered a major surgical procedure because it involves the use of general anaesthesia, a large incision is made on the abdomen. The equipment and skill required for performing a mini-laparotomy are fairly inexpensive and simple. Health care practitioners other than physicians can be trained to perform this procedure.

Mini laparotomy

Mini laparotomy is faster, safer and less expensive. The procedure is about 99 per cent successful in preventing pregnancy. It can be performed under local or general anaesthesia. The procedure takes 15-20 minutes or less to perform. A small incision (2-4 cm) is made slightly above the pubic bone. The tubes are located and lifted out of the abdomen through the incision. The tubes are tied and/or cut, and the abdominal incision is closed with a few stitches. Following the procedure, women should be told to keep the incision dry and clean for a few days. Lifting heavy objects should be avoided during this time if possible. Sexual intercourse can be resumed as soon as the physical discomfort is gone. Protection from pregnancy is immediate. The most common complications are:

- a. Accidental cutting of the uterus, bladder, or bowel
- b. Haemorrhage
- c. Infection

Vasectomy (Male Sterilisation)

Sterilization of men is called vasectomy, and it involves tying the vas deferens, the tubes which transport sperm from the testicles. Vasectomy has a very low failure rate. The procedure is safer than mini-laparotomy because the vas deferens are located outside the abdominal cavity. It is performed under local anaesthesia. A small (1-2 cm) incision is made in the skin on one side of the scrotum, and the vas deferens are pulled through the opening. The vas is tied and /or cut, and the incision is closed with two or three stitches. The procedure is then repeated on the opposite side.

The patient should be told to keep the incisions dry and clean for 24 hours. Heavy work should be discouraged. Men should avoid ejaculation for seven to ten days to avoid pressure and possible rupture

at the site of surgery. Unlike BTL in women, vasectomy does not immediately make a man sterile. Sperm may be present in the next few ejaculations. Condoms should be given to men at the time of vasectomy for use in the next four to six weeks. The most common complications of vasectomy are infection and haematoma. However, complications are rare and are not usually serious.

3.3 Advantages & Disadvantages of Sterilisations

Advantages

- a. Continual motivation on the part of the patient is not needed
- b. A regular source of contraceptive supplies is not needed
- c. Protection is forever
- d. The procedure needs to be performed only once
- e. “Check-ups” as encouraged with the use of oral contraceptives and IUDs are not necessary
- f. Common side-effects associated with the oral contraceptive and the IUD is not present

Disadvantages

One major disadvantage is that its permanency in that it gives life-long protection against pregnancy. But people can change their minds, for example, a partner may die, or a disaster may occur in which children are killed. In these situations, the person may regret having had the sterilization. Reversal of the procedure, “untying” the tubes, are often unsuccessful.

3.4 Counselling for Sterilisation as a Method of Birth Control

Counselling should emphasize that sterilisation is desired only if people do not want more children at any time in the future. Sufficient time to make a thoughtful decision should be allowed. Counselling should include information about, benefits of the procedure and risks of the procedure.

That no change in sexual functioning will occur as a result of sterilisation. Patients should be told what will happen and how they are likely to feel. Post-operative care is the same as for any operative procedure. Vital signs should be checked to identify haemorrhage. Analgesics may be needed for pain. Danger signs that patients should look for after discharge are, in particular, bleeding, infection, and severe abdominal pain, and should be reviewed. Instructions for keeping the wound clean should be given to the patient.

SELF-ASSESSMENT EXERCISE

Male sterilisation is rare in Nigeria. Discuss.

4.0 CONCLUSION

The midwife must know about sterilisation procedures. They must give appropriate information and counselling and support people in their decisions about birth control.

5.0 SUMMARY

Counselling for sterilisation as a method of birth control should emphasize that sterilisation is desired only if people do not want more children at any time in the future. Sufficient time to make a thoughtful decision should be allowed. Counselling should include information about, benefits of the procedure and risks of the procedure

6.0 TUTOR-MARKED ASSIGNMENT

1. Discuss the method of sterilizations available for the male and females.
2. Explain why condom is preferred by most young persons.
3. Male sterilisation is rare in Nigeria. Discuss.

7.0 REFERENCES/FURTHER READING

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