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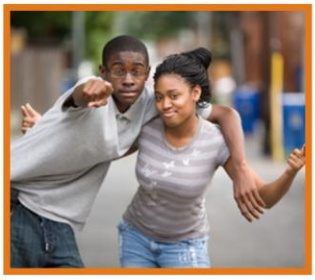
CLINICAL PROTOCOL FOR THE HEALTH AND DEVELOPMENT OF ADOLESCENT & YOUNG PEOPLE IN NIGERIA.



FEDERAL MINISTRY OF HEALTH

in collaboration with

UNITED NATIONS POPULATION FUND (UNFPA)
WORLD HEALTH ORGANIZATION (WHO)
POPULATION AND REPRODUCTIVE HEALTH PROGRAMME

CLINICAL PROTOCOL
FOR THE HEALTH & DEVELOPMENT OF ADOLESCENT& YOUNG PEOPLE IN NIGERIA

SEPTEMBER, 2011

Clinical Protocol for the Health & Development of Adolescent and Young people in Nigeria

First Revision

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The task of developing this revised *Clinical Protocol and Service Guidelines* was spearheaded by the Gender, Adolescent/School Health & Elderly Care Branch (GASHE) of the Department of Family Health, Federal Ministry of Health. This important task could not have been achieved without the immense contribution of several individuals, organizations and institutions.

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Advancing the health and development of young people is a multi-disciplinary and multi-sectoral endeavor, which requires the participation of a wide group of dedicated and committed partners. In this respect, I am grateful to all stakeholders who are contributing positively to young people's health in Nigeria, and have made inputs into the development of the protocol. These stakeholders include the National Adolescent Health Working Group, Federal Ministry of Youth, Federal Ministry of Women Affairs, Adolescent Health Desk Officers of State Ministries of Health, other international partners such as the United Nations Children Fund (UNICEF), members of the academia, and representatives of Civil Society Organisations. Several young people participated actively in the various stages of the development of this manual; their contribution is especially acknowledged.

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Foreword

Adolescents constitute a distinct population sub-group; transiting between childhood and adulthood, they have unique needs and are confronted with unique health challenges. Furthermore, their unique developmental characteristics demand unique response to their health and development issues. As such, the technical expertise and capacities that meet the needs of other population groups such as children and adult would not be appropriate for adolescents and other young people. The failure to provide appropriate adolescent-focused service has contributed substantially to increasing morbidity and mortality globally. This failure of the health system has far reaching implications beyond the adolescents themselves and current era as today's young people are tomorrow's parents and productive adult that will provide support to today's generation of adults in their old age; thus, the health of adolescents has immense societal value and inter-generational effect.

One of the key elements of strengthening the health system's response in terms of adolescent health is to build a critical mass of health workforce with appropriate attitude and expertise to provide quality services to adolescents in health facilities and other settings in a competent and friendly manner. The Nigerian government, conscious of the importance of giving due attention to the development of young people and aware of the acute shortage that currently exists with respect to adolescent health service provision, is poised to turn the tide and engender a positive change. It is in this respect that the Federal Ministry of Health has recently developed a revised National Training Manual for Adolescent Health and Development; this clinical protocol is an accompanying material.

Presented in a user-friendly manner, this protocol is intended to serve as a resource for health workers who provide services (including promotive, preventive and curative health services), especially those functioning at the primary health care level. Its purpose is to enable health workers to respond to adolescents more effectively and with greater sensitivity. In this regard, the protocol deals with many of the common adolescent health concerns and challenges, providing precise and step-wise guidance on how to deal with adolescents when they present with such problems. This revised version is a considerable improvement over the older version (developed in 2001), both in the depth of coverage and the style of presentation. It draws on current knowledge, and borrows substantially on the approach used by WHO in its adolescent job aid, while building on the platform on the depth of coverage provided in the older version. This revised protocol, therefore, has immense potentials to adding value to health workforce development and quality adolescent health service in Nigeria. I, therefore, strongly commend it to all health workers in Nigeria.

The Federal Ministry of Health deeply appreciates all individuals and organisations who have partnered with her and contributed to the development of the protocol.

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CHAPTER ONE

ADOLESCENTS' CONCERNS ABOUT PUBERTY

1. CONCERNS OF PUBERTY

During the transition from childhood to adolescence, young people often experience some physical and psychological changes, which may become sources of concern to them. It is therefore pertinent for the health workers to be conversant with the clinical management of these changes when they come across adolescents who have these complaints.

1.1 FEMALE CONCERNS

1.1.1 PRECOCIOUS PUBERTY

This refers to the commencement of the physical changes (especially menarche) associated with secondary sexual maturity before the age of 8 years or at an age more than 2.5 standard deviations below the mean age for the society.

Assessment/Identification of the Problem

HISTORY	• Welcome the client and make her feel comfortable. • Take a history from client and/ or parents/guardians: - Similar history in other siblings of parents – early growth of pubic and axillary hair, fully developed breasts and onset of menses below the age of 8 years. - Drug ingestion (medication) - Type of body cream used – if it contains oestrogen - Swelling in the abdomen.
PHYSICAL EXAMINATION	• Check the weight and the height. • Examine general appearance of the client, and her nutritional status. • Check the development of the breasts, axillary and pubic hair. • Check for thyroid swelling. • Examine the abdomen for presence of mass(es) especially in the lower abdomen and the flanks.

INVESTIGATIONS	
MANAGEMENT	• Counsel the client accordingly and refer to a gynaecologist if necessary. **No abnormality may be detected in which case the precocity is idiopathic. However, because it is necessary to rule out life threatening Central Nervous System (CNS) or endocrine problems, it is necessary that a physician assesses the client.**

1.1.2 DELAYED MENARCHE

This refers to failure of commencement of menstruation by the age of 16 years but the adolescent may or may not have some pubertal development such as breast development or appearance of pubic and/or axillary hair.

Assessment/Identification of the Problem

HISTORY	• Welcome client and make her feel comfortable. • Take a history from the client and parents/guardians: - Ask about similar history in siblings and mother - Inability to perceive odour such as perfume - Stressful conditions - Under or over-eating - Use of drugs
EXAMINATION	• Examine the client physically from head to toe with emphasis on the following: Physical appearance noting signs of inter-sexual disorders such as “short for age”, webbing of neck. etc. - Size of thyroid gland and signs of thyroid dysfunction such as excessive sweating or coldness. - Examine the breasts to determine if they are appropriately developed for age. - Check for presence of axillary and pubic hair. - Examine the abdomen and pubic area for hair growth and check for the presence of swelling.
INVESTIGATIONS	
MANAGEMENT	• If no abnormality is detected and there is a similar history in the family and/or if other pubertal development such as breast, pubic and axillary hair are present, counsel client that all may be well but request client to return after 6 months if menstruation has not commenced. • If abnormality is detected or client desires immediate treatment refer the client to gynaecologist/physician for further assessment and management.

1.1.3 MENSTRUAL DISORDERS

Heavy Menses

This refers to excessive menstrual flow both in terms of duration and/or quantity. Irregular menstruation, usually with increased blood loss (i.e. metrorrhagia or metriostaxis), is a frequent complaint soon after puberty. It is usually due to anovulatory (lack of ovulation) cycles.

Assessment/Identification of the Problem

HISTORY	• Greet the client and make her comfortable. • Take a history from client and parent/guardian concerning the nature and pattern of the menstrual flow prior to the current problem (heavy menses). • Ask client if there is an increase in the number of sanitary towels she uses during menses. • Ask client if there is an increase in the duration of her menses. • Ask client if there is any abdominal pain during menses. • Ask client if there is any blood clot in the menses. • Ask for a history of contraceptive use.
PHYSICAL EXAMINATION	Palpate the abdomen to detect any swelling. • Perform a pelvic examination, both manual and with a speculum to detect any growth (in sexually active adolescent). **Please do not perform a pelvic examination for virgins**
MANAGEMENT	• Counsel client appropriately that it is usually a self-limiting condition, which normalizes once ovulation becomes regular. • If abnormalities are discovered on examination, refer to physician/ gynaecologist.

Scanty Menses

This is a menstrual flow that is small in quantity; it may also be short in duration i.e. less than 3 days.

Assessment/Identification of the Problem

HISTORY	• Greet the client and make her comfortable. • Take a detailed history; personal/family, medical, menstrual and nutritional history. • Note evidence of severe and prolonged illness that may lead to scanty menses. • Number of sanitary towels used and how often it is changed.
EXAMINATION	• Check the weight and height. • Conduct physical examination from head to toe. • Palpate the abdomen to detect abnormal growth. • Perform a pelvic examination both manual and with a speculum if client is sexually active. • Examine sanitary towel if client is menstruating at time of examination.
MANAGEMENT	• If no abnormality is detected, counsel the client that menses should return to normal as she grows up. • If an abnormality is detected, refer the client to a physician/gynaecologist for further management.

Menstrual Irregularities

This refers to the inconsistency in the duration and intervals between one menstrual period and the next.

Assessment/Identification of the Problem

HISTORY	• Welcome the client and establish a rapport. • Take a history (personal; menstrual pattern; medical history; family and nutritional history).
EXAMINATION	Assess her general appearance and look out for pallor. • Palpate the abdomen to detect any mass. • Do a pelvic examination to rule out any growth along the reproductive tract.
MANAGEMENT	• In the absence of any abnormality, counsel and reassure client that menses will become normal as she grows up. • If the client is more comfortable with regular cycles and does not desire pregnancy, give a combined oral contraceptive (COC) for 3 cycles. • However, if any abnormality is detected or the client wishes to be pregnant, refer her to a gynaecologist/physician.

Note that menstrual irregularities are very common in adolescents and youths particularly during the first few years of commencement of the menses.

1.1.4 PRIMARY AMENORRHOEA

This is failure of commencement of menstruation by 18 years of age. When this happens, adolescents and their parents are usually concerned and embarrassed by the absence of menses and want an evaluation, treatment and the onset of menses as soon as possible.

Assessment/Identification of the Problem

HISTORY	• Greet the client and make her comfortable. • Take a history from the client and parents/guardian concerning similar experience with siblings or others. • Ask for presence of symptoms of thyroid dysfunction such as excessive sweating, palpitation. • Ask for any chronic medical disease, use of drugs (e.g. anti-cancer drugs, hormone suppressants) and feeling of swelling in the abdomen, loss of weight.
EXAMINATION	• Check the weight and height. • Conduct a general physical examination noting the presence of pallor, evidence of under nutrition or deficiency state and the presence of pubic or axillary hair. • Look for evidence of virilisation such as beard or hair on the chest. • Check the neck for thyroid swelling. • Examine the breast for under development. • Palpate the abdomen for masses or other anomalies. • Check the vulva for any abnormality. • If sexually active, perform pelvic examination to detect abnormalities of the genital organs or presence of pelvic masses, and to exclude pregnancy.
INVESTIGATIONS	
MANAGEMENT	• Counsel appropriately and refer to a gynaecologist.

1.1.5 SECONDARY AMENORRHOEA

A client is said to have secondary amenorrhoea if her menses stops for a period of at least six months in the absence of pregnancy.

Assessment/Identification of the Problem

HISTORY	Greet the client and make her comfortable. Take a history relating to the following:- • Regularity of menstruation in the past. • Presence of pregnancy e.g. symptoms suggestive of pregnancy, undue tiredness, nausea, vomiting especially in the morning. • Abnormal ill health. • Dietary habit changes. • Weight loss. • Use of medications. • Participation in active sports. • The eating habits of the client, e.g. take note of symptoms suggestive of chronic ill health or under nutrition.
EXAMINATION	Conduct a thorough physical examination noting the following:- • Weight and height, • Body hair distribution (facial and body), • Presence of thyroid swelling, • Breast size, masses or discharge from nipples, • Abdomen to detect masses, and Pelvic examination for; hair distribution; size of clitoris; pelvic mass and Pregnancy.
MANAGEMENT	• Counsel the client and allay her fears when there is no pathology. • If need be, advise on dietary habits. • If pregnant, refer for antenatal care. • If an abnormality is detected, refer to a gynaecologist/physician. **Proper management of secondary amenorrhoea in an adolescent requires meticulous assessment in order to rule out any pathology.**

1.1.6 DYSMENORRHOEA

As many as 60% of adolescent girls may complain of dysmenorrhoea after attaining regular menstrual cycle. In such cases, there is often no organic cause detectable. It is usually due to excessive contractions of the uterus during menstruation.

Assessment/Identification of the Problem

HISTORY	• Greet the client and make her comfortable. • Allay the fears and anxiety of the client by receiving her courteously. • Ask client if she has experienced menstrual pain since menarche noting the onset of the pain either before or at commencement of each menstrual flow. • Ask for history of vaginal discharge and its severity to exclude pelvic infection or other pathology. • Ask for associated symptoms such as nausea, vomiting, weakness and sweating. • History of contraceptive use. **Primary dysmenorrhoea in adolescents tends to start with menstruation, which is severe for few hours to 2-3 days.**
EXAMINATION	• Examine abdomen to exclude undue tenderness or mass. • Pelvic examination if sexually active.
INVESTIGATION	
MANAGEMENT	• Instruct client to apply heat over low abdomen (e.g. hot water bottle). • Give any of the drugs that reduce production of prostaglandin e.g. Aspirin/Dispirin, Piroxicam Ibuprofen, Flufenamic acid (Note that these drugs should not be taken on an empty stomach or to a known peptic ulcer patient). • Counsel on regular exercise especially just before and during menstruation. • If problem persists refer to a gynaecologist.

1.1.7 CONCERNS ABOUT BREAST SIZE

Adolescents sometimes express concern about breast size, which may be regarded as small or large. In most cases, one breast is slightly bigger than the other. Such adolescents may seek assistance from the healthcare providers.

Large Breasts

The breasts may be big only as a variant of normal and specific to that person. It may, however, reach gigantic size almost always due to enhanced response of the breast tissue to oestrogens. The size of the breasts may bring great physical and psychological burden on the adolescent.

Assessment/Identification of the Problem

HISTORY	• Greet the client and make her comfortable. • Ask questions regarding the breast size of other siblings and mother. • Ask for the onset of enlargement of the breast. • Ask about use of oral contraceptive pills or other oestrogen-containing drugs.
EXAMINATION	• Examine both breasts in turn using the technique for breast examination and paying attention to the presence of lumps, swelling or discharge.
INVESTIGATIONS	
MANAGEMENT	• If there are no specific lumps or swelling, reassure the client that sizes of breasts vary with individuals and that she should appreciate what she has been naturally endowed with. • If the enlargement follows use of oral contraceptive pills, reassure client that the breasts will quickly go back to the normal size when the pills are discontinued. • If necessary refer to a higher level of care.

Small Breasts

Inadequate breast development may occur at puberty unilaterally leading to asymmetrical breasts or it may occur bilaterally. The cause may be low production of oestrogen or poor response of the breast tissue to circulating oestrogens. Small breasts accompanied by failure of other secondary sexual development are usually due to ovarian failure. Where other secondary sexual characteristics are satisfactorily developed, small sized breasts may be constitutional or familial.

Assessment/Identification of the Problem

HISTORY	Take history as follows: • Greet the client and make her comfortable. • Breast size in mother and other siblings. • Occurrence and regularity of menstruation. • Presence of other secondary characteristics such as pubic and axillary hair.
EXAMINATION	Conduct physical examination. • Check weight and height (normal for age or not). • Check for other signs of pubertal development such as pubic and axillary hair.
INVESTIGATIONS	

MANAGEMENT	• If other pubertal signs of development are normal and menarche is not delayed, counsel the client accordingly that sizes of breasts vary from one individual to another. The size of the breasts does not diminish her beauty or ability to breastfeed in future. • If other pubertal characteristics are absent or poorly developed, refer to a physician for further assessment.

1.2 MALE CONCERNS

1.2.1 PRECOCIOUS PUBERTY

Normal male puberty starts with the growth of the scrotum and a change in the colour and texture of the scrotal skin. A unilateral increase in testicular volume is the most common sign for the onset of puberty in males. Pubic hair growth, penis enlargement, physical growth, beard development and voice mutation occur in sequence. Precocious puberty occurs if all or a combination of these signs appears by age of 8 years. Although this is uncommon when compared to the females, accelerated development can occur in early production of androgens from the adrenal glands or stimulation of the testis by the pituitary hormones, or testosterone production by tumours of the pituitary-hypothalamus, adrenal glands or the testes.

Assessment/Identification of the Problem

HISTORY	Greet the client and make him comfortable. Take history regarding the following: • Pubertal development in other siblings. • Appearance of the pubertal growth indices such as pubic hair, beard, penile growth, voice mutation etc. • Headaches or visual disturbances.
EXAMINATION	Conduct a physical examination: • Note the height and weight, • Check the secondary sexual characteristics, • Assess growth of the penis and scrotum, and Examine the abdomen for presence of masses.
INVESTIGATIONS	
MANAGEMENT	• If all findings are normal, then it may be constitutional or idiopathic precocity. In this case, reassure the client and advise him to come back if in doubt. If there is any abnormal finding, refer to a physician.

1.2.2 DELAYED PUBERTY

Delayed puberty is present if a boy's pubertal development (genital development, testicular growths) has not started by age of 14 years. Constitutional delay of puberty (CDP) in which there is no detectable abnormality is by far the commonest form of delayed puberty. CDP may occur as a familial or a sporadic condition. Yet, it is often a pressing psychological burden for adolescents. Pathological delay of puberty is usually due to hypopituitarism; hypogonadism; malabsorption; severe chronic diseases e.g. sickle cell disease; psychological deprivation and malnutrition.

Assessment/Identification of the Problem

HISTORY	Greet the client and make him comfortable. Take history from the adolescent/parent/guardian* about: • Similar history in siblings • Dietary habit • Chronic illnesses • Stressful conditions • Evidence of reduced function of other endocrine glands e.g. thyroid gland- excessive sweating or coldnesss. *Consent should be obtained from the client before history taking from the parent/guardian.
EXAMINATION	Examine the client: • Height and weight (small for age). • Nutritional level. • Look out for: - Presence or absence of beard, pubic hair. - Poor or absent scrotal or penile growth.
INVESTIGATIONS	
MANAGEMENT	• In most cases of CDP, spontaneous pubertal development will start before ages 18-20 years. So reassure the client and request him to come back at age 16. • Where spontaneous onset of puberty fails to start by age 16 years or when there is evidence of endocrine organ or gonadal failure, refer the client to a physician for evaluation and treatment.

1.2.3 GYNECOMASTIA

Gynecomastia is defined as increased mammary gland size in the male. It must be distinguished from lipomastia, which is deposition of fat in the breast. Gynecomastia develops frequently in pubescent

boys about the age of 13-14 years and disappears within 2-3 years. Occasionally, it persists into adulthood without any clinical significance. Adolescent gynecomastia seldom requires treatment, in that it is often due to a tilt in the balance between androgenic and oestrogenic stimulation.

Assessment/Identification of the Problem

HISTORY	Greet the client and make him comfortable Take a history regarding the following from the client: • Use of drugs e.g. oestrogen containing drugs, on rare occasions, prolong use of some drugs such diazepam, metronidazole, opiates inhibits testosterone secretion. • Excessive alcohol consumption. • Pain and swelling of testicles suggestive of orchitis. • Testicular masses. • Reduced beard, pubic hair, etc. • Reduced libido.
EXAMINATION	Examine the client to: • Assess general physique. • General degree of virilization e.g. hair growth on jaw, chest, legs, arms, pubic area. • Check the breasts to ascertain presence of mammary tissue and not fat. • Check for signs of liver and kidney disease (increase pulse rate, right hypochondrial pain etc.). • Check for abdominal masses that may suggest tumour of adrenal glands. • Palpate the testes.
INVESTIGATIONS	
MANAGEMENT	• If gynecomastia is mild and non-progressive, reassure the client and follow up 3-6 months later. • If there is doubt that it is a case of physiological or adolescent gynecomastia hormone determination in the plasma an ultrasound assessment of the reproductive organs should be carried out. • If in doubt, please refer to a physician/ surgeon.

1.2.4 UNDESCENDED TESTES

During the last two months of gestation the testes descend into the scrotum. Descent may, however, come to a halt along the path of movement into the scrotum. Thus we may have the following situations.

1. ***Cryptorchidism:***The testis lies intra-abdominally above the inner inguinal opening or retroperitonially and can neither be seen nor palpated in the scrotum.
2. ***Inguinal testes:*** in which the testis is located in the inguinal canal.
3. ***Retractile testis:*** In this case, the testis lies at the outer orifice of the inguinal canal and can be

pushed into the scrotum but returns to the original position when released.

4. ***Testicular ectopy***: This describes a testis that lies outside the normal route of descent e.g. in the femoral canal or groin.

Premature babies have undescended testis in about 30% of cases, however in the majority of them, the testis descends into the scrotum within a few months after birth.

Maldescent of the testes is common in the following situations:

- Disturbance of hypothalamic-pituitary hormone production.
- Poor testosterone production.
- Anatomical abnormalities of inguinal canal.
- Reduced intra abdominal pressure.
- Primary testicular disorders.

The risk of developing a testicular cancer is 4-5 times higher with undescended testis; therefore, such cases must be corrected as soon as they are detected.

Assessment/ Identification of the Problems

HISTORY	• Welcome and make him comfortable. • Take a detailed history – when the condition was noticed, etc.
EXAMINATION	• Examine the scrotum with the patient standing and then in the recumbent position. • Measure or estimate testicular volume.
INVESTIGATIONS	• If available, use ultrasound scanning to locate the testis along the descent line.
MANAGEMENT	• Testicular maldescent should be corrected by surgery as soon as possible. • If the testes have not descended by the end of the first year of life, refer to a physician or urologist who may use hormone therapy (either human chorionic gonadotrophin or releasing hormone or testosterone) or perform surgical fixation in the scrotum (orchidopexy).

1.2.5 HYDROCOELE

It is not uncommon for adolescents to discover that one (usually) or both scrotal sacs have fluid collection, which is painless. It is often due to chronic or recurrent inflammation of the testis or epidydimis (e.g. gonococcal infection), following surgery or from testicular tumors.

In early childhood, idiopathic hydrocoele may be found. This tends to be self-limiting and resolves usually in the first 2 years of life.

Assessment/Identification of the Problem

HISTORY	Greet the client and make him comfortable; take a history regarding the following: • Duration of the hydrocoele e.g. from birth or since childhood. • Past history of pain and swelling in the scrotum suggestive of orchitis or epididymitis.
EXAMINATION	• Check for the presence of the testes. • Note the relative sizes of the testes to exclude testicular tumour.
INVESTIGATIONS	
MANAGEMENT	• Reassure the client and allay his fears. • Refer to a physician/surgeon.

1.2.6 PAINFUL SCROTAL SWELLING

Note that painful scrotal swelling (which may be warm) can be a sign of:

- Epididymoorchitis.
- Testicular trauma.
- Inguino-scrotal hernia, especially when obstructed or strangulated.
- Testicular torsion.
- Testicular tumour.

Assessment/Identification of the Problem

HISTORY	Take history taking note of the • Greet the client and make him comfortable. • Time of onset. • History of trauma.
EXAMINATION	• Examine the scrotal swelling. • Locate the site. • Assess the extent of the swelling and tenderness. • Check for presence of complications like bleeding.
INVESTIGATIONS	

MANAGEMENT	**These are emergency situations in which the healthcare provider must act swiftly.** • Therefore allay the fears of the client. • Provide adequate analgesia. • Provide scrotal support to relieve pain and. Refer immediately to a higher level where such clinical condition can be best managed.

1.2.7 CONCERNS ABOUT SIZE OF THE PENIS

As adolescents become conscious of sexuality and begin to dialogue with peers, the size of the penis when considered small by the adolescent may be a source of worry.

Assessment/Identification of the Problem

HISTORY	• Greet the client and make him comfortable. • Take a history to ascertain that there is no erectile, orgasmic or ejaculation inadequacies.
EXAMINATION	• Perform general examination to determine that secondary sex characteristics such as physique, beard, and voice changes are adequately established. • Examine the genitalia for penile deformities /presence of testes in scrotum.
INVESTIGATIONS	
MANAGEMENT	• If no abnormality is detected, counsel the client that: 5. Size of penis varies from individual to another. 6. Size of penis does not determine efficiency at sexual intercourse. 7. ***Size of penis does not determine fertility in as much as there is no problem with erection.*** • If there is an evidence of pathology such as hypogonadism or testosterone insufficiency, then refer to a physician.

CHAPTER 2

PREGNANCY AND ABORTIONS

2.1 MANAGEMENT OF UNCOMPLICATED ADOLESCENT PREGNANCY

An adolescent pregnancy is one occurring in a person below the age of 20 years. An adolescent pregnancy is a high risk one and requires proper ante-natal care and well supervised delivery.

Assessment/Identification of the Problem:

History	• **Personal data** - Including name, address, age, religion, marital status. - Ask about school status i.e. school expulsion. - Information about the spouse education, socio economic status, acceptance of and support for the pregnancy. - Record any family history of hypertension, diabetes mellitus, multiple pregnancy, etc. • **Ask about medical history:** - Infectious diseases - Previous surgery - Nutritional and dietary habit - Contraception in the past, noting the type and duration of use - Past obstetric history including previous abortions or deliveries - Past psychiatric illness. • **For present obstetric history ask about** - Last Menstrual Period (LMP)/ Last Normal menstrual period (LNMP) and if she is certain of the date. - Unusual tiredness - Excessive vomiting - Vaginal bleeding - Excessive vaginal discharge - Swelling of limbs - Excessive weight gain/loss • **In the social history, ask about** - Smoking-i.e number of cigarettes per day - Alcohol use - Drug use - Attempts to terminate pregnancy - Past Sexually Transmitted Infections (STI or HIV/AIDS) • **Family history** - ask family disposition towards the pregnancy and level of social and financial support. **For management of teenage pregnancy, the social history is as important as the clinical history to determine levels of support available and therefore rehabilitation needs.**

Physical Examination	• **Conduct a physical examination, check for the following:** - Temperature, Pulse, Weight, Height - Gait-normal or abnormal - Blood pressure - Pallor, jaundice and pedal oedema • **Conduct an abdominal examination and do the following:** - Inspect for scars, striae gravidarum and linea nigra - Palpate the abdomen and ascertain whether or not the uterus is palpable. Note signs of multiple pregnancies and hydatidiform mole (If applicable). - Auscultate if pregnancy is 24weeks and above. • **Conduct a vaginal Examination (at booking) to:** - Confirm pregnancy - Ascertain size of the uterus in relation to the period of gestation - Exclude any soft tissue masses - Ensure normal adnexae - Assess size and shape of pelvis - Take high vaginal swab for microscopy, culture sensitivity to exclude STDs - Take a cervical smear (where possible for cytology) **Focused Antenatal Care (FANC)** • First visit: By 16 weeks or when woman first thinks she is pregnant. • Second visit: At 24–28 weeks or at least once in second trimester. • Third visit: At 30-32 weeks. • Fourth visit: At 36-38 weeks. • Other visits: If complication occurs, follow up or referral is needed, woman wants to see provider, or provider changes frequency based on findings (history, exam, testing) or local policy. ***At 36 weeks, conduct a pelvic assessment to establish adequacy of the pelvis. Note that cephalo-pelvic disproportion (CPD) is a common complication of adolescent pregnancy.***
Investigations	• **Carry out the following investigations at booking:** - Urinalysis- glucose, protein, acetone - PCV or Hb estimation - ABO and Rhesus screening - Sickling test/genotype - HIV test (after voluntary counseling) - Venereal Disease Research Laboratory (VDRL) test - Pregnancy test if needed - Ultrasound scan if applicable
Management	• **Provide information, education and communication (IEC):** - Counseling on regular antenatal visits and use of medication. - The possibility of continuing school if interrupted.

2.2. DISORDERS OF PREGNANCY

2.2.1 HYPEREMESIS GRAVIDARUM

This means excessive vomiting during pregnancy. It is commoner in the first three months.

Assessment/Identification of the Problem

History	• Take a history of present condition noting the following: vomiting, number of times, quantity, content etc.
Physical Examination	• **Conduct a physical examination and observe the following:** - General appearance: check if weak, miserable, anxious looking or restless • **Check for signs of dehydration:** - Sunken eye. - Dry mouth, coated or furred tongue. - Loss of skin tugor. • **Check weight** • **Check vital signs:** temperature, pulse, respiration and blood pressure.
Management	**If dehydration is severe (i.e. high pulse rate, low blood pressure, there is presence of weakness. sunken eyes, dry coated tongue),** Admit the patient and do the following: - Give I.V. infusion of 5% dextrose saline in 24 hours (3-6 litres). - Monitor intake and output of fluids, give antiemetic drugs e.g. ancoloxin, Phenergan. - Encourage small carbohydrate and dry biscuit meal frequently, avoid oily foods. - Give semi-solid food gradually. - Provide emotional support to patient and family. - Reassure the patient and her family. - Inform them about the danger of excessive fluid loss from the body. **If dehydration is mild to moderate (normal pulse rate, normal blood pressure, dry coated tongue);** You need not admit or give I.V. fluids. However, - Encourage liberal fluid intake as tolerated. - Give antiemetics. - Encourage small amount of non-oily food and dry biscuits/local food. ***If no improvement within 24 hours refer patient to a higher secondary or tertiary health care facility.*** **Provide information, education and communication (IEC) as follows:** - Counsel patient on: the importance of small but frequent carbohydrate meals and avoidance of fatty food. - Admonish to eat dry biscuit, boiled plantain or yam. - Teach deep breathing exercises and to rise up slowly from the bed on waking up.

2.2.2. MALARIA IN PREGNANCY

Malaria is a febrile condition caused by plasmodium species of parasite.

Assessment/Identification of the Problems

History	• **Take history of present complaints** i.e. presence of fever, headache, body aches, rigors and yellowness of eyes (jaundice). - Note history of drug intake/allergies
Physical Examination	• **Conduct a physical examination and do the following:** - Check if patient is ill looking, pale, lethargic, weak and tired. - Assess patient for pyrexia, body aches, abdominal pains. - Check vital signs (temperature, pulse, blood pressure and respiration). - Palpate the abdomen and check for fetal heart beats.
Investigations	• Take blood for PCV or Hb and malaria parasite. • Check urine for glucose, acetone and protein.
Management	• Tepid sponge, fan and expose patient. • Give antipyretic e.g. Paracetamol 500 mg tab 1-2 tabs tds x 3 days. • Give an appropriate anti-malarial: Give Artemether-Lumefantrine 4 tablets twice daily for 3 days-(from the 2nd trimester of pregnancy). This is for 1st line management of uncomplicated malaria. Give quinine 600mg three times daily for 7 days in all trimesters.Encourage patient to take plenty of fluids and fruits. ***Intermittent Presumptive Treatment (IPT) with Sulphadoxine Pyridoxine (2-3 tablets depending on the weight) at 4th to 5th month and the 2nd dose one month before expected dated of delivery.***

2.2.3. ANAEMIA IN PREGNANCY

Anaemia is defined as a reduction in the haemoglobin level below 10g/dl or PCV less than 30%, resulting in low oxygen carrying capacity of the blood.

Assessment/Identification of the Problem

History	• Take a history; ask specifically about nutritional intake, tiredness, and breathlessness, swelling of feet and history of sickle cell disease. - Ascertain the date of LMP/LNMP to determine gestational age. - Inquire about any care so far received in this pregnancy and regular use of routine antenatal drugs.

Physical Examination	• Check the conjunctiva, tongue, lips, palm, nail bed and soles of feet for pallor.
	• Check for fever and jaundice and pedal oedema.
	• Check for raised jugular venous pressure.
	• Check for breathlessness, tiredness, enlarged spleen and liver.
	• Conduct an abdominal examination.
	  - Check uterine size, and its compatibility with gestational age.
	  - Auscultate for foetal heart sounds in advanced pregnancy.

Investigations	• Conduct the following investigations:
	  - Haemoglobin estimation/PCV and blood films appearance
	  - Malaria parasite
	  - Sickling test/Genotype
	  - Stool for ova and parasite
	  - Urinalysis culture and sensitivity, and other appropriate investigations.

Management	***reatment of mild to moderate anaemia during pregnancy:***
	• Give higher dose of iron preparation e.g. ferrous sulphate tablet (200mg) three times daily and folic acid tablet (5mg) daily.
	• Re-check haemoglobin after two weeks, if PCV has increased by 3%, continue management.
	• **If PCV has not increased and continues to decrease please refer.**
	• Emphasize dietary sources of iron e.g., meat, liver, plantain and green vegetables.
	
	f signs of heart failure are present, this is an emergency, refer to the next level of health care mmediately.
	
	Refer, if anaemia is severe regardless of gestational age (i.e. PCV is less than 20%).
	
	• **Counsel the patient on the prevention of anaemia:**
	  - Good dietary habits
	  - Prevention of malaria/prophylactic anti malaria
	  - Regular use of haematinics
	  - Deworming of intestinal parasites
	  - Proper treatment of infections/diseases, e.g. UTI, pulmonary tuberculosis
	  - Regular haematocrit estimation
	  - Maintenance of personal and environmental hygiene.

2.2.4. HYPERTENSIVE DISORDERS OF PREGNANCY

Incidence

Hypertensive disorders complicate about 15% of pregancies. Pre-Eclampsia and Eclampsia are the most important types of hypertensive diseases in pregnancy in terms of incidence, morbidity and mortality.

Epidemiology

Pre-eclampsia/Eclampsia as observed worldwide is largely a disease of primigravidity. In Nigeria, over 80% of patients with eclampsia are primigravidae. In northern Nigeria probably because of the culture of early marriage, majority of these primigravidae are teenagers.

Other predisposing factors include lack of or poor access to antenatal care, past history of pregnancy induced hypertension, positive family history of hypertension, multiple pregnancy, molar pregnancy, diabetes mellitus and renal diseases.

Definition of Hypertension

Hypertension in pregnancy is defined as a blood pressure ≥ 140/90 mmHg measured on 2 separate occasions more than 6 hours apart OR a single reading at any stage of pregnancy of a systolic of ≥ 160mmHg or a diastolic of ≥110mmHg. Hypertension in pregnancy is also defined as an increase of at least 30mmHg systolic or 15mmHg diastolic over the booking blood pressure in the first half of pregnancy.

Classification

There are various classifications of hypertensive disorders of pregnancy. However, for this protocol, the classification below is adopted.

I. **Pregnancy Induced Hypertension (Gestational hypertension)**
Pregnancy induced Hypertension is defined as hypertension in the second half of pregnancy (20 weeks and above) without proteinuria.

II. **Pre-Eclampsia**
Pre-Eclampsia is defined as hypertension in the second half of pregnancy (20 weeks and above) associated with proteinuria (≥ 300mg/dL) in a patient not previously hypertensive or proteinuric. There may or may not be pedal oedema.

- **Mild Pre-Eclampsia**

Mild Pre-Eclampsia is when the systolic blood pressure is between 140-160 mmHg and a diastolic blood pressure of between 90 and 109 mmHg with proteinuria of +2 or less.

- **Severe Pre-eclampsia**

Severe Pre-Eclampsia is when the systolic blood pressure is greater than 160mmHg and/or a diastolic blood pressure of 110 mmHg or more with proteinuria of 3+ (5g/24 hour urine). There are also neurological or biochemical changes that can suggest severe disease. The appearance of symptoms like headache, blurring of vision, vomiting, epigastric pain also suggest severe pre-eclampsia.

III. Chronic Hypertension

Chronic Hypertension is pre existing hypertension or hypertension diagnosed in the first half of pregnancy.

IV. Chronic Hypertension with super imposed pre-eclampsia

If pre existing hypertension or hypertension diagnosed in the first half of pregnancy is associated with proteinuria and other features of pre-eclampsia in the second half of pregnancy, the condition is termed chronic hypertension with super imposed pre-eclampsia.

V. Eclampsia

Eclampsia is the occurrence of generalised tonic-clonic convulsions in a patient with pre-eclampsia in the absence of a neurological disease. It can be ante-partum eclampsia, intra-partum or post-partum eclampsia. The intra-partum type is the most common type in Nigeria.

The manual will focus on treatment of pre- eclampsia and eclampsia.

Assessment /Identification of the Problem

History	• **Obtain history of:** - High blood pressure prior to pregnancy or in previous pregnancies. - Dizziness or blurred vision - if yes, for how long? - Sudden excessive weight gain as evidenced by: - Oedema of the face, hands, feet, sacrum or vulva and tightness of wedding rings and shoes, - Nausea, vomiting, epigastric pain and headache - Home remedies that had been given to the patient. **If a patient gives a history of convulsion, REFER to a secondary or tertiary health care facility immediately after loading dose of MgSO4. (see section 2.2.5).** **The following women are at increased risk of Pregnancy Induced Hypertension (PIH):** **Pregnant Adolescents** **Low socio-economic class** **Irregular attendance at ANC** **Familial tendency for hypertension** **History of chronic renal condition**
Physical Examination	• **Conduct a physical examination:** - Determine if patient is fully conscious, restless, confused or convulsing. - Check for fever, pallor, jaundice, periorbital oedema, finger/pedal oedema, sacral and/or vulva/oedema. - Check vital signs - Pulse, respiration, temperature and compare BP with the baseline blood pressure obtained at booking. - Check reflexes-knee jerk. - Palpate the abdomen and auscultate for fetal heart beats. • **Conduct a full genital examination as follows:** - Check for signs of labour – show, liquor. - Check cervical dilatation if in labour. - Check adequacy of the pelvis.
Investigation	• **Conduct** - Urinalysis for protein, glucose and acetone. - Blood for electrolyte, urea and creatinine.
Management	• ***Utilize the general Principles of Management of PIH*** - Health education to the woman and her relatives about the nature of her problem, and the need for continued Antenatal care. - Solicit support from the relatives to assist her in sustaining the pregnancy. - Control the hypertension-hydralazine, methyldopa and nifedipine. - Prevention of convulsions. - Manage the pregnancy for as long as possible to ensure the baby's maturity and survival without jeopardizing the health of the mother.

Management	• ***Management of Mild Pre-eclampsia*** - Provide information on woman's condition to client, husband and family. - Advise her to rest at least 2 hours during the day and to sleep for 8 hours at night. - Test urine for albumin. - Monitor blood pressure and fetal heart rate at each visit. - Measure abdominal girth and ask about fetal movement. - Send 24 hours urine collection specimen to the laboratory for placental function test by assessing the level of Humanchorionic gonadotropin. Advise patient to lie on her side while in bed. - Give Diazepam 5 – 10mg to ensure adequate rest and sleep. - If blood pressure increases above140/90mm Hg and/or there is a significant rise in proteinuria (+++), refer immediately with complete medical report. • ***Management of Severe Pre-eclampsia > 160/110mmHg.*** - When it appears suddenly or fulminating, management is similar to that of eclampsia. - Explain the condition to client, husband and family. - Put her on complete bed rest. - Advise side lying and nurse in quiet environment. - Give MgSO4 4 g slowly intravenously over 5-10 minutes which is then followed by 10g of MgSO4 given intramuscularly (5g in each buttock). - Check vital signs (temperature, pulse, blood pressure and foetal heart rate). - Test all specimens of urine for protein. - REFER with accompanying health staff to a secondary or tertiary health facility. ***Do not at any point give Diuretics in management of P.I.H.*** **Supportive Care** • **Provide information, education and counselling** - Utilization of existing support and coping mechanism available to the patient to ensure baby's maturity and survival. - Provision of rest and tranquil environment. - Helping out with household chores by husband/siblings/relations. - Adequate Diet.

2.2.5. ECLAMPSIA (Ante and Post Partum)

Eclampsia is the occurrence of generalised convulsions (fits) in a pregnant woman with pre-eclampsia. It could occur in the antepartum, intrapartum and post partum period of pregnancy.

Assessment/Identification of the Problems

History	• **Observe the following, which are signs of onset of eclampsia:** - Severe headache - persistent, frontal, or occipital in location - Epigastric pain - Nausea and vomiting - Visual disturbances (photophobia) - Drowsiness or confusion

Physical Examination	• Generalized tonic-clonic convulsion that may be associated with loss of consciousness, faecal and urinary incontinence. • A sharp rise in blood pressure. • Generalized oedema. • Diminished urinary output.
Investigations	• Urinalysis-protein (Increased proteinuria), sugar and acetone • Full blood count, grouping and cross matching • Electrolyte, urea and creatinine, serum uric acid • Liver function test.

Management	**Principles of Management** • Resuscitation • Control of fits • Control of blood pressure • Correct fluid and electrolyte imbalance • Nursing care • Delivery of the baby • Post partum care to prevent further fits and other complications **Resuscitation** - Position patient in left lateral position away from harmful objects. - Clear and maintain airway (insert oropharyngeal airway and suction when necessary). - Give oxygen by face mask. - Pass nasogastric tube and in-dwelling foleys catheter (take urine sample to check for protein). - Set up an intravenous infusion and take blood sample for investigations. - If in a PHC, refer the patient to a secondary or tertiary facility for further care. **Control of fits** Several agents have been used to control fits in eclampsia. These include diazepam, pheytoin, paraldehyde, lytic cocktail and MgSO4. The best drug is MgSO4. • Give MgSO4 4g slowly intravenously over 5-10 minutes which is then followed by 10g of MgSO4 given intramuscularly (5g in each buttock). • **REFER with accompanying health staff to a secondary or tertiary health facility.** • Subsequently, 5g is given intramuscularly four hourly in alternate buttocks. Monitoring is important to ensure that the right doses are administered. The drug is administered for 24hours after delivery or after the last fit. If convulsion occurs, give an extra 2 g of MgSO4 IV over 5 minutes. Toxicity of the drug should be monitored using the following clinical parameters: - The knee jerk reflex should be present. - Respiratory rate should be more than 16 per minute. - Urine output should be more than 30 ml per hour. - The first warning sign of toxicity is loss of the knee jerk. In case of toxicity: - Stop the drug. - Support respiration with AMBU bag and oxygen/ventilator. - Administer the antidote which is 1 g of 10% calcium gluconate given intravenously slowly over 10 minute.
	Control of blood pressure

Management	If diastolic BP is ≥ 110mmHg, administer IV hydralazine 10mg slowly over 5-10 mins. The aim is to reduce and maintain the diastolic blood pressure below 110mmHg. When the BP cannot be controlled by repeated doses of hydralazine, it may be administered by putting 40mg of hydralazine in 500mls of normal saline in the infusion to run over 4 hours. **Correct fluid and electrolyte imbalance** Eclamptic patients have contracted blood volume. Fluid replacement should be done with care. The best recommended IV fluid is Ringers Lactate administered at the rate of 1L every 12 hours. Where it is not available, the alternative fluids are normal saline or 5% Dextrose saline. **Nursing care** Patient should be nursed in an Intensive Care Unit (ICU) or a High Dependency Area. Nursing care will involve the following: - Nurse in a cool quite environment. - Regular turning of the patient every 30 minutes. - Care of the pressure areas to avoid bed sores. - Regular vital signs monitoring. - Catheter care. - Infection prevention. **Delivery of the baby** After stabilization, eclamptic patients should be fully examined. After examinations are completed, delivery of the baby should be planned. Vaginal delivery is the route of choice and the labour could be augmented to speed up the delivery. The 2nd stage should be assisted preferably by forceps or vacuum extraction. Active management of third stage of labor should be done avoiding the use of ergometrine, rather use syntocinon. **Post delivery care to prevent further fits or complication** - Continue maintenance doses of IV fluids, anticonvulsant and antihypertensives where indicated. - Nursing care should be continued. - As patient recovers, oral feeding can be commenced within 24 to 48 hours. - Oral antihypertensive drugs may be introduced. - The patient can be discharged after full recovery of consciousness and stabilization of blood pressure.

2.3. MANAGEMENT OF LABOUR AND DELIVERY IN ADOLESCENTS

Labour is defined as the process by which the foetus, placenta and membranes are expelled through the birth canal to the outside world. The process of labour is divided into three stages, which normally follow in sequence.

2.3.1. FIRST STAGE

This is manifested by regular, painful uterine contractions, dilatation of the cervix and presence of show.

Assessment /Identification of the Problems

History	• **Obtain a history of the onset of labour:** - Frequency, strength and duration of contractions. - Presence of show, rupture of membranes (date, time, colour, odour, meconium-staining.
Physical Examination	• **Perform a physical examination** - Check the temperature, pulse, blood pressure, oedema, varicose veins, psychological state (calm, anxious or apprehensive). - Check for pallor and level of hydration. • **Conduct an abdominal examination** - Inspect abdomen, note shape, size, scar (if any). - Palpate abdomen, note height of fundus, lie, presentation, engagement of head. - Auscultate foetal heart to check heart rate and normality. - Count foetal heart rate (Normal 120-160 beats per minute). • **Perform a vaginal examination under aseptic conditions** - Inspect vulva for varicose veins, scars e.g. female genital mutilation and episiotomy, vaginal wart, vaginal discharge and liquor amni should be noted. - Check cervical position, consistency, degree of effacement and dilatation. - Note the descent of the presenting part. - Assess the pelvis to ensure it is safe for vagina delivery. ***If the breech is presenting, or the pelvis is certainly not adequate, refer to a facility where Caesarean section can be performed***.
Investigations	• **Urinalysis-protein, sugar, acetone** • **PCV/Hb**
	Management of the first stage of Labour • Record findings of assessment using the partograph. • Identify phase whether latent or active. • Continuously interpret the partograph. • Identify problems and take appropriate action. • Inform mother and relations of her progress in labour and if necessary reason(s) for referral to a hospital (if applicable). • Pay attention to the care of bowels, bladder, perineal care and personal hygiene. • Give sips of nourishing fluids with caution. • Give emotional support and encouragement/reassurance. • Test all urine specimens for sugar, protein and acetone. • Review the progress of labour by a pelvic examination every 4 hours (note degree of dilatation of the cervix, level of descent of the head, presence of caput/moulding).

Management	• Relieve pain during labour through: - **Exercises**: breathing techniques: This should be explained to the patient if this was not done during the antenatal period. - **Drugs**: Give appropriate drugs e.g. Pethidine Hydrochloride, 50-100mg intramuscularly, if necessary. • Assess the pelvis to ensure it is adequate for safe delivery. ***First stage of labour should not exceed 16 hours irrespective of parity.***

2.3.2 SECOND STAGE

It is the period from full cervical dilatation to the birth of the baby.

Assessment/Identification of the Problems

Physical Examination	• Check the contractions for strength, duration and frequency. • Continue to check vital signs and foetal heart rate. • Note the client's strong urge to bear-down. • Check bulging of the perineum; pointing anus or urge to defecate. • Check if the foetal head is visible at the vulva. • Note nausea, retching and vomiting which may sometimes occur at full cervical dilatation. • Confirm full cervical dilatation on vaginal examination.

Management	**Management** • Position the patient (dorsal, squatting or left lateral). • Swab the vulva with antiseptic lotion. • Encourage the client to bear down with each uterine contraction. • Monitor the descent of presenting part and the way the perineum stretches which should be progressive. • Perform episiotomy with the crowning of the fetal head as applicable. • Deliver the head, and check for cord round the neck. - If cord is loosened around the neck, slip over the head. - If tight, clamp in two places and cut between clamps. - Slip the clamp ends to either side of the neck. • Support the head until it restitutes externally. • Deliver the posterior shoulder and the rest of the body. • Note the sex of the baby and the time of delivery. • Deliver the baby on the mother's abdomen. • Wipe the baby with a dry warm clean towel and discard. • Place the baby skin to skin with the mother's abdomen to encourage early bonding, cover mother and baby. • Initiate breastfeeding within 30 minutes. • Initiate resuscitation if necessary. ***Second stage of labour should not exceed 30 minutes irrespective of parity.***

2.3.3. THIRD STAGE OF LABOUR

It is the period following the delivery of the foetus to the complete delivery of placenta and membranes, and control of bleeding.

Assessment/Identification of the Problem

Physical Examination	• Check vital signs, temperature, pulse, respiration, and blood pressure.
Management: **Active Management of Third Stage of Labour (AMTSL)**	• Give injection oxytocin 10 I.U intramuscularly within 1 minute of delivery of the baby. • Clamp and cut the umbilical cord within 3 minutes of the birth of the baby, deliver placenta by controlled cord traction.

Management Contd.	• Massage the uterus, ensure uterus is well contracted. • Examine placenta and membranes. • Put the baby to suck. • Examine perineum and lower vagina/vulva for tears. • Repair any identified tears. • Estimate blood loss and record findings. ***3rd Stage of labour should not exceed 5-20 minutes irrespective of parity. Avoid application of fundal pressure throughout labour.***

Note on Oxytocics

1. IM oxytocin 10 IU should be the first line drug for AMTSL.
2. If oxytocin is not available, IM Ergometrine 0.5mg should be given to women without hypertension or heart disease.
3. In cases where none of the above is available or appropriate, oral or sublingual Misoprostol 600µg should be used.

Management of mild to moderate anaemia in labour

- Maintain strict asepsis and antisepsis.
- Give antibiotic, if membranes have ruptured for more than 12 hours.
- Prevent prolonged labour i.e active phase labour lasting more than 12hours, then watch for signs of cardiac failure.
- Shorten the second stage of labour.
- Give syntometrine 1ml or 0.5mg ergometrine intramuscularly after delivery of baby to prevent post partum haemorrhage, and overloading of the heart.
- Examine placenta and membranes for completeness.
- Observe fluid intake and output in the first 48 hours after delivery.
- Conduct follow up activities by:
  - Checking Haemoglobin 48 hours after delivery.
  - Continuing iron therapy according to degree of anaemia.
  - Giving dietary advice.
  - Advising patient to keep post natal appointment.
- Provide Information, Education and Communication (IEC) as follows:
  - Give dietary advice with information on foods rich in iron and the need to take iron supplements.
  - Advise on side effects of iron preparations.
  - Advise to take iron drugs after meals with fruit juice to enhance absorption.
  - Counsel patient on family planning.

Women with severe anaemia in labour should be managed in a hospital where there is facility for blood transfusion.

2.3.4 IMMEDIATE CARE OF THE BABY AT BIRTH

Management	• Dry, warm, position, suction and stimulate the baby. • Assess the baby's breathing and color. • Decide if the baby needs resuscitation. • Tie and cut the cord. • Place the baby in skin-to-skin contact with the mother. • Have the mother start breastfeeding. • Give eye care. • Later care: - Immunize baby with BCG and OPVo and HBV 1(at birth). - Weigh and measure the baby. - Check vital signs (temperature, apex beat and respiration). - Record all findings. - **The newborn should not be bathed within the first 24 hours to prevent hypothermia.** **For more information on the care of the newborn, see section 2.5.**

2.4. POST PARTUM PERIOD

Mothers should be given adequate information about the post partum period on discharge. Provide postpartum information as follows:

2.4.1 POST PARTUM INFORMATION

Information from the hospital should include:

- Nutritional requirements for mother's health and breastfeeding.
- Advice on food items rich in protein, calcium and vitamins.
- Advice on dangers associated with drug abuse, alcoholism, and harmful practices including taboos on certain food items.
- Personal hygiene for mother.
- Personal hygiene for the baby.
- Care of umbilical cord and stump.
- Immunization schedule for the baby.
- Post partum exercises.
- Adequate rest and good nutrition.
- Safe sexual intercourse during post-natal period and use of contraception.
- Give an appointment for post natal visit at 6 weeks or earlier if indicated.

2.4.2 POST PARTUM (PUERPERAL) PSYCHIATRIC DISORDERS

These are mental illnesses occurring during the twelve months (most commonly in the first 6 weeks) following delivery. Examples include acute organic mental disorder; depression and psychotic behaviour (see Chapter 5 for further description of these disorders).

Risk factors for these disorders are puerperal sepsis, past history of mental illness, unwanted pregnancy and rejected pregnancy by spouse and/or family members.

Assessment/Identification of the Problem

History	• Take a history from the patient and key informants. The history should include the nature of the mental illness, time of onset after the delivery and the circumstances of the delivery. • Ask about past psychiatric episodes following previous deliveries (for the multiparous patient). • Conduct a mental state examination (see MSE box in 5.2.1).
Physical Examination	• Conduct a thorough physical examination noting possible evidences of sepsis, fluid/electrolyte imbalance, anaemia, etc.

Management	The management of postpartum psychiatric disorders is not limited to the patient; additionally, the well being of the baby should be guaranteed. Furthermore, the patient's spouse (if any) and relatives should be appropriately counselled for their support to the patient. **The patient** • Appropriate investigations and treatment of any underlying physical problems such as sepsis, anaemia, dehydration, etc should be carried out. • See Chapter 5 for appropriate treatment of the identified mental illness. • Refer to secondary/tertiary health institution when necessary. **The baby** Ensure the well being of the baby by paying special attention to: • Nutrition/feeding: The mother should breastfeed the baby under close supervision. • Hygiene: especially cord care. **The spouse/relatives** • Watch out for possibility of rejection of the patient by the spouse on account of the illness; and institute counseling appropriately against the rejection. • Wrong beliefs about puerperal mental illnesses such as deprivation of the baby from breastfeeding should also be discouraged by health education of the spouse (if any) and relatives. ***Note possible complications: Infanticide (deliberate harm on the baby to cause its death) and suicide especially in puerperal depression.*** ***Emphasize and encourage exclusive breastfeeding for 6 months. Discourage giving of water and pacifier to the baby.***

2.4.3 POST NATAL VISIT (conducted at 6 weeks post partum)

History	• Take a history concerning mother (lactation, lochia, general condition, resumption of sexual activity, baby breastfeeding, well weight gain, immunisation etc).
Physical Examination	• Repeat physical examination of both mother and newborn. • Weigh mother and newborn (Growth monitoring). • Check for signs of anaemia. • Check breasts: tenderness, redness, lumps, nipples for cracks and soreness. • Check lactation. • Carry out Vaginal Examination as follows: - Check vulva for discharge and lochia(vagina should be pink, warm and moist). - Check perineal scar for wound healing. - Check that cervix is firmly closed with a transverse slit. - Check uterus for full involution. - Check vital signs (temp, pulse, respiration and blood pressure). • Test the urine for acetone, sugar and protein. • Check haemoglobin (Hb) or PCV. **NB** ***Mother and newborn should not wait for 6 weeks before visiting the health facility. Any concern on the health of the newborn or the mother should be reported at the nearest health facility taking note of danger signs in the newborn below.***
Management	• The health worker should provide the following information during Post Natal Visit: - Importance of exclusive breastfeeding. - The nearest Primary Health Care Clinic. - Compliance with immunization schedule with reasons. - Re-supply of routine drugs. - The need to report early at the health facility, when complications arise - Choice of family planning method. - Discharge both mother and baby if everything is normal. - If any complication is noted apply appropriate therapy and reschedule another visit. **Refer the patient if the following complications are noted during post-natal visit** **Haemorrhage** **Infections e.g. breasts, uterine, etc.** **Baby: feeding difficulties, abnormalities**

Danger Signs in the Newborn

- *Fast breathing (>60 breaths per minute)*
- *Slow breathing (<30 breaths per minute)*
- *Severe Chest in drawing*
- *Grunting/noisy breathing*
- *Blueness of the body (cyanosis)*

Danger Signs in the Newborn Contd.

- *Excessive crying (irritability)*
- *Diarrhoea*
- *Convulsions or twitching or fits*
- *Floppy or stiff*
- *Fever (>38^{0}C)*
- *Low temperature (< 35^{0}C)*
- *Very small baby (<1500g)*
- *Very preterm baby (<32 weeks or > 2 months early)*
- *Umbilicus draining pus or umbilical redness extending to the skin*
- *More than 10 skin pustules*
- *Bleeding from stump or cut*

2.5 CARE OF THE NEWBORN BABY

The midwife should be able to manage the newborn, detect any abnormalities, prevent any condition that may affect the baby and refer where necessary.

2.5.1 IMMEDIATE CARE

In the immediate postpartum period, the baby should be thoroughly examined.

Table 2.1A Physical Assessment of the Baby

- Assess apgar score immediately after birth at 1 and 5 minutes (appearance/colour, heart rate, respiratory effort, muscle tone, reflex irritability).
- Assess weight.
- Measure the head circumference and length of the baby.
- Examine baby from head to toe as indicated in the table below.
- Skin-for colour(blue, pale or yellow), septic spots.
- Note obvious abnormalities e.g. mongolism, microcephaly, harelip.
- Check muscle movement (spontaneous/inactivity/limp).
- Check respiratory effort (note if 60 cycles per minute or above).
- Check for position of apex beat.

Table 2.1B Summary of Examination of the Baby

PART OF THE BODY	WHAT TO LOOK FOR
Head	Note any swelling, size in comparison with the rest of the body, presence of the pupils; of moulding/caput succedaneum, trace the anterior/posterior fontanelle and sutures for bulging, depression or closure.
Eyes	Examine for discharge, jaundice conjunctival haemorrhage, dullness of the pupils; (cataract) note angles of the eyes for features of Down's Syndrome.
Nose	Check for jaundice on the nose. Also check for nasal discharge or blockage.
Face	Check for asymmetry shape and size of facial features.
Mouth	Check for cleft palate and harelip, size and shape of the mouth and lower jaw to exclude receding chin (Teeth are rarely present at birth).
Ears	Note position of ears (low set ears are associated with renal abnormalities and downs syndrome): check shape, size of ears. Note any accessory auricles.
Neck	Check for enlargement of neck (tumours, haematoma, enlarged thyroid) fractured clavicle.
Abdomen	Check umbilical stump to ensure that it is securely clamped and for signs of bleeding/infection/distention.
External Genitalia	In females, note size and shape of labia and ambiguous genitalia. In males, feel scrotum (check for undescended testes), urethral opening (note if the urethreal opening is in the centre of the tip of the penis (exclude hypospadias/ epispadias).
Anus	Note if baby has passed meconium, if anus is patent.
Limbs	Note length of arms and legs, hands and feet for extra digits, webbing, palmar and plantar markings.
Ankle	Check for talipes.
Hips	Exclude congenital dislocation.
Back of Spine	Note spinal defect e.g. spina bifida, meningocele.

Table 2.2 Neurological Examination of the Baby

Assess by reflexes present in the newborn. Note muscle tone sucking and swallowing reflexes (done to check the intergrity of the oesophagus).

Rooting or searching reflex

Tested by touching the angle of the baby's mouth with the finger, baby will turn his head towards the finger and search for the finger.

Grasping reflex

Is demonstrated by stroking the back of baby's finger and it extends, and placing the finger in the palm the baby takes a firm grasp. This is similarly noted in the toes.

The Moro reflex

Is tested by dropping the baby's head from one hand to the other or making a loud noise near the baby. When startled, the baby first throws out his hands and then brings them together in an embracing movement.

Primitive walking reflex

Is demonstrated by holding the baby so that his feet are touching a firm surface. So he raises one leg and takes large hesitating step.

The most important thing to check is whether the baby is breathing and his/her heart is beating. Rapid breathing during the newborn period is 60 or more cycles per minute. The normal newborn heart rate is 120-160 beats per minute. By the time a baby is 28 days old, the rate is about 140 beats per minute

2.5.2 COMPUTING AN APGAR SCORE

- Computing an Apgar score is as follows and score as in the table below:

  A - **Appearance.** Look at the colour of the baby's skin.

  P - **Pulse.** Listen to the baby's heart with a stethoscope if available, or feel the pulse with your fingers. Count the number of beats per minute.

  G - **Grimace**. Rub back and forth on the soles of the baby's feet with one of your fingers. Observe the reaction on his face. Or notice the baby's reaction when you suck the mucus from his mouth and throat.

  A - **Activity.** Watch the newborn move his arms and legs. Or, pull an arm or a leg away from his body. Note how his arms and legs move in response to the stimulation.

  R - **Respiration.** Look at the newborn's chest and abdomen. Watch him breathe.

- Record the Total of the APGAR score on the mother's labour chart.
  - Normal signs (score of 7-10)
  - Abnormal signs (score of 0-6)

Table 2.3 APGAR Scoring System

	Points	**Point**	**0 points**
A	Completely pink body and face.	Pink body, blue arms, legs and face	Pale or blue body and face
P	More than 100 beats per minute, strong heart rate	100 beats per minute or less/weak heart beat	No heart beat
G	Crying, coughing or sneezing	Grimace or puckering of face	No response
A	Active movement waging arms and legs	Some movement in response to stimulation	No response
R	Strong cry	Slow, irregular breathing, retraction of chest wall, grunting or weak cry	No breathing No cry.

2.5.3 SUBSEQUENT CARE OF THE BABY DURING THE FIRST 10 DAYS

Table 2.4

Vital signs	Temperature, apex beat and respiration)
Skin Colour	Note cyanosis of the hands and feet. Check for jaundice after 24 hours up to 4-6 days(Physiological jaundice). Bathe baby daily and inspect skin for rashes, septic spots.
Weight	Check baby's weight.
Eyes	Check for stickiness or discharge.
Mouth	Inspect to exclude infection (thrush).
Urinary output	Note frequency and odour. If strong odour, supervise baby's feeding, suggest more frequent breastfeeding.
Stools	Note colour, textures, odour and frequency.
Umbilical cord	Inspect for wetness or signs of infection. Teach mother the care of the cord. The cord usually falls off within 7 to 10 days of birth.
Feeding	Supervise breast-feeding, commend mother's effort. Suggest feeding on demand.
Give appointments for return visit in 6 weeks. Advise mother to visit the clinic if she observes any change in the baby or has any difficulty with breathing. • ***At six weeks, examine mother and child from head to toe. Check baby's weight. Check vital signs (temperature, pulse, respiration and blood pressure). Immunize baby with DPT_1, OPV_1 and HBV_2.***	

2.5.4 IMMUNISATION SCHEDULE

An Immunization schedule contains information to which health workers may wish to refer when deciding which immunization types to administer to children, women of childbearing age and pregnant women. There is no limit to the maximum time interval between successive doses. Even if a year goes by between the administrations of successive doses of a vaccine, do not begin the series, give the next dose as if the minimum time interval has passed.

Table 2.5

CONTACT	MINIMUM TARGET AGE OF CHILD	TYPE OF VACCINE	DOSAGE	ROUTE OF ADMINISTRATION	SITE	CENTRAL VACCINE STORAGE TEMPERATURE UP TO 6 MONTHS
1ST	At Birth	BCG	0.05ml	Intradermal	Right upper arm	-20^{0}C
		OPV_0 HBV_1	2 Drops 0.5ml	Oral intramuscular	Mouth Thigh	-20^{0}C +4^{0}C to +8^{0}C
2ND	6 weeks of age	DPT_1	0.5ml	Intramuscular	Thigh	+4^{0}C to +8^{0}C
		OPV_1 HBV_2	3 Drops 0. 5ml	Oral Intramuscular	Mouth Thigh	-20^{0}C +4^{0}C to+8^{0}C
3RD	10 weeks	DPT_2	0. 5cc	Intramuscular	Thigh	+4^{0}C to +8^{0}C
		OPV_2	3 Drops	Oral	Mouth	-20^{0}C
4TH	14 weeks	DPT_3	0. 5ml	Intramuscular	Thigh	+4^{0}C to +8^{0}C
		OPV_3	3 Drops	Oral	Mouth	-20^{0}C
		HBV_3	0. 5ml	Intramuscular	Thigh	+4^{0}C to +8^{0}C
5TH	9months	Measles	0.5ml	Subcutaneous	Left upper arm	-20^{0}C
		Yellow fever	0. 5ml	Subcutaneous	Left upper arm	+20^{0}C

***Note**:*

Paracetamol tablet/syrup should be given to all children receiving DPT and Measles Vaccine. Read and comply with maker's instructions on the number of drops for polio vaccine, direction and route of administration.

For more information on consequences of Adolescent Pregnancy, refer to Module 3: Session 2 of the Training Manual on Adolescent Reproductive Health.

2.6 ABORTION

Abortion is the termination/expulsion of a pregnancy before 28 weeks (the foetus is capable of extra uterine life).

Definitions

- **Spontaneous Abortion:** (also known as **miscarriage)** It is the termination of pregnancy arising from natural causes (e.g. Disease), but may be as a result of trauma, accident, disease or cervical incompetence.

- **Induced Abortion:** It occurs when there has been a deliberate interference with pregnancy either by the woman herself or someone else (legally or illegally) with the aim of termination.

- **Incomplete Abortion:** It occurs when part or all of the products of conception are retained. It may be as a result of spontaneous or induced abortion.

- **Therapeutic Abortion:** This happens when an abortion is medically induced for women whose life and health are threatened by continuation of the pregnancy or when the health and survival of the foetus are threatened by congenital factors.

- **Threatened Abortion:** occurs when a pregnancy is accompanied by minimal or little vaginal bleeding with or without lower abdominal pain and heavy bleeding but without expulsion of products of conception.

- **Inevitable abortion** occurs when the cervical os is dilated more than 2cm, associated with heavy vaginal bleeding without expulsion of products of conception.

- **Missed Abortion: It is** the death of a developing fetus in uterus before the age of viability. Such foetus is retained in the uterus and not expelled.

2.6.1 MANAGEMENT OF ABORTION

Assessment/Identification of the Problems

History	• **Take a history of:** - Past pregnancies, - Present pregnancy including LMP and estimated weeks of pregnancy, - Pain in the lower abdomen/back whether continuous or intermittent, - Bleeding-onset, nature of (gushing, trickling), - Fever/chills, - Vaginal discharge - colour, quantity and odour, - Medication - whether prescribed or not, name of drug and dosage,

	- Intervention by doctor, nurse, TBA and others.
Physical Examination	• **Conduct a general examination:** - Check to see if patient is ill looking, or has signs of collapse-pallor, cold and clammy extremities. - Check for fever, check for signs of shock, weak pulse. - Check vital signs (blood pressure, pulse and temperature). • **Conduct an Abdominal Examination:** - Check for tenderness – (localized, generalized or rebound), and masses. • **Do a pelvic examination to:** - Assess vaginal bleeding, blood clots, offensive discharges or products of conception. - Check the status of the cervical os – (if dilated or not). - Check for the presence of products of conception at the os.
Investigations	• **Conduct the following investigations:** - Urgent PCV or Hb estimation. - Cross match blood if indicated. - Cervical or High Vaginal Swab if indicated.
Management	• **Management of patient with abortion** - Explain patient's condition to her and the relatives. - Establish rapport and show empathy. - If patient is in shock, place patient in dorsal position and elevate foot of bed. - Give oxygen if necessary. - Check BP and pulse 1/4 hourly. - Replace fluid loss intravenously or rectally if it is difficult to get a peripheral vein e.g. 0.9% normal saline at 40 drops per minute. - If patient is bleeding per vagina with clots or painful contraction or has passed the products of conception, give injection of ergometrine and massage the uterus. - If the abortion is incomplete, conduct a Manual Vaccum Aspiration (MVA). - If an abortion is inevitable , infuse syntocinon: 40 units in 500 mls of 4.3% Dextrose in 0.18% Saline to empty the uterus and control bleeding. - Start antibiotics, ampiclox 500mg 6 hourly and tab metronidazole 400mg 3x daily for five days. - Put patient on complete bed rest for 24-48 hours. - Give strong analgesic and sedation e.g. Pethidine, 100mg or diazepam, 10mg. i.m. - Observe vital signs - temperature, blood pressure, pulse and respiration. - Observe the abdomen for contraction and tenderness. - Observe the vagina for blood loss, lacerations and foreign body in the vagina or cervix. ***Refer if pain persists or bleeding is profuse.***

Septic Abortion

Assessment/Identification of the Problems

Physical Examination	• If abortion is septic: - Check for confusion. - Check vital signs (Blood Pressure, Temperature (look out for fever), Pulse and Respiratory rate). - Check for abdominal pain, offensive vaginal discharge, profound shock and collapse. - Check for evidence of attempted intervention.
Investigations	• Take blood for grouping, cross matching and haemoglobin (Hb) and PCV estimation. • Take a cervical or vaginal swab.
Management	• Give nothing orally. • Set up an I/V infusion of 500ml normal saline and administer IV ciprofloxacin , flagyl and gentamycin. • Give tetanus toxoid. • Treat for shock. • Discuss need for admission and evaluation. • Where applicable, refer immediately. • Inform the client about the following on discharge: - Dangers of condition - Need for safer sex and family planning - Emphasis on parental/guardian support.

2.6.2 POST ABORTION CARE

Post abortion care consists of emergency care (treatment of complications), family planning counselling and referral services given to an adolescent after an induced or spontaneous abortion.

Assessment/Identification of the Problems

History	• Take a history to establish the abortion e.g. amenorrhoea, positive pregnancy test.
Physical Examination	• Check vital signs (blood pressure, temperature, pulse, and respiration). • Palpate the abdomen for tenderness, and the size of the uterus. • Perform a pelvic examination to establish trauma to cervix/vaginal and presence of cervical excitation tenderness or products of conception.
Investigations	• Conduct the following investigations: - PCV/Hb, - Urinalysis, - High vaginal swab/endocervical swab for microscopy, culture and sensitivity.

Management	**Management** • Give tetanus toxoid. • Resuscitate the patient if need be: treat shock , set up IV fluids, give ergomentrine. • Give antibiotics, give analgesics. • Refer if abortion is incomplete or inevitable after resuscitation or pain persists. Refer septic abortion after commencement of antibiotics such as Ampiclox, Gentamycin and Flagyl. • Post abortal psychiatric disorder: refer to section 2.4.2. • Provide counselling as follows: - Abstinence: where appropriate. - Reversible contraceptive method. - Refer for services if preferred method is not available.

For more information on Post-abortion Care, refer to Module 3: session 3 of the Training Manual on Adolescent Reproductive Health.

CHAPTER 3

CONTRACEPTIVE CHOICES FOR ADOLESCENT

Young people need reliable information about where to access modern contraceptives in order to protect them from STIs, including HIV/AIDS and unintended pregnancies.

> ***Information about contraceptives is important for all young people whether they abstain from sex or are sexually active.***

Not all the modern methods of contraceptives are appropriate for adolescents. Most of the temporary methods are appropriate but not the permanent methods.

Assessment/Identification of the Problems

HISTORY	• Greet the adolescent/youth warmly. • Introduce self to the client and ask general questions to establish rapport. • Take a detailed history (personal, social, economic, past medical, obstetric and gynaecological history, previous contraception). • Obtain a sexual history (vaginal discharge or irritation, frequency or sexual intercourse, dyspareunia, post coital bleeding and number of sexual partners).
PHYSICAL EXAMINATION	• Conduct a physical examination – weight, blood pressure, evidence of anaemia or jaundice, breast and thyroid gland, enlargement of spleen/liver or any other mass. • Conduct a pelvic examination of sexually active client (check for redness, discharge, swelling scar, lice, ulcers; note the position and consistency of the cervix, evidence of cervical erosion or cervicitis; check the adnexae for tenderness, swelling; size, consistency, shape and mobility of the uterus, whether anteverted or retroverted).
INVESTIGATIONS	• Conduct laboratory investigations –check the urine for albumin, sugar and acetone; obtain blood specimen for the packed cell volume (PCV) or haemoglobin (Hb), and blood film for evidence of sickling and malarial parasites; obtain pap smear; and do pregnancy test.
MANAGEMENT	• Discuss all temporary forms of contraceptives available in the clinic with the client. • Show all the methods to the client. • Discuss the advantages and disadvantages of each method. • Allow the client to make a choice. • Discuss the method chosen by the client with him/ her.

3.1 CONTRACEPTIVE METHODS

ABSTINENCE
BARRIER METHODS: • Male Condom • Female Condom • Diaphragm
SPERMICIDES
HORMONAL CONTRACEPTIVES METHODS • Combined Oral Contraceptives (COCs) • POP/Mini pills • Emergency Contraceptives • Injectables • Hormonal Implants
NATURAL CONTRACEPTIVE TECHNIQUES • Basal Body Temperature • Calendar/Rhythm Method • Sympto-Thermal method • Coitus interruptus • Cervical mucus method (CMM) or Billings ovulation method

3.1 .1 ABSTINENCE

- Discuss the safety of the method – prevents pregnancy and STIs/HIV/AIDS.
- Provide information on the need to continue with abstinence for as long as possible.
- Discuss the skills for refusing sexual intercourse.
- Encourage the clients to freely express their views to their friends.
- Emphasise self-control and discipline.
- Assist clients in developing a positive vision of life.
- Redirect youths' energies into creative arts and sports.
- Encourage clients to request for co-operation from their friends in ensuring abstinence.
- Avoid situations that can provoke sexual stimulations.

3.1.2 BARRIER METHODS

MALE CONDOM

- Inform the client that when the condom is used correctly and combined with spermicides, the level of efficacy becomes higher.
- Discuss the advantages with the client.
  - Inexpensive and easily available.

- No serious side effects (except reaction to latex rubber in some people).
- Ensures protection against STIs and HIV/AIDS.

- Provide instructions regarding the use of condoms:
  - Ensure that condom is properly packaged.
  - Check the expiry date.
  - Open the package from the recommended angle (Do not use sharps e.g. teeth, fingernails, etc to open the pack).
  - Ensure that penis is erect before wearing the condom.
  - Identify and pinch the "teat" or nipple of the condom as you roll the condom all the way to the base of the penis.
  - if the condom is the type with no teat/nipple, leave a small space (about 1.5cm) at the tip.
  - Expel any air in the tip ("teat") of the condom to prevent the condom from bursting.
  - Withdraw the penis soon after intercourse (while still erect) to prevent spillage of semen close to the vagina (hold the rim of the condom firmly against the base of the penis during withdrawal).
  - Use a new condom each time you have sex.
  - Do not lubricate condom with petroleum jelly as it can cause deterioration of latex rubber.
  - Ensure that the condom does not slip off too soon and the semen does not spill/leak on the vulvae area.
  - Used condom should be properly disposed e.g. wrapped and thrown into the dustbin or burnt. Don't throw into the latrine.
  - If the condom is found to be torn after intercourse, insert contraceptive foam, jelly or suppository. Return to the clinic, consider emergency contraception.
  - Poor storage (back pocket, glove compartment, hot environment) can affect quality and contraceptive effectiveness.
- Demonstrate the process on a model.
- Allow the client to practice on a model.
- Discuss the disadvantages with the client:
  - Allergy to latex by some people.
  - Application requires interruption of sexual intercourse.
  - May interfere with sexual intercourse – reduction of sexual pleasure.
  - May have a hole and may leak.
  - Must be used every time sexual intercourse takes place.
  - Deteriorates if stored in too much heat.
- Provide the condoms for the client.
- Book follow-up visit to the clinic for re-supply of condoms as necessary.
- Record service on the appropriate Management Information System (MIS) forms.

Burst Condom/ Dislodgement during Intercourse

- Ascertain the last menstrual period (LMP) of the female partner.
- Ascertain the time of sexual intercourse.
- Provide emergency contraceptives if intercourse took place around the ovulatory period:
  - If within 72 hours, use emergency contraceptive pills (ECP) such as Postinor-2^{R} 1tablet stat, then 1 tablet 12 hours later.
  - If later than 72 hours, but within 7 days, consider the use of IUCD if client is parous.
- Re-educate on how to use condom.
- Repeat follow-up 5 weeks later to ensure that client is not pregnant.

Reaction to Latex

- Obtain a history – type of reaction, onset of reaction, duration, localised or systemic.
- Observe the reaction, if possible.
- If the reactions are minor, give palliative treatment.
- If major, discontinue use, use other methods of contraception, and refer to a specialist.

Reduced Sexual Pleasure

- Obtain a history.
- Encourage on a more intimate foreplay.
- Counsel on the need to have female partner wear the condom on the male.
- Emphasise the total benefits of condom use.

FEMALE CONDOM

The female condom is made of synthetic nitrile material and is worn in the vagina by the woman. It has an outer fixed ring (rim) and an inner mobile ring. The female condom is impregnated with a spermicide – non-oxynol-9.

- Inform the client that when the female condom (FC2 etc) is used correctly, it protects against unwanted pregnancy.
- Discuss the advantages with the client:
  - No reaction since it is not made with latex rubber.
  - Ensures protection against STIs/HIV/AIDS and pregnancy if used correctly.
  - It provides an opportunity for women to share the responsibility for condoms with their partners.
  - A woman may be able to use the female condom if her partner refuses to use a male condom.
  - It can be inserted in advance of sexual intercourse so as not to interfere with the moment.
- Provide instructions regarding the use of female condom:
  - Ensure that the condom is properly packaged.
  - Check the expiry date.
  - Wash hands before insertion.
  - Spread the lubricant evenly by rubbing the sides of the condom together.
  - You can stand with legs astride, squat, lie down or put one leg on a stool/chair to ease insertion.
  - Collapse the inner ring between the thumb, index and middle finger.
  - Separate the labia with the other hand, insert the squeezed ring deep into the vagina with the index and middle fingers until the inner ring with the outer fixed ring is hanging out.
  - Gently curve the finger towards the front of the vagina to feel the pubic bone, indicating that the condom has been inserted correctly.
  - Smoothen the outer ring over the vulva to ensure that the penis goes into the condom and not along side during coitus. After intercourse, turn the condom and pull out gently.
- Demonstrate the process on a pelvic model.
- Allow the client to practice on a model and observe.
- Discuss the disadvantages with the client:
  - Can be noisy during intercourse but adding more lubricant can lessen this problem.
  - Some women may not like the process of insertion.

- May have a hole and leak, thus a higher failure rate in preventing pregnancy than non-barrier methods such as the pill.
- Must be used every time sexual intercourse takes place.
- The outer ring or frame is outside the vagina and can make some women feel self-conscious.

- Provide the female condom for the client.
- Book the client for follow-up visit to the clinic for re-supply of the condom as necessary.
- Record service on MIS forms.

Dislodgement of Female Condom during Intercourse

Manage as discussed under male condom dislodgement/burst.

DIAPHRAGM (For parous adolescents only)

The diaphragm is a mechanical barrier between the vagina and the cervical canal. It is a dome-shaped rubber cup with a flexible rim. A contraceptive jelly or cream should be placed on the cervical side of the diaphragm before insertion which also serves as a lubricant for the insertion.

- Inform the client that when the diaphragm is used correctly, it protects against unwanted pregnancies.
- Discuss the advantages with the client:
  - Cheap and easy to use.
  - Has no side effect.
- Carry out vaginal examination to rule out any contraindication (if this has not been performed).
- Determine the size of diaphragm to be fitted (since the vagina expands during sexual intercourse, it is important to add 5mm to a measured size).
- Fit the diaphragm; ensure that the posterior rim lies well behind the cervix, which should be felt through the dome of the diaphragm.
- Ask the client to feel the diaphragm inside her vagina (feel for the cervix through the diaphragm).
- Check from client if any discomfort, e.g. pressure on the rectum.

Discomfort may mean that the diaphragm is too big for the client.

- Provide instructions regarding the use of the diaphragm:
  - Insert diaphragm before the initial act of intercourse.
  - Must be inserted immediately before or several hours before intercourse (note: if intercourse does not take place within 2 hours apply additional spermicides into the vagina without removing the diaphragm).
  - Cover the diaphragm with spermicides and place about 1 teaspoonful in dome of the diaphragm before insertion.
  - Fold the diaphragm by pressing the opposite sides together.
  - Part the opening of the vagina with the other hand and insert the folded diaphragm into the vaginal and push it downward and backward along the posterior wall of the vagina as far as it can go, then tuck the front rim under the pubic bone up to the roof of the vagina.

- Feel round the diaphragm to ensure that finger cannot be slipped easily between it and the vagina wall.
- Ensure that the posterior rim lies well behind the cervix which should be felt through the dome of the diaphragm.
- Check for proper placement.
- Leave diaphragm in place for 6 hours after the last act of intercourse.
- Use additional spermicides with each act of intercourse without removing the diaphragm.
- After removal, wash with clean water and unscented soap, dry, dust with unscented powder (corn starch is best) and put back in its container.
- Keep away from areas of intense heat.
- Check diaphragm for holes and tears from time to time and before insertion.

- Supervise insertion by client through all the steps above.
- Discuss the disadvantages with the client:
  - Must be used each time a couple has intercourse;
  - Skill is required to insert the device properly;
  - Should be inserted prior to intercourse and left inside for six to eight hours.
- Provide the diaphragm to the client.
- Give follow-up appointment of 1 week and ask client to come with the diaphragm fitted at home.

Instruct the client that the size of the diaphragm must be re-checked each year and after pregnancy, abortion, pelvic operation or noticeable weight loss or gain.

- Examine to ensure proper placement.
- Record service on MIS forms.
- Instruct client to return to the clinic if the following occur: Sudden fever, fainting, rash, diarrhoea and sore throat.
- At subsequent visits, re-supply spermicide.

Management of problems during use of diaphragm

- The following may occur during the use of diaphragm as a contraceptive method:
  - Sudden fever
  - Rash
  - Fainting attack
  - Diarrhoea
  - Sore-throat
- Take a good history from the client.
- Treat the symptoms as appropriate.
- Treat and refer if client has recurrent vulval and vaginal irritation with discharge.
- Re-educate on the use of the diaphragm.

3.1.3 SPERMICIDES

These are products that contain sperm-killing ingredients. Spermicides come in various forms – foams, foaming tablets, creams, suppositories, and jelly. They are more effective when used with the condom and diaphragm.

- Instruct the client that the spermicides can be very effective.
- Discuss the advantages of spermicides:

- Inexpensive and easily available.
- No serious side-effects (except allergy in some people).

Foaming tablets and vagina suppository

Provide instructions regarding the use of foaming tablet or suppository:

- Take foaming tablet or suppository between the index and forefinger;
- Part labia with a finger of the other hand;
- Insert the fingers holding the tablet or suppositories into the vagina;
- Withdraw the middle finger and with the index finger, push tablet or suppository deep into the vagina and on to the cervical os;
- Wait for 10 minutes for the tablet or suppository to dissolve before commencing intercourse;
- If intercourse is to be repeated or 30 minutes has elapsed before intercourse, insert another tablet/suppository.

Aerosols/Spermicidal Foam

- Instruct client to use aerosol/spermicidal for every act of intercourse.
- Teach client how to correctly load the applicator.
- Teach on how to depress the finger to deposit the foam, cream or jelly into the posterior fornix and withdraw the applicator.
- Instruct client to wash the applicator with soap and warm (not hot) water.
- If more than 30 minutes elapse before intercourse, another dose of foam should be inserted.
- Instruct the client to use additional full application of foam before each subsequent act of intercourse.
- Teach the client to commence intercourse almost immediately because jelly or cream disperses very quickly.
- Demonstrate the process on a model.
- Allow the client to practice on a model.
- Discuss the disadvantages with the client:
  - Burning sensation in some clients.
  - Touching of genitals may be repulsive to some clients.
  - The 10 minutes waiting time may be seen as a deterrent to foaming tablet use.
  - They do not protect against STIs/HIV/AIDS.
- Provide the foaming tablets, jelly, cream, etc., to the client.
- Teach the client to use in combination with condoms and diaphragm.
- Book follow-up visit to the clinic for re-supply as necessary.
- Record service on MIS forms.

Vaginal Cream and Jellies

It is commonly used in combination with diaphragms and condoms. When used as sole contraceptive, instruct clients as follows:

- Screw applicator onto the can containing jelly or cream with the plunger pulled right up.
- Squeeze cream/jelly into the applicator until the barrel of applicator is filled.
- Detach applicator from the can.
- Insert applicator into the vagina (as for aerosol foam) and depress the plunger to deposit the cream/ jelly into the posterior fornix.
- Commence sexual intercourse almost immediately as the jelly/cream disperses quickly.
- Use additional cream/jelly for subsequent intercourse.

3.1.4 HORMONAL CONTRACEPTIVE

ORAL CONTRACEPTIVE PILLS

The hormonal contraceptive pills contain two main female hormones (oestrogen and progestin) either in combination or singly. The combined oral contraceptive (the "pill") is the most widely used. Oestrogen and progestin are taken in constant doses for 21 days followed by an interval of 7 days. The continuous low oral progestin ("the minipill") has a contraceptive effect although it does not always inhibit ovulation. It is less effective than the combined pill, but is free from estrogen-induced side effects.

COMBINED ORAL CONTRACEPTIVE PILLS (COCS)

- Discuss the advantages of the COCs with the client:
  - Highly effective if used correctly. It is an effective reversible method.
  - Offers continuous protection.
  - Easy to use.
  - Menstrual periods become lighter, less painful and more regular.
  - Clients can discontinue independently.
  - Use is not related to sexual intercourse.
  - Reduces the risk of ectopic pregnancy and symptomatic Pelvic Inflammatory Disease (PID).

- Provide the following instructions regarding the use of COCs:
  - Begin the first pack on Day 5 of the menses whether bleeding has stopped or not.
  - Take one pill a day, <u>at the same time</u> each day, whether sexual intercourse is likely or not.
  - There are two types of Packs - a 28 group pack and a 21 group pack.

- For a 28 – Pill Pack:
  - First group of 21 pills have the same colour and the last 7 pills may sometimes have a different colour.
  - Start with the 21 like-colour tablets and end with the 7 differently colour ones.
  - Begin the next packs the very day after the last tablet of the present pack whether menses has occurred or not.
  - There should be no break.
  - Always start a new pack with the group of 21 like-colour tablets.
  - Instruct clients to return when there are 7 tablets left in the first pack.

- For a 21 – Tablet Pack;
  - All the tablets are of the same type and colour.
  - Wait for 7 days after taking the last tablet and then start a new pack whether menses has occurred or not.

Post prescription instructions

Instruct the client on the following:

- For additional safety, use a barrier method or spermicides while on the pack.
- Keep a back-up method handy.
- If diarrhoea and/or vomiting is experienced for several days, use a barrier method until next menses starts.
- Always bring the used and unused packs when visiting the clinic.
- When seeing the doctor for any other problem or an admission, inform health staff that she is taking the pills.
  - Report to the clinic:
  - If you have concerns or questions.
  - When taking other medications.
  - 4 - 6 weeks before and after major operations
- Inform the client:
  - To keep scheduled appointment visits at 3, 6 and 12 months.
  - How and where to get supplies.
  - About regular breast self-examination.

DANGER SIGNS DURING THE USE OF COCs

Stop the pills at once, report to the clinic if any of the following occurs:

A - Abdominal pains (severe)

C - Chest pains (severe)

When the client forgets:

- One tablet
  - Take the forgotten tablet when she remembers.
  - Take that day's tablet at the normal time.
  - If 18 hours had elapsed, prescribe a barrier method in addition until next period.

- Two tablets
  - Take 2 tables as soon as she remembers.
  - Repeat 2 tablets next day.
  - Use a barrier method for 2 weeks after starting the new pack.
  - Tell client to repeat to you, all the instructions for clarification.

If the client is too forgetful, the provider should counsel on appropriate method switch.

FOLLOW-UP

- ***At One Month***
  - Check BP and weight.

- Ensure that the tablets have been taken correctly.
- Ask of any early side effects, respond to them and reassure the client.
- Rehearse the method of taking pills with the client.
- Give 3 months supply if the client demonstrates ability to use pills correctly and all the time.
- Instruct the client to return for re-supply just before the third pack finishes.
- Give 6 monthly appointments.
- Stress return to the clinic without appointment, any time there is a problem or doubt.
- Teach self breast examination.
- Encourage client to carry out the breast examination monthly after menses.

- ***At 3 and 6 Months***
  - Take history.
  - Check BP and weight.
  - Ensure tablets are taken correctly.
  - Ask for any complaints.
  - Manage any problems appropriately.
  - Give supply of pills:
    - 4 packs at the 3-month visit.
    - 7 packs at the 6-month's visit.

- ***At One Year***
  - Take a history including danger signals.
  - Carry out full physical examination including:
    - Weight
    - Blood pressure
    - Breast examination
    - Heart examination
    - Abdominal examination
    - Pelvic examination
    - Pap smear
  - Give 6 packs of pills.
  - Return appointment for 6 months.
  - Record service on the appropriate MIS forms.

PROGESTIN ONLY PILLS (MINI-PILLS OR POP)

- Discuss the advantages with the client:
  - Decreases menstrual cramps.
  - Does not disturb breast milk production.
  - Chances of pelvic inflammatory disease are probably reduced.
  - Less likely to cause headaches or raised blood pressure.
  - No increased risk of cardiovascular complications.

- Discuss the disadvantages with the client:
  - Must take the pill every day.
  - Slightly less effective than combined pills.
  - For more effectiveness, a barrier method must be used.
  - May cause infrequent menstrual periods.
  - More likely to cause irregular bleeding, although many clients have normal cycles.
  - Ectopic pregnancy is somewhat more common with mini-pill users.

- Provide instructions regarding the use of POP.
  - Supply 1 packet of mini-pills.
- Instruct client as follows:
  - Start mini-pill on day 1 of menses.
  - Take it every day, non-stop, from one packet to another.
  - Do not miss a day.
  - Take it at the same time of each day, e.g. between 6pm and 8pm.
  - Use barrier contraceptive method for the first 6 months whatever the bleeding pattern is.
  - Use a barrier method during mid-cycle or fertile period for additional effectiveness.
  - Report to the clinic if irregular or missed period occurs.
  - Be aware that menses may sometimes be heavier and may come earlier.
  - Report to clinic if the following occurs:
    - More than 45 days have passed without menses.
    - Any of the danger signs listed earlier.
  - Other medications are being taken while on mini-pills.

Most antibiotics do not interfere with the contraceptive effects of mini-pills. However, certain drugs may reduce the hormonal blood level as they do with combined pills. Therefore, barrier method is needed when the following are used: Rifampicin, Antiepileptics, Spironolactone, Chlorpromazine, Griseofulvin.

Post prescription instructions:

- Remind client to take one pill every day at the same time preferably in the late evening (6pm – 8pm).
- Instruct client that if she forgets to take one tablet, take the forgotten pill as soon as it is remembered and make the day's pill at the regular time even if it means taking 2 pills in one day. In addition, use a barrier method for the next 2 days.
- Instruct the client that if she takes her pill more than 3 hours late, she should use a barrier method for the next 2 days.
- If she forgets a dose for the next 2 or more days, use a barrier method. Consider changing to another method if forgetting persists.
- Instruct client to use a barrier method if she has vomiting or diarrhoea and continue use for 2 days after the illness is over.
- Instruct the client to visit the clinic in one month when she has 7 tablets in the first packet. If she cannot come to the original clinic she should go to the nearest Family Planning clinic.

Please note that while taking mini-pills the client may observe one or two patterns of menstruation:

Regular bleeding every 28-30 days - This means that she is probably ovulating regularly and needs a barrier method of contraception during mid cycle (day 10-18).

FOLLOW UP

- ***At One Month***
  - Check blood pressure and weight.
  - Make sure the tablets have been taken properly.
  - Ask if there are any early side effects, respond to them and reassure her.
  - Rehearse the method of taking pills with client by asking her to tell you how she should take them and what to do if she misses her pill(s).
  - Give 4 months supply if client shows the ability to use pills correctly.
  - Instruct the client to come for resupply just before the 3rd packet finishes.
  - If you doubt her ability to take pills properly, see her monthly until you are satisfied or consider changing her to another method.
  - See her every 6 months for check-up and for resupply just before the 6th packet finishes.
  - Stress that she must return to the clinic without appointment anytime she has problems or doubts.
  - Teach self breast examination.
  - Encourage client to carry out breast self examination monthly after menses.

- ***At Three Months***
  - Take history and check blood pressure, and the weight.
  - Make sure tablets are being taken correctly.
  - Ask of the side effects and danger signals and manage as appropriate.
  - Give supply of pills:
    - 4 packets at the 3 months visit.
    - 7 packets at the 6 months visit.
  - Give a return appointment for 6 months.

- ***At One Year***
  - Take a history, asking of danger signals.
  - Carry out full physical examination including:
    - Weight
    - Blood pressure
    - Heart examination
    - Breast examination
    - Abdominal examination
    - Calves and thighs examination
    - Pelvic examination (speculum, digital and pap smear)
  - Give 7 packets of pills plus barrier method.
  - Record findings in the appropriate MIS form.

- Give return appointment for 6 months.

EMERGENCY CONTRACEPTION (EC)

Emergency contraception is a safe and effective way of preventing pregnancy after unprotected intercourse or a contraceptive accident, such as condom slippage or breakage and dislodgement by diaphragm.

Emergency Contraceptive Pills (ECPs)

This is the immediate use of hormonal contraceptive oral pills after unprotected sexual intercourse to prevent pregnancy.

- Discuss the advantages of ECPs with client:
  - Well documented safety.
  - Drug exposure and side effects are of short duration.
  - Readily available (COCs).
  - Convenient and easy to use.
  - Reduces the risk of unwanted pregnancy.
  - Reduces the need for abortion.
  - Appropriate for young women who may have unplanned sex.
  - Can provide a bridge to the practice of regular contraception.

ECPs cannot be used to disrupt an established pregnancy.

- Discuss the disadvantages of ECPs with the client:
  - No protection against the transmission of STIs and HIV.
  - Must be used within 3 days (72 hours) of unprotected intercourse for higher efficacy.
  - Less effective than regular contraception.
  - May produce nausea and sometimes vomiting.
  - May change the time of the woman's next menstrual period.
  - Could result in increased pregnancy risk if used too frequently.
- Explain the correct use of ECP to the client.

High Dose Formulation *(COCs)*

- Take 2 pills immediately and within 72 hours of unprotected sex.
- Take additional 2 pills 12 hours after the first dose. Examples are Neogynon, Nordiol, Duofem, Ovral etc.
-

Low Dose Formulation *(COCs)*

- Take 4 pills immediately and within 72 hours of unprotected sex.
- Take additional 4 pills, 12 hours after the first dose. Examples are Microgynon 30, Nordette, Lo-Femenal etc.
-

Progestin-Only Pills *(POP)*

- Take one tablet of Postinor-2 within 72 hours.
- Take another tablet of Postinor-2, 12 hours after the first dose.

Table 3.1 Formulations and Dose Required for Emergency Contraception

Formulation	Common Brand Names	Tablets per Dose	Doses Required	Timing of Administration
EE 50 mcg + LNG 0.25mg or EE 50 mcg + NG 0.50mg	Neogynon, Noral, Nordiol, Ovidon, Ovran Eugynon 50, Ovral	2 2	2 2	First dose within 72 hours of unprotected sex; second dose 12 hours later.
EE 30mcg + LNG 0.15 mg Or EE 30 mcg + NG 0.30 mg	Microgynon 30, Nordette, Rivevidon Confidence Lo/Femenal, Ovral L, Duofem	4 4	2 2	First dose within 72 hours of unprotected sex; second dose 12 hours later.
LNG 0.75 mg	Postinor	1	2	First dose within 72 hours of unprotected sex; second dose 12 hours later.
LNG 0.03 mg or NG 0.075 mg	Microlut, Norgeston, Microval Ovrette	20 20	2 2	First dose within 72 hours of unprotected sex; second dose 12 hours later.

EE = Ethinyl estradiol LNG = Levonorgestrel ND = Norgestrel

- Tell client about some common side effects associated with ECPs:
  - Nausea in 50% of women using emergency contraceptives. Nausea does not last for more than 24 hours.
  - Vomiting occurs in 20% of women.
  - Irregular bleeding or spotting.
  - Breast tenderness.
  - Headache.
  - Dizziness.
  - Menstrual cycle disturbance: the next menstrual bleeding may be early or late (when using POPs, delayed cycles are more common).

On completion of the recommended dose, client should not take an 'extra' emergency contraceptive pill. More pills will not decrease the risk of pregnancy any further but will only give serious nausea.

- Provide the user with the following instructions/information:
  - Tell the client that drinking milk or eating food with the pill or taking them near bedtime may help reduce nausea.
  - Explain that the dosage needs to be repeated if the client vomits within 2 hours of taking ECPs.
  - No protection from pregnancy is offered when unprotected sexual intercourse occurs in the days or weeks following treatment. This is a common misconception among some clients.
  - Instruct the clients to use a barrier method (condom) for the remainder of her cycle.
  - Explain that the ECPs typically do not cause the client's menses to come immediately. The period may come a few days earlier or later than normal.

  - Give antihistamine 1 hour before the 1st dose of ECP.
  - Explain that if the period is more than a week late, client may be pregnant.
  - Instruct the client to come back or visit a referral clinic if the period is delayed for more than one week, or if there is a concern.
  - Ask the client to return as soon as possible after the onset of the menstrual flow for contraceptive counseling.

FOLLOW-UP

- Provide follow-up care as follows:
  - Ask for the state of health of the client.
  - Record menstrual date to verify that she is not pregnant.
  - If not sure, do a pregnancy test.
  - Discuss contraceptive options, as appropriate.

- When ECP fails and client is pregnant:
  - Explain available options.
  - Allow client to make decision most comfortable to her.
  - If client decides to continue with pregnancy, reassure that ECP does not have any known tetratogenic effect.
  - Refer the client to other service providers as appropriate.

Give each client barrier methods and/or oral contraceptives to use for the remaining days of her cycle until she returns for follow- up.

INJECTABLES

These are long-acting contraceptives containing progestogen only which are given by intramuscular injection. It can also be combined injectable contraceptive as contained in cycofem and mesigyna (information relating to the use of the combined injectable is similar to those of oral contraceptives).

Types

(a) Norethisterone Enanthate (Noristerat, NET-EN)
(b) Depo-medroxy-progesterone Acetate (DMPA, Depo Provera)
(c) Norigynon

- **Discuss the advantages with the client:**
  - Highly effective.
  - Long-acting.
  - Fewer client – dependent actions are required (i.e. 1-3 monthly visits).
  - Not related to sexual intercourse.
  - Injections culturally more acceptable (privacy).
  - Decreases menstrual cramps.
  - Has less slowing effect on blood circulation than combined pills.
  - May increase blood haemoglobin level.
  - May have beneficial effect on sickle cell disease.
  - May protect against ovarian and endometrial cancer.
  - Does not decrease breast milk production.
  - Low risk of ectopic pregnancy.

- **Discuss the disadvantages with the client:**
  - No protection against STIs and HIV/AIDS.
  - May cause irregular bleeding.
  - Menses may cease for several months.
  - Return of fertility may be delayed after stopping injection(average about 6-18 months).
  - May cause weight gain.
  - Breast tenderness, nausea, headache and abdominal discomfort.

- Provide the injectable contraceptives to the client.

Apply pressure on injection site with the cotton wool to prevent bleeding. Do not RUB SITE.

Post Injection Instructions

- Instruct the client on the following:
  - To use a barrier method during the first month after injection.
  - That irregular menses or amenorrhoea (no menses) may be experienced.
  - To return to clinic in 3 months for repeat injection if on Depo-Provera, or 2 months if on Noristerat (for the first 4 doses) then every 3 months (12 weeks) or 1month (4 weeks) for Norigynon. Encourage client to keep appointments.
  - To return to the clinic if the following is experienced:
    - Any concerns about the method.
    - Danger signals such as weight gain, headache, heavy bleeding, and depression.
  - To inform physician that she is using injectable contraception, whenever she consults a physician or is admitted to hospital.

- Give appointment for return visit – 3 months (12 weeks) for Depo-Provera or 2 months (8 weeks) for Noristerat or 1 month (4 weeks) for Norigynon.
- Teach self breast examination.

FOLLOW-UP

Every 3 Months for Depo Provera or 2 months (8 weeks) for Noristerat or 1 month (4 weeks) for

Norigynon:

- On the appointment day:
  - Review the client's record card.
  - Ask if she has questions, complaints or concerns. Is she satisfied with the method?
  - Ask about menstruation; date, duration and quantity.
  - Ask about Danger Signals;
  - Ask if she has been doing breast self-examination.
  - Test urine for sugar and record.
  - Check weight and record.
  - Check blood pressure and record.
  - If client is satisfied and has no contraindications to continued use, give the repeat injection.
  - If client defaults for more than 7 days, do a pregnancy test (if possible) and if negative, give the next injection. If pregnancy test is not possible, give a barrier method until she has withdrawal bleeding.
  - Give the follow-up appointment for 3 months or 2 months or 1 month.
  - Record on client's card/appropriate MIS form.

- **Every 12th Month Visit**:
  - Review the client's card.
  - Obtain history as for the 3/2 monthly visits; update information on the record card.
  - Perform a complete physical examination, including Pap smear.
  - Give repeat injection.
  - Give follow-up appointment.
  - Record on client's card.
  - Enter in the appropriate MIS form.

3.1.4 HORMONAL IMPLANTS

Implants are progestin-only contraceptives inserted under the skin of a woman's upper arm through a minor surgical procedure.

TYPES:

NORPLANT: Six thin, flexible capsules filled with levonorgestrel (LNG) 36mg which are inserted just under the skin of a woman's upper arm are good for parous adolescents who want long-term, highly effective, reversible contraceptive that does not require daily action. Contraception ability lasts for 5 years.

JADELLE: 2 silicon rods containing 75mg Levonorgestrel. It is an improved version of **NORPLANT**. Contraception ability lasts for 5 years.

UNIPLANT: 1 rod containing nomegestrol acetate. Contraception ability lasts for 1 year.

IMPLANON: 1 rod containing progestin – ketodesogetrel. Contraception ability lasts for 3 years.

- Discuss the Advantages of Norplant with the client:
  - Norplant is a very safe, effective and reversible contraceptive.
  - The active substance (levonorgestrel) is contained in six plastic-like capsules, which are inserted under the skin of the client's upper arm.
  - Continuous contraception is provided for up to 5 years after insertion.
  - Norplant becomes effective within 24 hours of insertion.
  - At anytime and for any reason, the Norplant implants can be removed if so indicated or requested by client.
  - Once removed, return to fertility is not delayed.

NOTE: Insertion and removal of Jadelle, Uniplant and Implanon are easier and faster than Norplant because of the fewer rods.

- Discuss the disadvantages with the client:
  - Spotting and irregular vaginal bleeding may occur with use of Norplant.
  - A minor surgical procedure is required to insert or remove Norplant.
  - Amenorrhoea may occur.
  - Conduct insertion of implants using standard protocol.
  - Refer clients if facilities for insertion are not available.

- Discuss post insertion care and give instructions.

  Observe the client in the clinic for 15 minutes for signs of fainting or bleeding from insertion site.

  Instruct the client to:

  - Keep the insertion area dry for 2-3 days, after which the dressing can be changed if it becomes wet.
  - Return to the clinic if undue pain is experienced after insertion.
  - Return to the clinic if there is heavy bleeding.
  - Inform the Service Provider that she is using Norplant. If there is need to treat her for any other ailment.

  - Treatment reviewed for unrelated medical problem should be reported to the Health Clinic.
  - Watch out for the following danger signs and come to the clinic immediately:
    - Feeling unwell
    - Fever
    - Severe abdominal pain
    - Heavy vaginal bleeding

- Pus at site of insertion
- Amenorrhoea

FOLLOW UP

- Schedule follow up appointment as follows:
  1st Visit - 3 months

  2nd Visit - 6 months

  3rd Visit - 12 months after insertion, thereafter yearly.

- At each follow-up visit:
  - Ask the client if she has any complaints.
  - Inquire about her menstrual cycle with emphasis on regularity, intermenstrual bleeding or amenorrhoea.
  - Check her blood pressure and weight.
  - Record service in the appropriate MIS form.
  - Reassure the client and/or treat any abnormalities as necessary.
  - Provide a back-up method if Norplant has to be removed and client is still interested in contraception.
  - Remind the client of the life span of the type of implant she has.

Client should be encouraged to report any complaint related to the method.

- Discuss the indications for removal with client:
  - Recommended active period has lapsed.
  - There are complications.
  - Client desires to become pregnant.
  - Client wants to discontinue its use.

Following removal, normal fertility returns almost immediately and pregnancy may occur at any time. Tell her to use other methods of contraception if pregnancy is not immediately desired.

3.1.5 NATURAL FAMILY PLANNING METHODS/FERTILITY AWARENESS BASED METHODS

Natural family planning methods are based on the ability to recognize certain physiologic changes associated with ovulation. This enables couples to recognize fertile and infertile phases of the menstrual cycle. The couple can plan the time of intercourse according to their desire to achieve

pregnancy; hence the methods are sometimes called fertility awareness methods. These methods are not appropriate for adolescents whose menstrual cycles are not stabilized. **They have very high failure rate.**

Types

- The basal body temperature (BBT) methods
- The calendar/rhythm method
- The cervical mucus method (CMM) or Billings ovulation method
- The sympto-thermal method (STM)

- Discuss the advantages of natural family planning methods:
  - Safe
  - Helpful for planning or avoiding pregnancy
  - Inexpensive
  - Acceptable to many religious groups that oppose conventional method
  - Encourage couples to communicate about family planning and sexuality

- Discuss the disadvantages of natural family planning methods with the client:
  - Require high motivation for success.
  - Restrict sexual spontaneity.
  - Not suitable for young women who often have irregular menses.
  - Require along time of practice.
  - No protection against STIs and HIV offered.

> ***Natural family planning methods do not protect against STIs and HIV/AIDS.***

Provide instructions for users of each method as follows:

Basal Body Temperature Method

- Instruct the clients as follows:
  - Take oral temperature in the morning before getting out of bed and before eating or drinking anything, or putting anything in your mouth.
  - Take temperature at the same time every morning.
  - Leave thermometer in the mouth for five minutes.
  - Record the reading at the level the mercury stops.
  - If mercury stops in between two readings take the lower reading as your temperature.
  - Can also use rectal reading (for 2 minutes) or vaginal reading (for 3 minutes).
  - Record reading on a temperature chart.
  - Abstain from intercourse from the first day of your period until after the third consecutive day of rise of body temperature.
  - Do not use this method if you are breast feeding (temperature may not rise during this period).
- Request client to repeat instruction.

> ***This method is not reliable when there is febrile illness.***

Calendar/Rhythm Method

- Instruct the client as follows:
  - Record the first day of each menstrual cycle for 6-12 months.
  - Determine the beginning of the fertile period by subtracting 18 days from the shortest cycle.
  - Determine the end of the fertile period by subtracting 11 days from the longest period.
  - If your longest period is 31 days and the shortest is 23 days, your fertile period is from the 5th to the 20th day of your cycle, i.e. 16 days.
  - Abstain from intercourse during this period every month.
  - If your period is irregular do not use this method of contraception; use spermicides or other barrier methods as well.
- Request client to repeat instruction.

> ***Adolescents may not be able to keep to the strict record keeping and be disciplined to abstain from sexual intercourse on required days.***

The Cervical Mucus (Billings) Method

- Explain the following to the client:
  - Billing's method is based on changes that take place in the quantity and quality of the cervical mucus during the menstrual cycle. Prior to ovulation the mucus is thick. At ovulation the mucus becomes thin, clear, plenty in amount and watery. It is easily stretched out between the fingers, like egg white. After ovulation it becomes thick again and does not flow.

- Provide instructions to the client on the use of cervical mucus method as follows:
  - Abstain from intercourse during the menstrual period.
  - Feel the vagina daily for mucus.
  - Have sexual intercourse during the "dry" days when no mucus appears.
  - Abstain from intercourse whenever there is inter-menstrual bleeding.
  - Abstain from intercourse once mucus appears and continue abstinence until four days after mucus has ceased.
  - Abstain on alternate days, during the learning phase, prior to onset of the feeling or observation of mucus in order to minimize the difficulty of recognizing the onset of mucus secretion because of the presence of seminal fluid.
  - Record findings daily on appropriate chart.

Symptho-thermal method

This is a combination of the temperature, calendar and mucus methods to determine time of ovulation. Other ovulation – associated signs and symptoms such as breast tenderness, feeling of bloatedness, mid-cycle pain and vaginal spotting are also used in this method.

- Explain to client as follows:
  - Avoid intercourse during the fertile period as determined by BBT or calendar method, or when mucus is first noted, whichever comes first.

3.1.6 COITUS INTERRUPTUS (WITHDRAWAL METHOD)

Coitus interruptus (withdrawal method) is when the penis is withdrawn from the vagina just before ejaculation.

- Instruct the client as follows:
  - Wipe off any fluid at the tip of the penis, before intercourse (pre-sexual emissions may contain sperm).
  - Withdraw the penis from the vagina when ejaculation is about to occur and make sure ejaculation occurs away from the entrance of the vagina.
  - Do not use this method if there is going to be repeated acts of intercourse.
  - Do not use this method if your partner is not in full control of ejaculation.
  - In case of an accident (failure to withdraw completely before ejaculation has taken place) use a quick acting spermicide such as foaming tablet or jelly immediately, and emergency contraceptive within 72 hours.

- Disadvantages:
  - Partner may fail to withdraw, resulting in possible pregnancy.
  - Withdrawal may occur late after introduction of some semen which can result in pregnancy.
  - There may be feeling of sexual dissatisfaction or unfulfilment.

CHAPTER FOUR

SEXUALLY TRANSMITTED INFECTIONS INCLUDING HIV/AIDS

4.1 SEXUALLY TRANSMITTED INFECTIONS

Sexually transmitted infections (STIs) are infections that are spread through sexual intercourse. Common STIs include gonorrhoea, syphilis, herpes, chlamydia, trichonomiasis, candidiasis, genital warts, Human Immunodeficiency Virus (HIV).

STIs can be painful and uncomfortable; they can also have tragic consequences such as pelvic inflammatory diseases (PID), infertility, blindness, and death. STIs are significant public health problems, but more so in adolescents. Adolescents and young adults are at higher risk of contracting STIs. Existing prevalence figures in Nigeria do not differ significantly from global figures. The age group, 15-24yrs, are more vulnerable because they are entering the period of sexual activity, resulting in higher incidence of STI cases. During this period, they are more likely to have a less stable relationship, do not have skills for safer sex negotiation and have less access to STI care due to lack of awareness, lack of money or restrictive policies of clinics. Females are more at risk of contacting STIs than males because of earlier sexual debut, involvement with higher risk, older partners and prone to sexual abuse.

Assessment/Identification of the Problems

Introduction	• Greet the adolescent warmly. • Introduce self to client and ask general questions to establish rapport.
History taking – Take a personal, sexual and gynaecological history.	History taking is one of the most important and sensitive parts of the encounter with the adolescents with STI, since we ask and probe about sexual behaviours and concerns. Privacy and confidentiality should be ensured. **Essential information to obtain during history taking:** • Biodata: Name, Sex, Age/ date of birth, Address, Level of education,

	Occupation, Marital status, Religion, Number of partners, Number of children. • Present complaints: Symptoms and their duration. • Medical history: Reproductive Tract Infections (RTI) and STI in the past, other illnesses and drug allergies. • Sexual history: Currently sexually active, age at first intercourse, new partner and sexual behaviours. • Contraceptive method, if any and date of last menstrual period.
STIs Risk Assessment - adolescent's risk of contracting STI	**Risk Assessment of STI patients** Risk assessment is a process of asking the patient particular questions to determine the probability of her contracting or transmitting an STI (e.g. many women may be at risk due to the behaviour of their sexual partners). Risk assessment can be used in both males and females. A female is said to be risk assessment positive if: • Male partner has urethral discharge. Or • She answers 'yes' to any 2 of the following: - Unmarried - Under 21 years and sexually active - More than one partner in the last 12 months - New partner in the past 3 months

Physical examination of adolescent with suspected STI	**General Examination**: Physical examination confirms any STI symptoms the patient has described by checking for signs of STI. Examining the most private parts of a person's body especially an adolescent's requires sensitivity and respect on the part of the health worker. The need for an STI examination is to: • Confirm history • Arrive at a diagnosis • Provide additional information for managing the client • Ascertain the general health of the client • Identify the signs of infection(s) • Determine the extent of infection(s) • Confirm the client's history • Find other signs that the client did not mention. **Ethical Issues and Professional Behaviour** Ethical issues require that health care providers respect the right of the patient. They should: • ensure privacy and confidentiality; • explain what you are going to do and why the examination is important; • be gentle with patients; • approach the examination in a confident and professional manner; • have a chaperone in attendance. For most syndromes, the examination is important in order to arrive at a diagnosis. However, we must never force someone to be examined. **Examining the Patient** All patients should be fully examined no matter the reasons for attending the health facility. Seek consent always before carrying out any procedure on the patient. Perform a general physical examination by checking for - skin rash - weight loss - fever - pallor - jaundice - neck stiffness - lymph node enlargement - level of consciousness.

Examining the Male Patient

(1) Ask the patient to stand up and lower his pants to expose the genital area.

(2) Palpate the inguinal region in order to detect the presence or absence of enlarged lymph nodes and buboes.

(3) Palpate the scrotum, feeling for individual's parts of the anatomy:
- testes
- spermatic cord
- epididymis.

(4) Examine the penis, noting any rashes or sores. Then ask the patient to retract the foreskin if not circumcised, and look at the:
- glans penis,
- urethral meatus (orifice).

If you cannot see an obvious urethral discharge, ask the patient to milk the urethra in order to express any discharge.

(5) Examine the rectum for prostrate enlargement (done by health worker with pre-requisite training).

(6) Record the presence or absence of:
- Buboes,
- ulcers,
- urethral discharge, noting the colour and amount.

Examining the Female Patient

Remember to do a general examination before STI examination.

1. Ask the patient to remove her clothing from chest down, and lie face up on the couch. To prevent embarrassment, use a sheet to cover the parts of her body that is not being examined.

2. Ask the patient to bend her knees and separate her legs, then observe the vulva, anus and perineum.

3. Palpate the inguinal region in order to detect the presence or absence of enlarged lymph nodes and buboes.

4. Palpate the abdomen for pelvic masses and tenderness.

	5. Perform a vaginal and speculum examination (done by health worker with pre-requisite training). 6. Record the presence or absence of - Buboes, - Ulcers, - vaginal discharge, noting the type, colour and amount. *Gloves are required if you wish to conduct a vaginal or bimanual examination.

Common symptoms and signs of STIs are listed in the table below:

Table 4.1: Symptoms and Signs of STIs

MALE	**FEMALE**
Urethral discharge	An unusual vaginal discharge
Pain while urinating	Burning or itching around the vagina and vulva
Passing urine frequently	Bleeding from the vagina which is not during the menstrual period

Urinary urgency	Pain deep inside the vagina when having sex
Genital blisters and/or ulcers	Pain in the pelvic area between the navel and the sex organ.

Forms commonly used include:

- STI/RTI Clinic form (STI/RTI-01) - if the client presents at a PHC facility
- Syndromic STI/RTI Reporting Form (STI/RTI-02)
- Aetiologic STI/RTI Reporting Form (Secondary and Tertiary Care facilities) (STI-03)

MANAGEMENT

- Use the syndromic approach to STD Management, which is presented as flow charts (See next pages and also "National Guidelines on the Syndromic Management of Sexually Transmitted Infections (STIs) and other Reproductive Tract Infections (RTIs)).
- This approach allows health care providers to diagnose and treat patients on the basis of groups of symptoms presented by the patients other than for specific diseases.

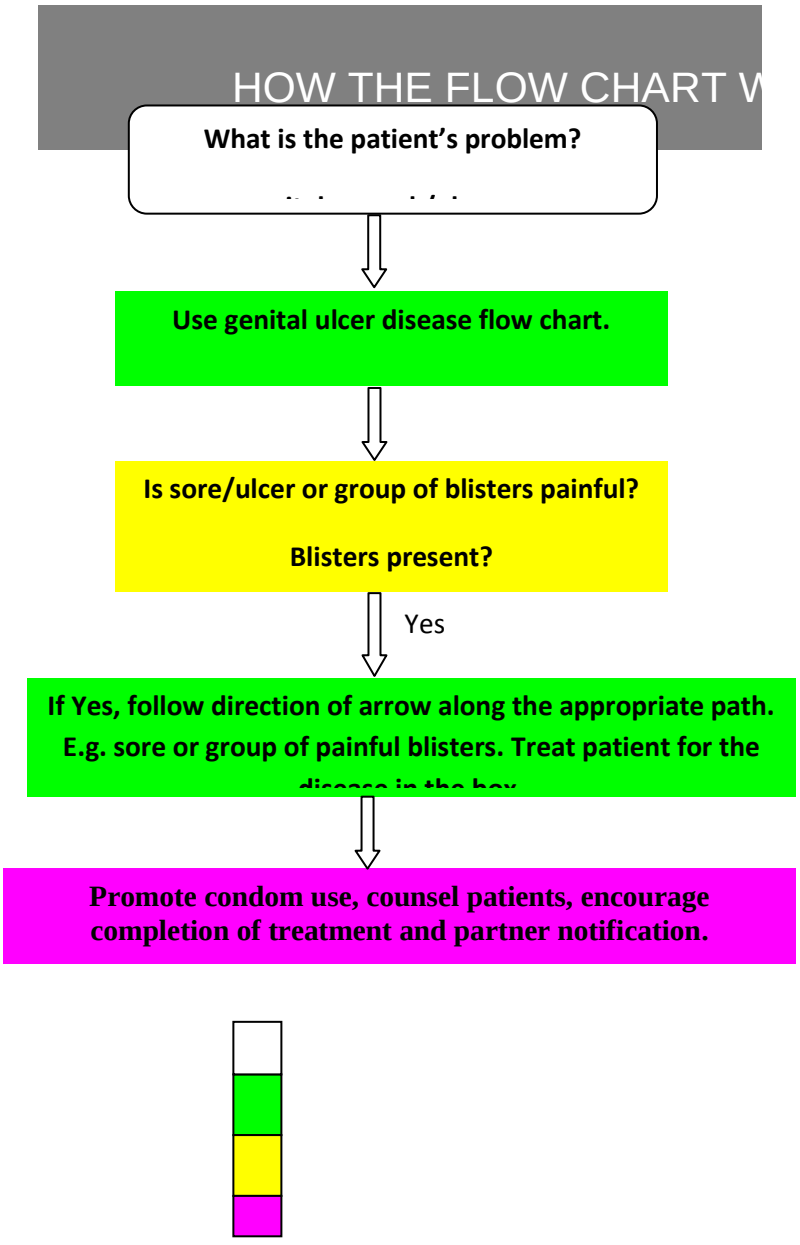
Table 4.2 - The 4Cs of good STI Management

COUNSELLING **You should:**	**COMPLIANCE** **Encourage patient to:**	**CONDOMS** **You should:**	**CONTACT TREATMENT** **Encourage patient to:**
Put yourself in your patient's place (show empathy) .	Avoid self medication.	Inform patient of proper condom use as the only alternative.	Inform all sexual partner(s) in the last three months to seek medical treatment.
Listen to patient and engage in dialogue.	Ensure completion of treatment regimen even after all the symptoms have disappeared and not to share the medication with partner.	Educate patient on consistent and correct condom use.	Avoid further spread of the infection to others.
Counsel patient on the need to change risky behaviour.	Abstain from sex until treatment is completed and infection cured.	Demonstrate condom use .	Avoid re-infection.
Educate patient on STI prevention .	Follow other instruction.	Provide condoms to patient.	
Educate patient on the implications of untreated STI.			

The 4Cs should be emphasized to all patients regardless of the diagnosis, in order to encourage safe sexual practices.

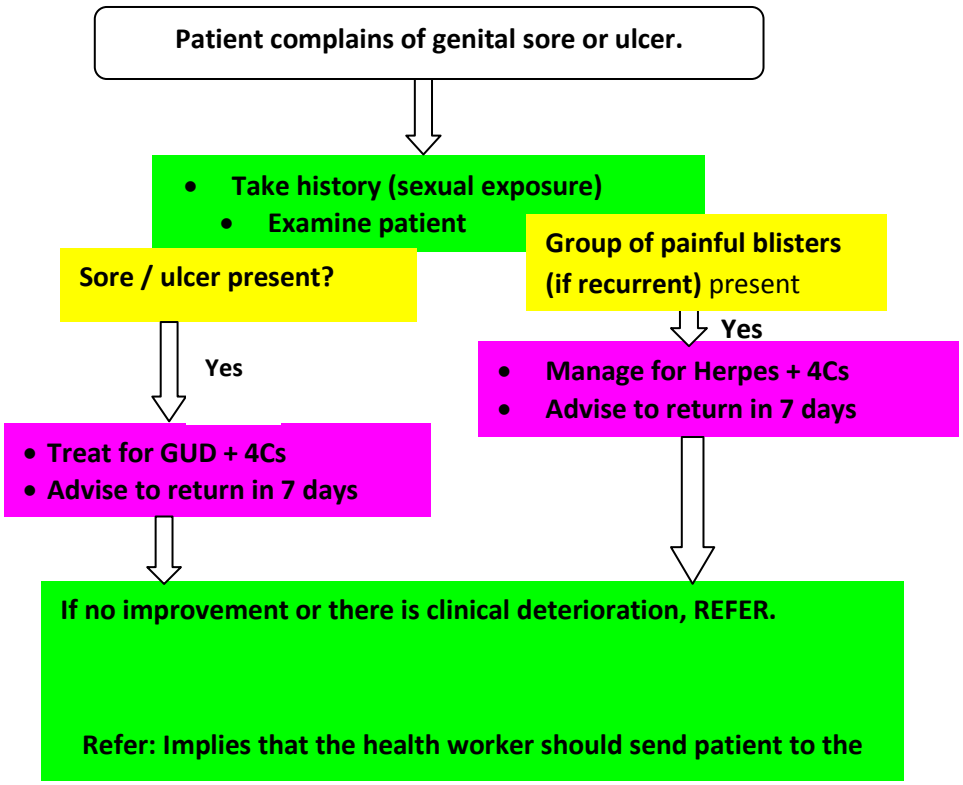
4.1.1 FLOW CHARTS FOR SYNDROMIC MANAGEMENT OF SEXUALLY TRANSMITTED INFECTIONS

Figure 4.1



A. SYNDROMIC MANAGEMENT OF GENITAL ULCER DISEASE (GUD)

Figure 4.2



Drug Treatment for GUD:

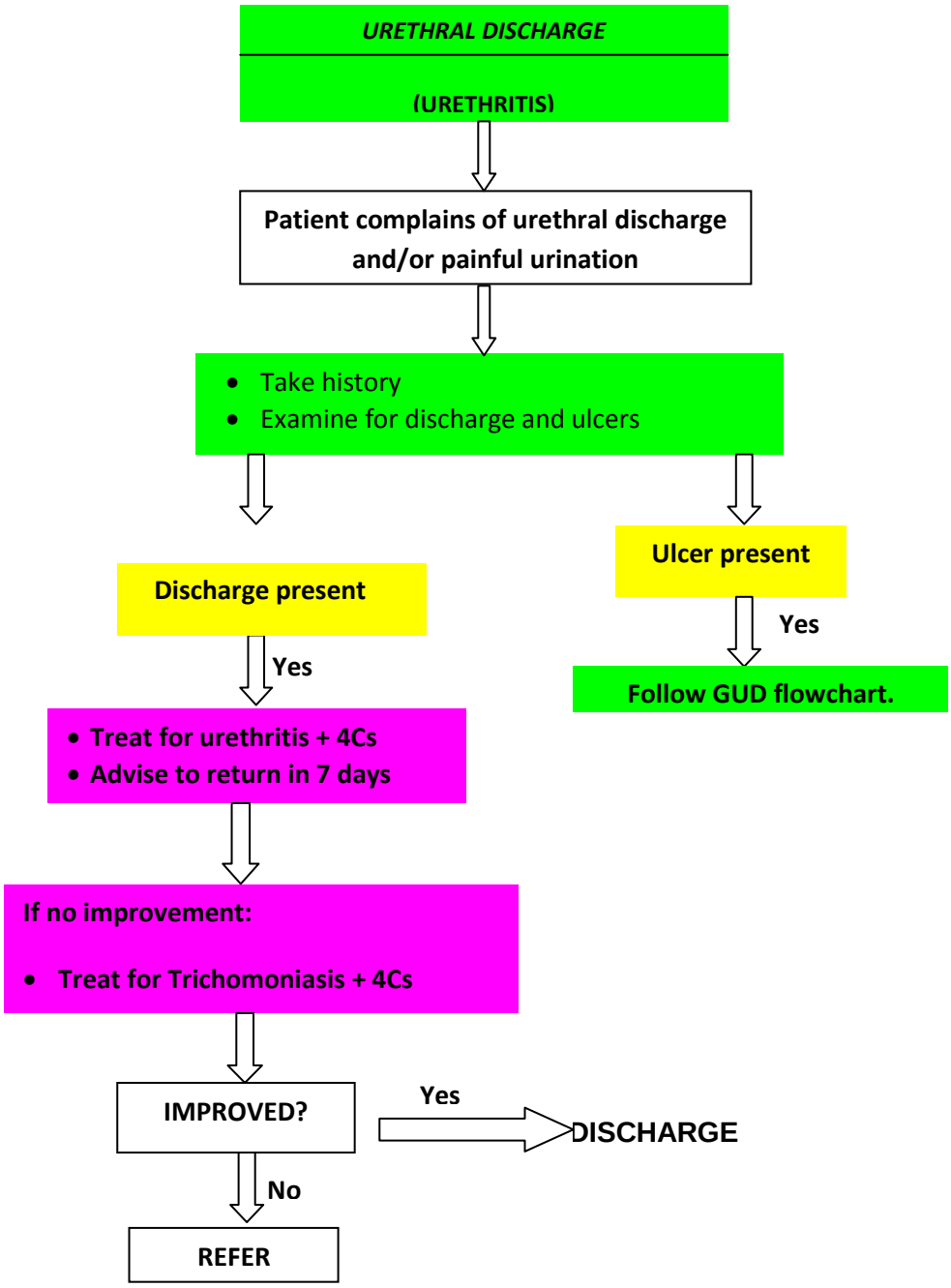
- Benzathine Penicillin G. 2.4 Million Units IM in a single session.
- Erythromycin 500mg tab orally 6 hourly (4 times a day) for 7 days.

Drug Treatment for Herpes:

- Acyclovir tab 400mg tds orally for 7 days (also in pregnancy).
- Analgesics, keep lesion dry and avoid sex during relapse.

B. SYNDROMIC MANAGEMENT OF URETHRITIS

Figure 4.3



Drug Treatment for Urethritis:

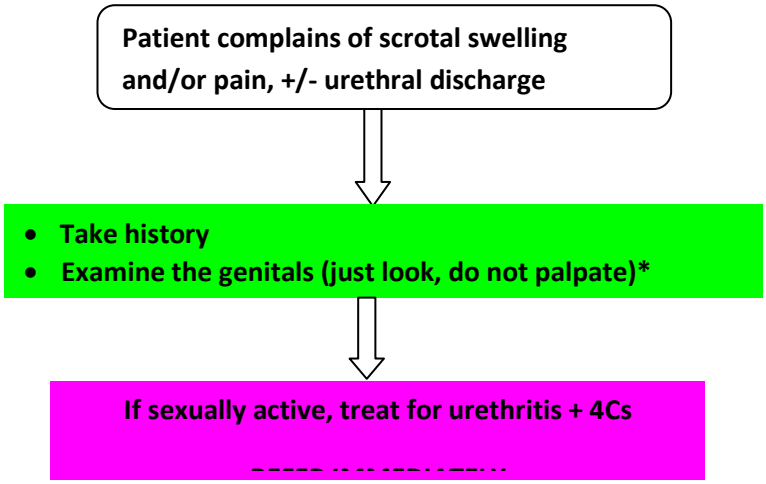
- Ciprofloxacin 500mg tab as single oral dose.
- Doxycyline 100mg cap orally twice daily for 7 days.

Drug Treatment for Trichomoniasis:

- Metronidazole 2g orally in a single dose.

C. SYNDROMIC MANAGEMENT OF SCROTAL SWELLING

Figure 4.4



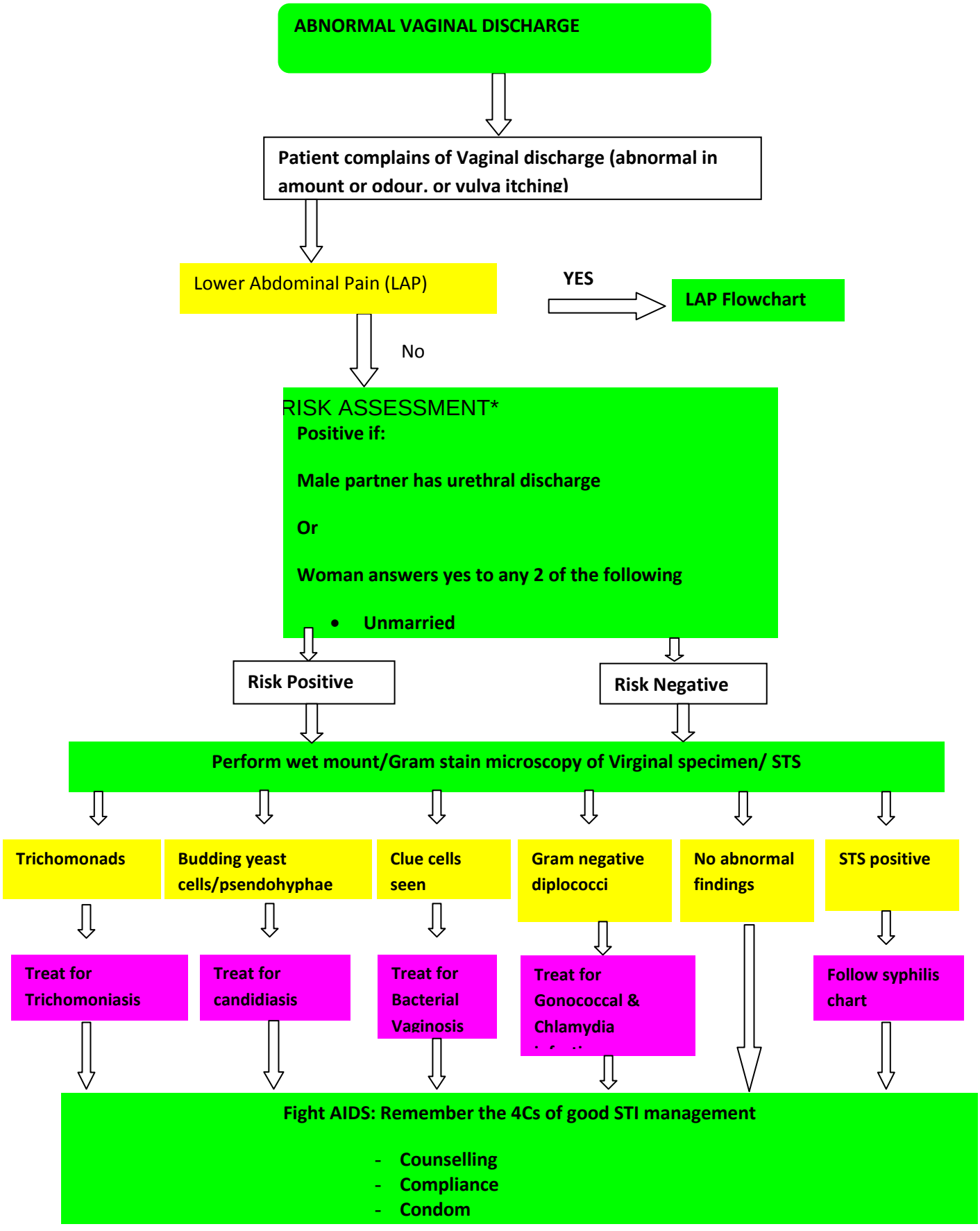
Drug Treatment for Urethritis:

- Ciprofloxacin 500mg tab as a single oral dose.
- Doxycyline 100mg tab orally twice daily for 7 days.

* *Because of the risk of more serious surgical emergencies.*

D. SYNDROMIC MANAGEMENT OF ABNORMAL VAGINAL DISCHARGE

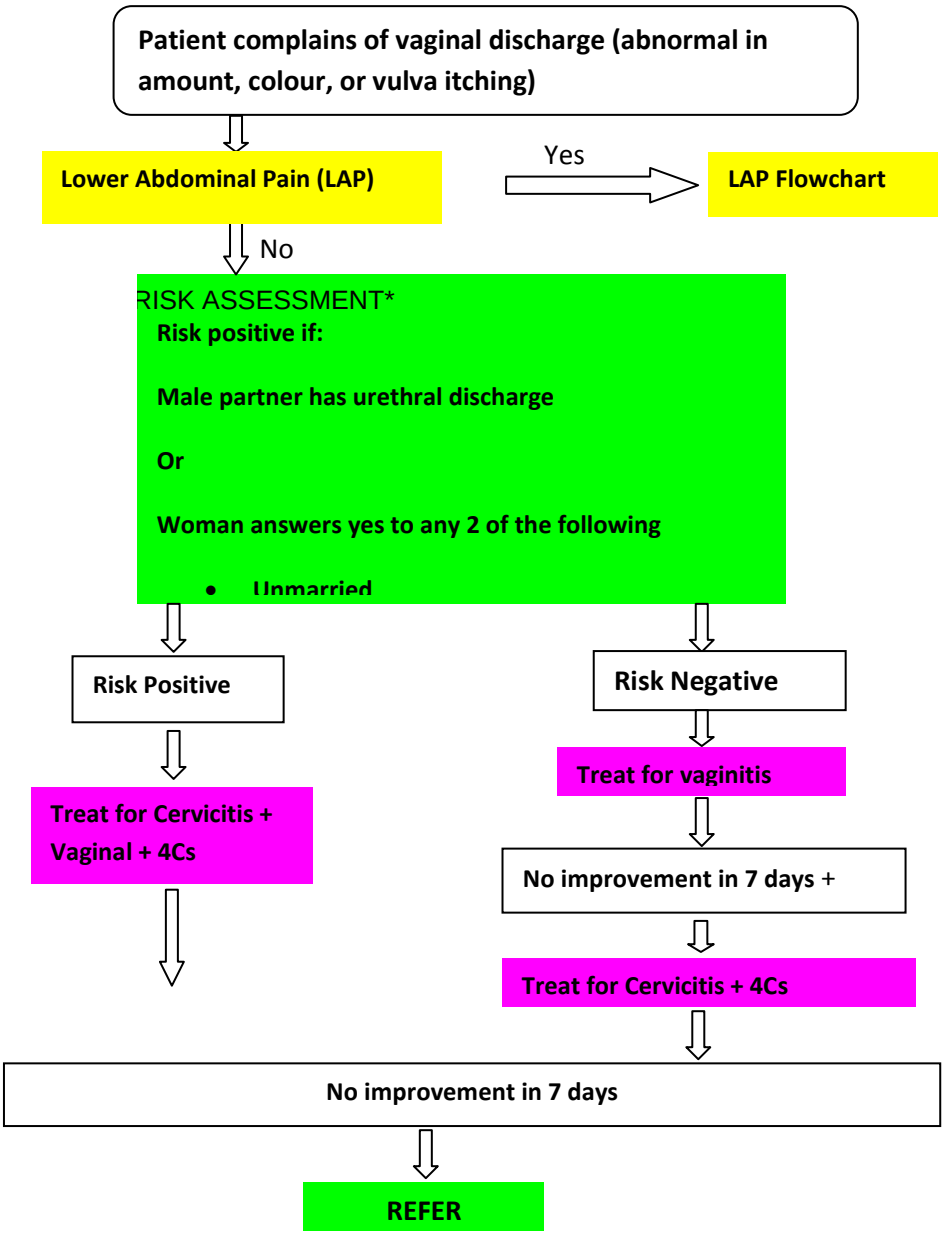
Figure 4.5



E. SYNDROMIC MANAGEMENT OF ABNORMAL VAGINAL DISCHARGE

(DIAGNOSTIC FACILITIES NOT AVAILABLE)

Figure 4.6



Drug Treatment for Cervicitis:

- Ciprofloxacin 500mg tab as a single oral dose.
- Doxycyline 100mg cap orally twice daily for 7 days.

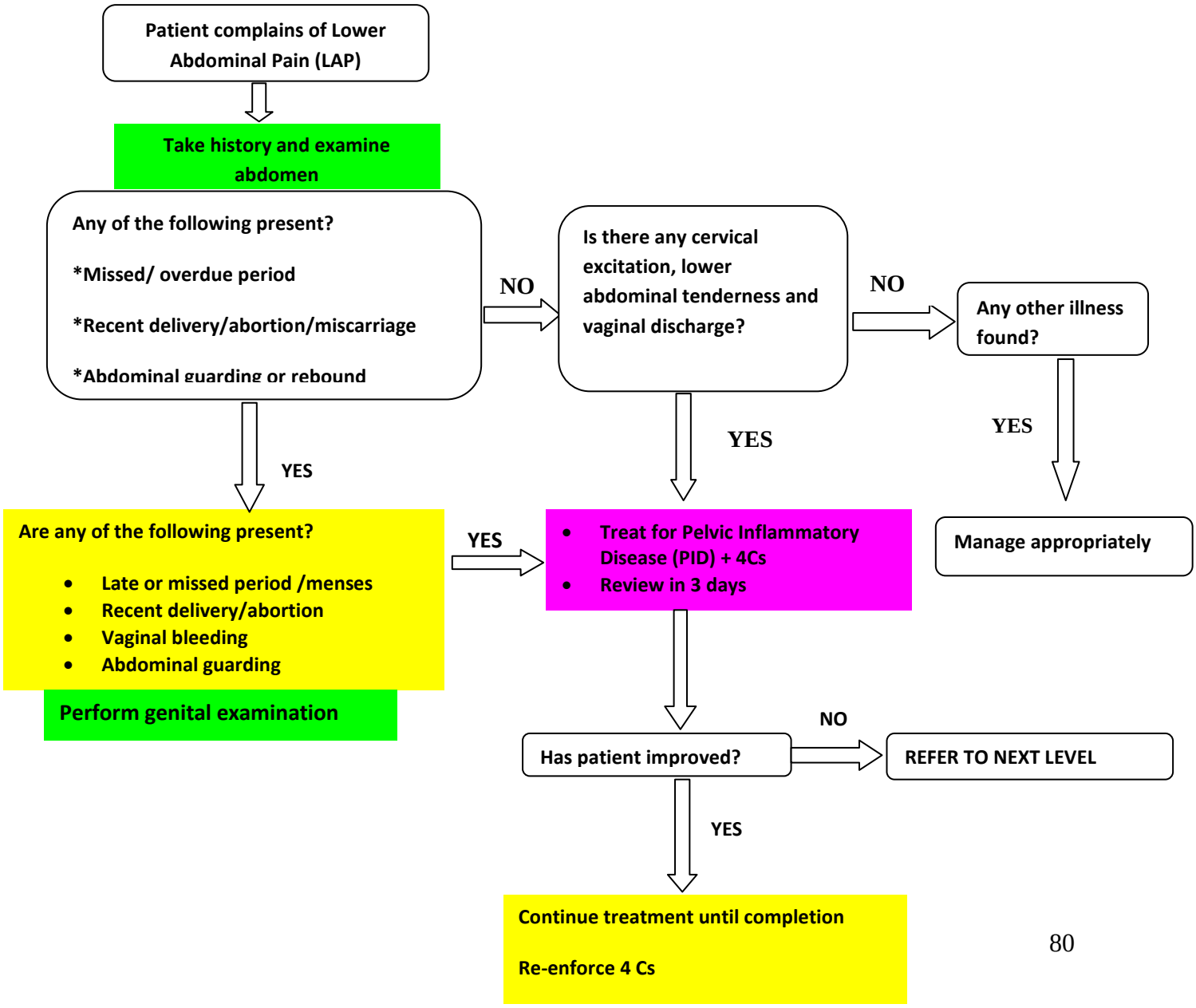
Drug Treatment for Vaginitis:

- Nystatin vaginal pessaries 100,000 Units inserted every night for 14 days.
- Metronidazole 2g orally in a single dose or 400mg twice daily for 7days.

** Risk Assessment might change after validation of Flowchart.*

F. SYNDROMIC MANAGEMENT OF FEMALE LOWER ABDOMINAL PAIN

Figure 4.7

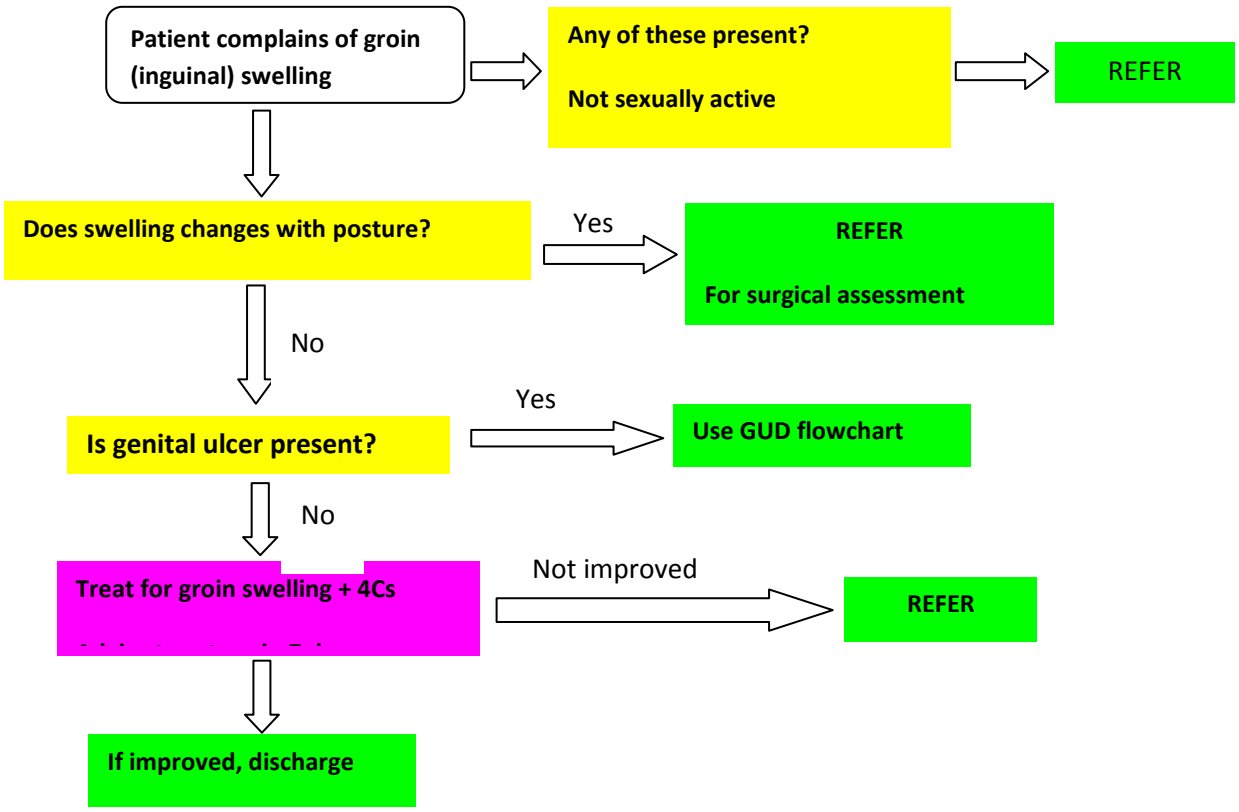


Drug Treatment for PID:

- Ciprofloxacin 500mg tab as a single oral dose;
- Doxycyline 100mg tab. orally twice daily for 7 days;
- Metronidazole 400mg tab orally twice daily for 14 days.

G. SYNDROMIC MANAGEMENT OF SWELLING IN THE GROIN (INGUINAL BUBO)

Figure 4.8



Drug Treatment for Groin Swelling:

- Ciprofloxacin 500mg tab as a single oral dose;
- Doxycyline 100mg cap. Orally twice daily for 7 days.

GENITAL DISCHARGE IN PRE-PUBERTAL GIRLS

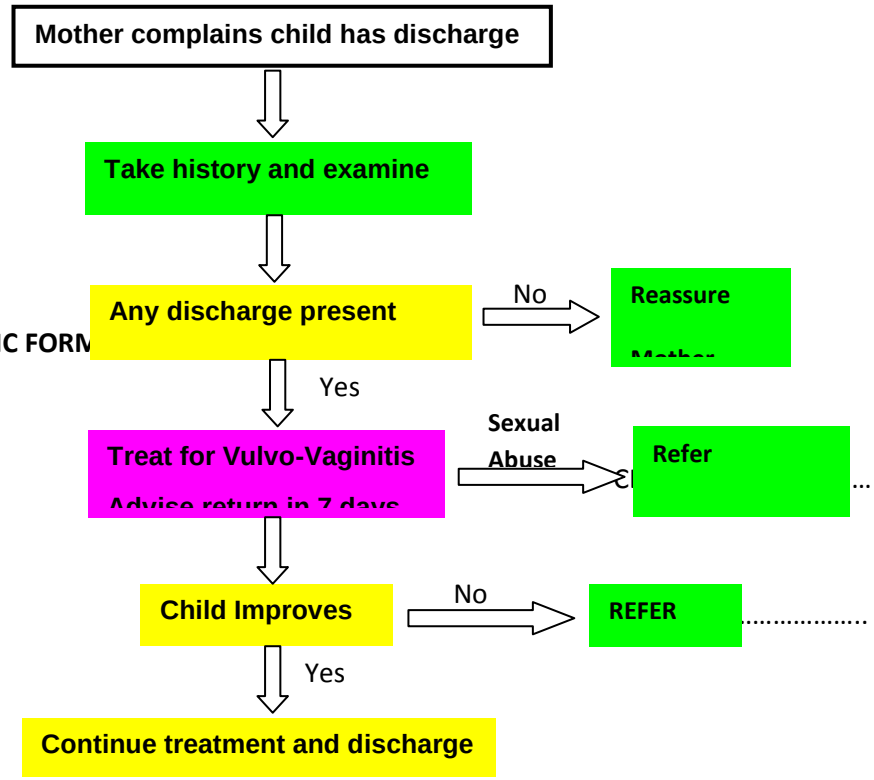
Vulvovaginitis in older children usually results from contamination of the vulva by the organism infecting the mother or care giver. Infected mothers or care givers who share towels with their wards are often implicated. Vulvovaginits could result from sexual assault or sexual abuse in children. Ideal cultures for N. *gonorrhoea* should be performed with biochemical test to confirm the diagnosis in such medico legal cases. Additionally serological tests for syphilis, HIV, and hepatitis are required.

All children with vulvovaginits should be treated using the vulvovaginits flowcharts. In treating vulvovaginits, treat for gonorrhea and Chlamydia as well. Parents of these children should be given appropriate treatment using the flowchart for urethral discharge in males and vaginal discharge in females. In all cases of sexual abuse or sexual assault, the children should be referred for adequate medical management, psychological and social support.

H. MANAGEMENT OF VULVO-VAGINITIS IN PRE-PUBERTAL GIRLS

Figure 4.9

STI/RTI CLINIC FORM



1. Clinic: ……..LGA: …….. State: ……...

2. Name of Patient: ……..

3. Address: ……

4. Date of Birth: ……
(*Circle appropriate answer where applicable)*

5. Sex: Male/Female

6. Occupation: ……

7. Education level attained: nil/primary/secondary/tertiary/post tertiary

8. Marital Status single/married/divorced/separated/widowed

9. Number of wives/partners: ……..

10. Reason for attending (comment): ……

Asymptomatic check-up: ……...

Symptomatic self-reporting: ……..

Others: ……

11. Referred by: ……..

12. Sexual History

13. Number of sexual partners in last 3 months:

Is/Are partner(s)	wife (wives)/husband	[ ]
	Boyfriend/girlfriend	[ ]
	Others/casual	[ ]

14. Previous History of STI: Yes [ ] No [ ] Type of STI: ……..

If yes, was it within the last year:

15. Condom use: How often (Always/ usually/ Sometimes/ Never): ……..

With whom (which partner): …….

16. Other Contraceptive use: Which type?

How often? (Always/ usually/ Sometimes/ Never):

17. Last menstrual period

18. Are you pregnant? Yes [ ] No [ ]

19. Previous history of Abortion/Miscarriage Yes [ ] No [ ]

If yes, when was the last pregnancy?

20. Previous history of preterm delivery Yes [ ] No [ ]

If yes when was the baby delivered

21. Any history of sexual abuse? Yes [ ] No [ ]

22. Any history of insertion of materials into the vagina? Yes [ ] No [ ]

23. **COMPLAINTS** **PHYSICAL EXAMINATION**

Tick box, if yes and describe.Tick box, if abnormality is observed and describe.

Discharge	[ ]…….	Mouth	[ ] ……
Dysuria	[ ]…….	Eyes	[ ]…….
Urinary Frequency	[ ]……	Skin	[ ]……
Ulcer	[ ]……	Abdomen	[ ]……
Pain	[ ]……	Groin	[ ]……
Swelling	[ ]……	Lymph nodes	[ ]……
Rash	[ ]……	Perineum	[ ]……..
Itching	[ ]……	Discharge	[ ]……..
Abdominal Pain	[ ]……	Penis	[ ]…….
Eyes	[ ]……	Scrotum	[ ]…….
		Vulva	[ ]……..
		Vagina	[ ]…….
		Cervix	[ ]…….

Others: ……..

24. Syndrome based diagnosis: ……..

25. Treatment: ……

26. Referral: ……

Signed: …….. Date: ……..

FOLLOW-UP VISITS

Date	Note	Treatment

SYNDROMIC STI/RTI REPORTING FORM [STI/RTI02]

Health Facility …… Location …….. LGA ……State ……

Day ……. Month …… Year ……

	NUMBER OF CASES													GRAND TOTAL
	MALE (Age in years)							FEMALE (Age in years)						
	<1	1-4	5-14	15-24	25-39	>39	TOTAL	<1	1-4	5-14	15-24	25-39	>39	TOTAL	
Urethral discharge															
Vaginal discharge															
Lower Abdominal pain															
Genital Ulcers															
Genital Warts															
Eye discharge in infants															
Scrotal Swelling															
Swelling in the groin															
Vagina discharge in pregnancy/postpartum															
Bleeding in early pregnancy															

Premature rupture of membrane															
Postpartum infection															
Genital discharge in the pre-pubertal Girl															
Sexual violence															
Other STI/RTI															
TOTAL															

Total number of cases seen in the month ……

Name of Reporting Officer …… Designation ……Signature…….

Name of Supervisor ……..Designation …… Signature …….

AETIOLOGIC STI/RTI REPORTING FORM (for secondary and tertiary facilities) STI-03

Health facility …… Location …… LGA …… State ……. Day ……. Month: …….. Year ……

STI	NUMBER OF NEW CASES SEEN													LAB CONFIRMED CASE			GRAND TOTAL
	MALE							FEMALE									
	<1	1-4	5-14	15-24	25-39	>39	TOTAL	<1	1-4	5-14	15-24	25-39	>39	TOTAL	M	F	
Gonnorrhoea																	
Urethritis																	
Trichomoniasis																	
Candidiasis																	
Primary Syphillis																	
Secondary Syphillis																	
Chancroid																	
Granuloma Inguinale																	
Lymphogranuloma Venereum																	
Genital Warts																	
Gonococcal Ophthalmia neonatorum																	
Non-Gonococcal Ophthalmia neonatorum																	

HIV Infection																	
AIDS																	
Herpes Simplex																	
Post abortal sepsis																	
Peripartum sepsis																	
Sexual violence																	
Vulvovaginitis																	
Others																	
TOTAL																	

Total number of new cases seen in the month: ……

Name of Reporting Officer …….. Designation …….. Signature ……..

Name of Supervisor …….. Designation …….. Signature ……..

4.1.2 GUIDELINES ON LABORATORY PROCEDURES

Introduction

Although syndromic approach endorsed by WHO has become the standard of care in many countries, laboratory procedures play an essential role in epidemiological and microbiological surveys, antimicrobial susceptibility studies and in the validation of treatment and management approaches of STI. Many infections are asymptomatic, especially in women; and even when symptomatic, they may be due to different causes. Simple, inexpensive diagnostic laboratory tests are sometimes necessary to detect some of these infections.

The primary role of the laboratory is to support decision making in clinical practice and public health. In clinical practice, it is used for diagnosis, case finding and screening while in public health it is used: to help document the epidemiology of STDs, provide operational research and quality control. Types of tests that can be performed at the different levels of care depend on the resources, technical skills and competence of staff and available equipment. The most sophisticated ones are reserved for tertiary and research institutions.

Universal Precautions

It is essential to take all necessary precautions to prevent the transmission of infections from the patient to the health care provider and to other patients. A number of RTIs such as Hepatitis B and C viruses and also HIV can easily be spread if precautions are not taken. Since it is not possible to know which patients have infection, universal precautions should be followed for all patients.

Transmission of infections can be controlled by:

- **Washing of hands**- Hands should be washed thoroughly before and after any procedure, giving injections, taking blood or any specimen or touching a wound, broken skin or body fluids.
- **Safe work practices**: use of gloves, face mask, not recapping syringes.
- **Disinfection/Sterilization of all equipment and instruments**: This will get rid of nearly all contaminants and microorganism. All instruments for use in all procedures must be thoroughly washed and disinfected before and after use.
- **Disposal of waste**: Proper handling and disposal of waste not only protect the health worker but also the general community. Sharps should be handled appropriately and disposed in ways that reduced the risk to others.

Laboratory Tests in STI/RTI Management

Laboratory tests are the backbone of aetiological management of STI. The limitations of syndromic management make laboratory diagnosis very relevant in some settings. These tests identify the specific infectious agent, which then determines the treatment to be administered. It offers accurate treatment and prevents overtreatment that is common with syndromic management.

Criteria for Laboratory Tests Selection

- Validity: test sensitivity (percentage of true positive) and specificity (percentage of true negative).
- Reliability: ability to produce similar result for same sample.
- Feasibility: operational requirements such as space, water, reagents, refrigeration etc.
- Acceptability: type of sample, easy to take, non-invasive or painful, affordability in terms of cost to the patient.

The ideal diagnostic test would be:

- Accurate–highly sensitive and specific.
- Inexpensive–affordable in developing countries.
- Simple–requiring minimal training and uncomplicated or no equipment.
- Rapid–with results available before a patient leaves the clinic (maximum 20 minutes).
- Convenient–so that specimens are simple to collect and socioculturally acceptable (do not require venipuncture or vaginal speculum examination, such as saliva, urine, vaginal swab or capillary blood).
- Stable–using reagents with long shelf life that requires no refrigeration (35¡C and 80 percent humidity).
- Functional–packaged simply with easy instructions.

Laboratory Tests and Procedures

Laboratory procedure is based on the presenting symptoms and the resources (human, material and financial) available. It varies from the peripheral (Primary Health Care) to the Central (Tertiary or University Hospital or Research Centre).

Table 4.3 Laboratory Tests and Procedures

Disease	**Causative Microorganism**	**Laboratory Tests**
Gonorrhoea	*Neisseria gonorrhoea*	1.Direct Microscopy(Gram stain) 2. Culture 3. Detection of Antibiotic resistance and susceptibility 4. Antigen detection 5. Serology
Chlamydia	*Chlamydia trachomatis*	1.Microscopy(Giemsa stain) 2. Cell culture 3. Direct Antigen detection 4. Serology
Chancroid	*Haemophilus ducreyi*	Culture Diagnosis usually based on clinical signs

Syphilis	*Treponema pallidum*	1. Dark field microscopy 2. Serology (VDRL&RPR) 3. Other serology tests (TPHA,FTA-Abs, MHA-TP)
Granuloma Inguinale	*Calymmatobactum granulomatis*	1. Microscopy (Leishman stain) 2. Histology of biopsy material
Non–gonococcal urethritis, Lymphogranuloma venereum	*Chlamydia trachomatis* *Mycoplasma sp* *Ureaplasma sp*	1.Microscopic Diagnosis (Giemsa, direct immunofluorescence) 2. Cell culture 3. Direct Antigen detection 4. Serology
Bacterial Vaginosis	*Gardnerella vaginalis*, with anaerobes	1. Microscopy(wet mount, Gram stain) 2. Vaginal fluid pH 3. Whiff test
Genital Herpes	Herpes Simplex Virus	1. Culture 2. Direct imimunofluorescence 3. Serology
Genital Warts	Human Papilloma Virus	1. Culture 2. Direct immunoassay 3. in situ hybridisation (Not commonly done)
Trichomoniasis	*Trachomonas vaginalis*	1. Microscopy (Wet mount) 2. Culture
Vaginal yeast infection	*Candida albicans*	1. Microscopy (Wet mount) 2. Culture

Processing of Specimen

The processing of specimen depends on the type of tests to be performed: The underlisted tests are performed for the identification of various microorganisms responsible for STI.

- Wet Mount Microscopy

- Gram Stain Microscopy
- Whiff test for Bacterial Vaginosis (bedside testing procedure performed by managing clinician)

- **Gram Stain Microscopy**
  - A sample of discharge is taken with a swab and a smear is made on a slide.
  - The smear is fixed by passing it rapidly over a flame.
  - Cover the fixed smear with crystal violet for 60 seconds and rinse.
  - Decolourize with acetone-ethanol for a few seconds or until the liquid runs clear avoiding excessive discolouration.
  - Rinse quickly in running water to stop discolouration and drain off excess water. Counter-stain with safranin for 60 seconds and rinse.
  - Gently blot dry and examine under oil immersion with 100X objective. Gonococci appear as gram negative diplococci. Look for intracellular gram negative diplococci. Report any other findings as multiple infections are common.
  - Gram stain can detect almost all (95%) cases of gonorrhoea from urethral discharge of men but will only diagnose 40-60% of infection from cervical smear of women.

- **Wet Mount Microscopy**
  - Wet mount microscopic examination of vaginal fluid is used in the diagnosis of yeast infection, bacteria vaginosia and trichomoniasis.
  - A swab sample of discharge taken from the side walls or deep in the vagina is mixed with one or two drops of saline on a slide and covered with a cover slip.
  - The slide is examined under a microscope at 100X magnification. Look for typical jerky movement of mobile trichomonads.
  - Examine the same slide at 400X magnification to look for yeast cells and trichomonas. For easy identification of yeast cells, mix the swab in another drop of saline and add a drop of 10% potassium hydroxide to dissolve other cell.
  - Report your findings, as there may be evidence of other infections.

- **Laboratory test for Bacterial Vaginosis**
  - Take a sample of discharge from the side wall of the vagina with a swab. Touch pH paper with the discharge and note the pH.
  - Place discharge on a glass slide. Add a drop of 10% potassium peroxide and note the colour. Look for the underlisted characteristics to diagnose Bacteria vaginosis:
    - Presence of homogenous white-grey discharge that sticks to the vaginal wall
    - Vaginal fluid pH > 4.5
    - Release of fishy amine odour from the vaginal fluid when mixed with 10% potassium peroxide (positive whiff test)
    - Clue cells visible on microscopy
  - Look for evidence of other infection and report your findings.

Rapid Plasma Reagin (RPR) and Venereal Disease Research Laboratory (VDRL) Tests and their interpretation

These are non-treponema serology tests for syphilis which measures the antibodies directed against material released from the damaged cells. Both tests have similar sensititvity and specificity and detect almost all cases of early infection and are therefore used for screening. VDRL requires a microscope to read while RPR does not. Quantitative RPR titres can also be used to evaluate the response to treatment.

- **Rapid Plasma Reagin (RPR) test**:
  - Draw 5ml venous blood and put in a plain test tube.
  - Sit test tube for 20 minutes to allow serum to separate (or centrifuge at 2000 –3000 rpm for 3-5 minute).
  - Withdraw some of the serum with a pipette and squeeze one drop (50ul) unto a circle on the test card.
  - Spread the drop to fill circle using a clean spreader.
  - Draw the antigen supplied with a dropper and allow one drop of the antigen over the test sample circle.
  - Rotate the test card smoothly on the palm of the hand for 8 minutes or rotate with a mechanical rotator.

- **Interpretation of Results**:
  - Inspect the card in a good light.
  - Turn or tilt the card and look for clumping. Compare with the negative and positive control circles on the test card.
    - Non-reactive (no clumping or only slight roughness) – negative for syphilis
    - Reactive (highly visible clumping) – positive for syphilis
    - Weakly reactive (minimal clumping) – positive for syphilis
  - Specimen giving any degree of reactivity should be fully titrated.

Recommended Diagnostic Tests for various level of laboratory facilities

Diagnostic tests that can be performed vary from one level of health care to the other based on human, material and financial resources at the level. It may also be based on national policies and guidelines. It is recommended that facilities should be provided at the primary health care facilities for simple tests that will aid diagnosis and reduce unnecessary referrals.

- **Peripheral or Primary Health Care level**: microscopic examination of fresh and stained specimens, possibly KOH sniff test and non-treponemal syphilis screening test.
- **Intermediate or Secondary Health Care level**: microscopy, culture of *Neisseria gonorrhoeae*, antigen detection of *Chlamydia trachomatis*, and a number of serological tests, including HIV testing.
- **Central, Tertiary Hospital or Reference laboratory** : the range of tests at this level is limitless and depends on available human, material and financial resources. It may be the same as at the intermediate level or more extensive, depending on the level of decentralization.

Table 4.4 Recommended Diagnostic Tests for various levels of laboratory facilities

Health Care Facility level	Recommended Tests
Primary	Microscopy of fresh specimen Microscopy of stained specimen Wet Mount preparation KOH Sniff test pH of Vaginal fluid RPR or VDRL test
Secondary	Dark Field Microscopy Culture Antimicrobial sensitivity Serology: ELISA, Treponema tests (TPHA, FTA-Abs, MHA-TP) Including all tests at the Primary level
Tertiary	Cell culture Virus culture Histology Cytology Selology Antigen Detection Antimicrobial susceptibility Direct Immunofluorescence Antibody (DFA) Polymerase Chain Reaction (PCR) Including all tests at the Primary and secondary levels

4.2. HUMAN IMMUNODEFICIENCY VIRUS (HIV) AND ACQUIRED IMMUNE DEFICIENCY SYNDROME (HIV/AIDS)

Acquired Immune Deficiency Syndrome (AIDS) is a viral disease caused by the human immune-deficiency virus (HIV).

Adolescents are at a high risk of HIV infection. Worldwide, one out of every two new cases of HIV occurs in youths aged 15-24. In developing countries, including Nigeria, women are becoming infected at significantly younger ages than men, with more young women in their teens and early twenties becoming infected than women in any other age group.

Adolescents are at a risk for HIV and STIs as a result of the underlay between the following behavioural, biological, and socio-economic factors:

- During adolescence, sexual activity is often initiated; risk taking and experimentation are common.
- Adolescents are exposed to early marriage, sexual coercion and violence, trafficking and growing up without parents or other forms of protection from exploitation and abuse.
- Many lack education and life skills.
- Many adolescents fail to take appropriate prevention and precautions despite basic knowledge of HIV transmission and prevention.
- Adolescents are biologically more susceptible to STIs, especially Chlamydia and Gonococcus which have been shown to facilitate HIV transmission.
- Adolescents have mistrust for the health care system, fear of inappropriate disclosure and providers' lack of understanding of adolescent rights to confidentiality and the demand for parental consent for sensitive health issues.

4.2.1 HIV COUNSELLING, TESTING AND RISK REDUCTION

An adolescent may present in a health facility for HIV counselling, testing and risk reduction strategies. It is important that adolescents have independent access to HIV prevention, treatment, care and support. They should be provided with appropriate information regardless of their marital status and remove all barriers to health services, including those relating to HIV prevention, treatment, care and support.

Assessment/Identification of the problem

History	• Greet the adolescent/youth warmly. • Create a confidential atmosphere: - Assure youth about confidentiality of visit and ability to consent for testing by local regulations if any. - Assure youth that testing is his/her choice. - Acknowledge that it can be embarrassing to discuss several behaviors. - If possible, assist youth to identify a supportive adult who is aware that youth is being tested. • Assess his/her HIV/AIDS knowledge: - Allow the adolescent to express understanding of HIV, clarify misconception and fill in the gaps in knowledge. - Assess feelings about testing and previous HIV testing experiences. - Inquire if youth knows anyone with HIV/AIDS e.g. sexual partner, family member. • Assess risk as follows: - Assess sexual behaviour without making assumptions about sexual orientation, not all youths are heterosexual. - Assess number of partners and partners known risks. - Assess frequency of substance use in the context of sexual behaviour. - Assess consistency of condom use. - Assess level of assertiveness. - Ask about the desire to get pregnant. - Assess ability to discuss safer sex practices with sexual partner - Assess for history of sexual abuse or rape. • Assess substance use and other risks as follows: - Assess level of drug and alcohol use and reasons and context in which use occurs. - Review risk of impaired judgment that may lead to unsafe sex. - Assess potential need for drug treatment. - Assess violence in home and community. - Assess substance use in home and community.
<u>Provide pre-test information:</u>	You can provide pre-test information for a group, couple, or an individual. The group session is the recommended model for providing pre-test information where the client-to-provider ratio is high. Group information sessions are efficient, optimize human resources and allow group interaction. The pre-test session should, at a minimum, contain: ▪ Reasons for recommending HIV testing. ▪ The clinical and preventive benefits of HIV testing. ▪ Available services, for the adolescent if tested HIV positive or negative. ▪ Reassurance that all information will be treated confidentially and will not be shared with anyone other than health workers directly

	involved in providing care (shared confidentiality). ▪ The right to decline testing, and that declining of the test does not affect access to all other services that don't require knowledge of her HIV status. ▪ Information and support (skill how to go about it) if the client opts to disclose HIV test result to his/her partner and encourage partner testing. The health worker should also give the opportunity for the adolescent to ask questions or express concerns. It is important to discuss the concerns, including those related to disclosure and partner testing. ***HIV Counselling and Testing (HCT) ensure that pre-test information, informed consent and post-test counselling are incorporated into HIV testing and tailored to individual test results, risk behaviour and needs.***
Conduct HIV testing or refer for testing.	• Conduct or refer for testing after obtaining informed consent- Please note that children and adolescents who are below 18year cannot legally provide informed consent. However, they have the right to be involved in all decisions affecting their lives. • Instill a sense of hope and encouragement. • Provide support in helping the youth to integrate this life changing information (individual and peer group interventions with psychologists and social workers can help facilitate adjustment). • Offer guidance in determining whether it is safe and appropriate for the youth to disclose his/her HIV status. - Informing parents is difficult for many adolescents who fear losing their love and support. - Fear of rejection and loss of confidentiality is also a concern in disclosing to sexual partners. ***After learning their diagnosis, adolescents must decide who to inform and when to disclose their HIV status.***
Provide post-test counselling.	Post-test counselling is an integral component of the HIV testing process. All individuals undergoing HIV testing must be counselled when their test results are given, regardless of the test result. Counselling for those whose test result is HIV-negative should include the following

Management of an Adolescent that tests Negative	minimum information: • Inform him that testing negative is an achievement, however, one may test negative even if infection has just taken place. • Explain the HIV test result, including "window period" for the appearance of HIV-antibodies and a recommendation to re-test in case of a recent exposure. • Inform him/her that antibodies are detected after a period of time - from 3 weeks to 6 months (Persons with risk behaviour who test negative should be encouraged to have the test repeated after six months). • Remind the youth that testing negative does not mean one cannot be HIV infected in the future. • Encourage him/her to strive to remain negative, because indulging in risky behaviour would change the HIV status. • Assess individual risk; inform him/her on how to prevent HIV transmission. • Counseling the adolescent on ways of preventing HIV infection transmission: - Using condom correctly each time he/she has sex. - Ensuring his/her partner remains faithful to him/her. - Abstaining from sex. - Not sharing sharp instruments. • Discuss options for safer sex practices, and support clients' informed decision. • Provide condoms or information on how to get and use them. • Discuss sexual activities that do not involve exchange of body fluids. • Demonstrate proper male and female condom use on anatomical model and provide opportunity for practice. • Discuss effective ways to communicate role/responsibilities with sexual partner(s). • If the youth is on drugs, discuss harm reduction strategies. • Develop a personalized risk reduction plan. • Discuss postponing sex for youths who are not sexually active. The health care provider and the client should then jointly assess whether the patient needs referral for more extensive post-test counselling session or additional prevention support. • Inform the adolescent simply and clearly, and give him/her the time to consider it. • Ensure the client understands the result. • Allow client to ask questions. • Help the client cope with emotions arising from the test result. • Discuss any immediate concerns and assist the patient to determine who in his/her social network may be available and acceptable to offer immediate support. • Counsel the adolescent:

Managing an Adolescent that tests positive	- That HIV infected persons can live a reasonably normal life; - That the HIV infected person must seek prompt medical attention when sick; - That person must practice safe sex only; - Pregnancy causes deterioration in the HIV-infected female and can affect the unborn baby; - Being aware of the fact that one is HIV-positive gives one the opportunity to prevent others from being infected. • Discuss therapeutic options and build trust; the goal is active participation in all aspects of treatment. • Describe follow-up services that are available in the health facility and in the community, with special attention to the available treatment, PMTCT and care and support services. • Provide information on how to prevent transmission of HIV, including provision of male and female condoms and guidance on their use. • Provide information on other relevant preventive health measures such as good nutrition, use of co-trimoxazole and insecticide treated bed nets. • Provide information on nutrition, because malnutrition is common in HIV infection. - Reduced food in-take associated with anorexia contributes to poor nutrition. - Good food and dietary supplements (Vitamin and mineral supplements) improve quality of life, mental and physical performance, delay of disease progression and improved immunity. - Use of hygienically safe food and water. • Discuss the immediate needs of the adolescent (health, housing, etc) and explore avenues for support). • Discuss the stages of HIV infection. • Conduct a mental state examination as indicated in the MSE table in section 6.2.1 of this clinical protocol. • Assess mental health and cognitive abilities. • Discuss with the adolescent the available ARV regimen. • Assess physical ability to take medications. • Assess readiness to begin medications. • Educate about HIV infection: transmission, disease course and benefits of medications. • Discuss Follow-up visits: - Arrange clinic visits and obtain contact address. - Acknowledge and address side-effects. • Facilitate interactions with other youths taking medications.

4.2.2 PERINATAL TRANSMISSION OF HIV (MOTHER-TO-CHILD TRANSMISSION)

With increasing numbers of HIV-infected adolescents, there is an increasing concern about perinatal transmission of HIV from pregnant adolescents to their babies. Mother-to-child transmission (MTCT) of HIV is the main cause of HIV infection in children, and it can occur during: pregnancy, labour and childbirth and breastfeeding.

It is important to note that not all HIV infected women will transmit the virus to their child. In the absence of any interventions to reduce risks of MTCT of HIV; 5 to 8 infants out of 20 born to HIV-positive women will be infected by HIV (1-2 infected during pregnancy, approximately 3 infected during labour and delivery, and 1-3 infected through breastfeeding). Various interventions can help reduce this risk.

The most important risk factor for MTCT of HIV is the amount of HIV virus in the mother's blood, known as the viral load. The risk of transmission to the infant is greatest when the mother's viral load is high—which is often the case with recent or advanced HIV infection. Some of the risk factors for transmission are the same and some are different during pregnancy, labour and childbirth, and breastfeeding.

Importance of male/partner involvement in PMTCT interventions

Efforts towards the prevention of mother-to-child transmission (PMTCT) of HIV should be as comprehensive as possible and acknowledge that both parents have influence in reducing the risk of transmission of HIV to their child.

Therefore, where applicable:

- Couples/parents should be made aware of and supported to access PMTCT and HIV prevention, treatment and care services.
- Couples/parents need to be aware of the importance of safer sex practices all the time, including throughout pregnancy and breastfeeding.
- Health workers should recommend HIV testing and counselling to pregnant women and their partners, and where applicable encourage couple counselling together, partner disclosure, testing, and support.

When a woman's partner is involved and informed, she is more likely to be able to participate in PMTCT interventions; including safer sex practices during pregnancy and breastfeeding, seeking and receiving maternal and HIV services, and making an informed decision on infant feeding.

Assessment/Identification of the Problem

History/Examination	• Greet the adolescent/youth warmly. • Introduce self to client and ask general questions to establish rapport. • Take a detailed personal history. • Obtain an HIV history if status already known- date of diagnosis, history of malignancies; lowest CD4 cell count (where possible), complete antiretroviral

	history, including specific drugs, side effects or toxicity, length of treatment, adherence and response to treatment. • Obtain a pregnancy history - previous pregnancies and outcomes, complications, mode of delivery, use of antiretroviral prophylaxis, and HIV status of other children. • At the initial and follow-up visits, assess the following signs and symptoms suggestive of symptomatic HIV infection or AIDS: - Generalized lymphoadenopathy or thrush; - Constitutional symptoms such as fever or diarrhoea for more than 1 month duration; - Herpes zoster involving two episodes or one episode appearing in several places; - Peripheral neuropathy, wasting, dysphagia, shortness of breath; - Persistent mucocutaneous herpetic ulcerations; - Cognitive dysfunction, etc. • Assess symptoms and signs of pregnancy-related complications e.g. elevated B.P., significant oedema, severe headache, etc. • Obtain a family history.
Management: **Conduct Focused Antenatal Care:**	Antenatal care for HIV-positive women includes the basic antenatal services recommended for **all** pregnant women, plus HIV care for their own health and interventions to prevent mother to child transmission (MTCT) of HIV to their babies. **Apply special principles and considerations in caring for pregnant adolescents:** • **If the woman's HIV status is not known**, recommend HIV testing to pregnant woman and her partner. • Recommending HIV testing to pregnant women and their partners is a "gateway" to helping women, their partners and children to access HIV prevention, treatment and care services. • **HIV testing should be recommended on the <u>first antenatal visit</u>** with counselling, in order to ensure that as many women as possible receive HIV-related information and services. • **<u>It is important that the woman receives the test result on same day.</u>** This minimizes delay before intervention, and increases the proportion of women who receive their test results. • As with all provider-initiated HIV testing and counselling, it is important to respect the three core guiding principles i.e. 3 C's - **C**<u>onfidentiality,</u> informed **C**<u>onsent</u>, and **C**<u>ounselling</u>. • Provide pre-test information and post-test counselling. **Coordinate HIV testing with other tests done during pregnancy:** • In generalized epidemic settings, the recommendation of HIV testing and counselling to pregnant women should be part of essential care during pregnancy. • Coordinate HIV testing with other tests done during pregnancy (e.g. test for syphilis), as much as possible. This can shorten the woman's waiting time

	before receiving care and minimizes repeated invasive procedures. An HIV-positive pregnant woman often needs extra post-test counselling and support, as: • Adherence preparation and initiation of ART needs to be rapid to ensure maximum benefit from ART to prevent MTCT. She needs counselling to understand the benefits of taking either ARV prophylaxis or ART. Both reduce the risks of MTCT of HIV; HIV care and ART additionally maintain her health. • She needs support to disclose her HIV status to her partner and to encourage her partner gets tested. In most settings, partner's participation in PMTCT is important for maximum benefit from the service. For HIV-negative women, the post-test counselling should provide information on: • How to prevent HIV infection. New HIV infection during pregnancy and while breastfeeding has high risk of MTCT. They should receive necessary and immediate support to prevent HIV infection. **Repeat HIV test during pregnancy:** If an HIV-negative pregnant woman is at high risk of HIV infection, the health worker should recommend HIV testing and counselling in the third trimester or during labour, as appropriate. **Manage pregnant women who decline HIV testing:** If a woman declines HIV test, spend extra time with her to find out the reason, and see if she needs support: • Some women might be afraid of HIV testing, might not want to know their HIV status, might not want to discuss the results with their partner or anyone else, or they might not want to think their baby is in any risk. • Some women might not realize that they are at risk, and pregnancy is a result of unprotected sex - carries risks of sexually transmitted infections including HIV. • Stigma and discrimination against HIV positive pregnant or breastfeeding women, or women who decide not to breastfeed and are known to be living with HIV is a problem in many communities. Counselling pregnant women and their partners about the benefits of knowing their HIV status for themselves and their baby can usually help them to overcome fear of stigma, discrimination and other barriers. • Allowing pregnant women to express their concern is very important. Fear of bad outcomes following disclosure is common, and this could be aggravated by the low socio-economic status that women experience in many communities. Most women who disclose also report positive outcomes, support and understanding. When counselling, it is important to assist

	women to evaluate the chances of unpleasant outcomes, and help make a plan to minimize these outcomes. Also offer to speak to other family members if the woman decides to bring them. If a woman declines HIV testing at her first visit, - ask at every future visit if she is ready to be tested. - At each clinic visit, briefly review the benefits of knowing her HIV status, and the care that is available for HIV-positive pregnant women and their babies. - Provide referrals and take-home information that may help the woman decide to be tested for HIV. Assessment of HIV positive pregnant women should be routine pregnancy-related assessment as provided to all pregnant women plus HIV assessment. In this section, we will focus on the HIV clinical review. **HIV Clinical Review*:*** Clinical assessment of the HIV-positive pregnant woman should be performed each time she presents for antenatal services, for childbirth and postnatal follow up. • It is important to do a clinical review of pregnant women with HIV, at the first and each subsequent follow up visits. • Check for TB in all HIV positive pregnant women, during each visit. Persons with HIV are at higher risk of acquiring TB disease compared to persons who are HIV negative. A woman with untreated TB may also transmit TB to her newborn baby, and is associated with high maternal and infant death. • If any signs or symptoms are found manage for TB or refer. **Determine Clinical stage:** The criteria for WHO clinical staging are the same for a pregnant and postpartum woman as for any adult. Use the same WHO staging table for adolescents and adults - the only modification is the weight loss criteria in clinical stage 2 and 3. For a pregnant woman, failure to gain weight during pregnancy may also be considered the same as weight loss. • Conduct routine clinical staging for all pregnant women with HIV. In the absence of CD4, clinical staging guides the decision whether the woman is eligible for ART or ARV prophylaxis. **Determining CD4 count:** • Pregnant women who test HIV-positive need to have their CD4 count checked quickly, if possible on the same day as receiving their HIV test result. • If the number of CD4 tests which can be done by the laboratory are limited, priority should be given to pregnant women in WHO clinical stage 1 and 2, in order to decide whether to start ART or provide ARV prophylaxis. • Pregnant women in stage 3 and 4 are eligible for ART, irrespective of their CD4 result. The absence of CD4 count should not delay ART for pregnant women in stage 3 and 4.

Haemoglobin:

- In patients with pre-existing anaemia, AZT has been shown to worsen the condition.
- Therefore, if the proposed ARV regimen for an HIV-positive pregnant woman contains AZT, it is important to check her haemoglobin level before initiation of AZT and again at 4, 8 and 12 weeks after initiation for monitoring purposes.
- Haemoglobin test should always be available at the point of care.

Determine eligibility for ART or ARV prophylaxis

ART eligibility

If CD4 is possible:

- WHO Clinical Stage 3 and 4 - **irrespective of the CD4 count**
- WHO Clinical Stage 1 or 2 - **CD4 less than 350**

If CD4 is not possible:

- *All pregnant women in clinical stage 3 and 4 are medically eligible for ART.*

  Refer eligible pregnant women for ART to their own health if your facility doesn't have the capacity for ART.

  ARV prophylaxis

- *All HIV positive pregnant* women who are not yet eligible for ART should be offered ARV prophylaxis to reduce the risk of MTCT of HIV.

ARV prophylaxis for pregnant women:

If the pregnant woman is not eligible for ART, then give ARV prophylaxis:

- AZT (Zidovudine) - 300 mg twice daily - starting at 14 weeks of pregnancy, if Hgb is > 7g/dl. If the woman has severe anaemia (Hgb < 7g/dl) correct the anaemia first.

Special considerations and monitoring during pregnancy:

There are special considerations and precautions that you should be aware of in administering ARV drugs during pregnancy:

- *In advanced HIV disease (clinical stage 3 or 4 or CD4 less than 350 in any clinical stage), the benefits of ART outweigh the potential risk to the unborn child except for Efavirenz. Help the woman weigh the risks and benefits of ART.*
- If the woman is already on ART while becoming pregnant, continue ART. The only exception is: Do **NOT** give efavirenz (EFV) in the first trimester – it can cause birth defects (be teratogenic). If she is on EFV and is in the first trimester, change EFV to NVP. The ARV drug dosage is the same as

for non-pregnant adults and adolescents.

There are two key conditions that should be routinely monitored during pregnancy:

1. **Nevirapine related rash/liver toxicity**: There is an increased risk of severe nevirapine-related rash and liver toxicity, if it is given to pregnant woman with CD4 count between 250 and 350. Therefore, if CD4 count is between 250 and 350 there are two options:

   Either:

   - After the first trimester, give a first-line regimen with efavirenz rather than nevirapine **OR:**
   - If Nevirapine-containing regimen is used, the woman should be carefully monitored for clinical signs and symptoms of liver toxicity and if available, liver function tests (transaminase) should be done at baseline and closely monitored at 2-4 weeks and again at 3 months after initiation of Nevirapine. Liver toxicity from nevirapine is most common in the first month but occurs up to 3 months after NVP is started.

2. **Anaemia:** Anaemia is a common problem in pregnancy, due to poor iron stores and infection such as malaria or hookworm. Additionally, HIV infection itself, cotrimoxazole, and AZT can all contribute to anaemia. AZT can cause a very rapid fall in haemoglobin. Hence, if the ARV regimen contains AZT, obtain haemoglobin at initiation then at 4, 8 and 12 weeks after initiation.

   If the woman's haemoglobin is less than 7 g/dl:

   - Do NOT start AZT.
   - If the woman is already on AZT,
   - If the woman develops severe anaemia while on AZT prophylaxis, STOP AZT. The use of single dose Nevirapine during labour is an option for women with persistent severe anaemia (Hgb <7g/dl). We will discuss this in the labour and delivery module.
   - Treat the anaemia.

Note: Do not give ddl-d4T combination any time during pregnancy – it can potentially cause life-threatening toxicity.

Pregnant women need adherence preparation and support as with any other patients. They need to be rapidly prepared for ART in order to prevent MTCT of HIV. Use the 5As (Ask, Advise, Agree, Assist, Arrange) to prepare for adherence as soon as you determine that a pregnant woman is eligible for ART.

Rapid adherence preparation and support during pregnancy

	Providing ART to pregnant women might be more challenging because: • Apprehension related to the HIV diagnosis may be worse during pregnancy if the woman is not sure how she feels about being pregnant, if she is worried about how she is going to manage having a child, etc. In addition to having to deal with an HIV diagnosis, a pregnant woman has to cope with learning that there is a risk that she might pass the virus to her child. • Pregnant women may be hesitant about taking ARVs due to concern that the drugs might harm the baby. Assure the woman that there is little likelihood of harm to the unborn or breastfeeding baby from the ARV drugs. • HIV-positive women might experience additional stigma and discrimination when they are pregnant and decide to have a baby, and they themselves might feel guilty about the risk of transmitting HIV to the baby. This feeling of guilt may in turn affect their ability to adhere to treatment. It will be important to address their concerns and provide support. • Pregnant women who have not disclosed their HIV status may be particularly reluctant to take ARVs during pregnancy for fear that their HIV status will be discovered. Assure the woman of shared confidentiality in your facility, and support her in disclosing her status to her partner, family, and/or friends in whom she has confidence. Pregnant women need adherence preparation and support as with any other patients. • They need to be rapidly prepared for ART in order to prevent MTCT of HIV. Use the 5As (Ask, Advise, Agree, Assist, Arrange) to prepare for adherence as soon as you determine that a pregnant woman is eligible for ART. • Encourage the woman to disclose her HIV status and identify her treatment supporter (and if possible start preparing the supporter at the same time). • You will need to schedule several visits (i.e. closely scheduled visit dates) for education and adherence preparation so that the woman can start ART as soon as possible. Examine the pregnant woman from head to toe at each visit: - Identify fetal abnormalities or compromises so that appropriate interventions can be undertaken to optimize fetal health and prevent fetal damage or death. - Request obstetric ultrasonography as required where services are available. Pregnant women should be advised and counselled on preventive measures at **EVERY** antenatal visit. • **Provide prophylaxis for opportunistic infections:** - Provide cotrimoxazole for all women in WHO clinical stages 2, 3, 4, and if CD4 count is < 350 in WHO stage 1. Start after the first trimester and continue throughout pregnancy, the postpartum period, and afterwards.

Because of concerns about increasing risk of perinatal transmission with invasive techniques, they should generally be avoided in pregnancies complicated by HIV.

- Offer INH prophylaxis, after excluding active TB.

- **Provide infant feeding counselling.**
- **Advise on safer sex** and use of condoms during pregnancy.
- **Give tetanus toxoid.**
- **Give iron/folate.**
- **Give malaria intermittent preventive treatment in 2nd and 3rd trimesters.**
- **Encourage sleeping under insecticide-treated bed net.**
- **Advise and counsel on nutrition and self-care.**

There is increased susceptibility to:

<u>Genital Infection</u>: Neisseria gonorrhea, chlamydia trachomatis, candida albicans, trichomonas vaginal infections.

<u>Opportunistic infections</u>:tuberculosis, herpes zoster, bacteria pneumonia, urinary tract infection, etc.

Advise to stop smoking, avoid alcohol and not to abuse drugs.

During subsequent visits

Care provided during the second and third antenatal visits will include care and counselling provided during the first antenatal visit plus important additional measures:

- performing HIV clinical review
- counselling on family planning

Perform the antenatal clinical review:

During the second and third antenatal visits, repeat the antenatal clinical review: first conduct the Rapid Assement and Management:

- then check pregnancy status and birth plan; check for pre-eclampsia, anaemia, and syphilis.
- Update the birth plan.
- Update the emergency plan to include danger signs for preterm delivery and pre-eclampsia.

	• Provide preventive interventions. **Repeat HIV test at fourth visit.**
Intrapartum Care	***Labour*** ***Provide supportive care throughout labour and delivery.*** • **Employ Universal precautions** - Gowns, gloves, and eye protection should be used in all deliveries and in examinations or procedures likely to generate splashing of blood or amniotic fluid. - Safe handling of sharps and wastes. - Vaginal cleansing with chlorhexidine (0.25%) on admission and every 4 hours until delivery. • **Conduct fetal and maternal monitoring BUT** - AVOID use of invasive procedures such as fetal scalp electrodes or fetal scalp sampling. - AVOID artificial rupture of membranes, if possible. • **If the woman is on ART during pregnancy:** Continue ART as before (She does **NOT** need additional ARV prophylaxis). • **If the woman is on ARV prophylaxis (AZT) during pregnancy, give:** AZT 600 mg (two tablets of 300 mg) once at onset of labour **PLUS** single dose NVP 200 mg **PLUS** 3TC 150 mg **and continue with** 3TC 150 mg every 12 hours until childbirth. • **If the woman did Not take ART or ARV prophylaxis during pregnancy:** If your facility has no capacity to provide AZT during pregnancy, or the woman did not take AZT due to any other reasons; give single dose NVP and instruct the mother to take it at the onset of labour or when her water breaks. ***Mode of delivery*** • Counsel all HIV-infected pregnant women about probable benefit versus risk of elective Caesarean Section (Infants born to mothers with high plasma viral load benefit most from elective CS).
Post Partum Care	**If the woman is on ART during pregnancy:** Continue ART every 12 hours. **If the woman is on ARV prophylaxis during pregnancy:** 3TC 150 mg plus AZT 300 mg — twice daily for 7 days. Provide information on infant feeding - stress that • All HIV infected mothers should be encouraged to exclusively breastfeed their babies for the first 6 months, after which complementary feeds are introduced and breastfeeding continues for up to 12 months.

	• Breastfeeding should be accomplished with maternal ART or ARV prophylaxis and or infant ARV prophylaxis. • If a mother had previously passed through the PMTCT programme, the reasons for the change in policy on infant feeding in the context of HIV should be explained in simple language: - Shift of emphasis to HIV-free infant survival - BMS is associated with infant morbidity and mortality - Benefits of EBF - Breastfeeding is made safe by using ARVs. • Assess healing of wound sites, uterine involution, and appropriate cessation of postpartum bleeding. • Assess women who had been on ARV and determine the need for continuity of therapy. • Educate the patient on: - Perineal care - Safe handling of lochia/blood stained sanitary pads or materials - Infant feeding options - Need to join a local HIV support group - Contraceptive options. • Conduct post-partum examination at 6 weeks following delivery.

<table>
<tr>
<td>Care of the Neonate</td>
<td>

Wipe the eyes, and apply an antimicrobial within 1 hour of birth.

Either 1% silver nitrate drops or 2.5% povidone iodine drops or 1% tetracycline ointment.
DO NOT wash away the eye antimicrobial.

If blood or meconium is present, wipe off with a wet cloth and dry the skin immediately with a dry cloth (make sure to wear gloves when handling the cloth; advise the family on how to handle and clean the cloth).
DO NOT remove vernix and do not bathe the baby until at least 6 hours after birth.
Continue keeping the baby warm and in skin-to-skin contact with the mother.

Give the HIV-exposed newborn ARV prophylaxis as soon as possible after birth:
It is best to give the first ARV prophylaxis dose before the newborn leaves the delivery room. Speed is especially important if the mother did not receive ARV prophylaxis or ART during the antenatal period.

Give baby daily NVP from birth until one week after all exposure to breast milk has ended or till 6 weeks if mother is on ART.
Conduct testing for diagnosis of HIV either early by PCR if available or by ELISA at 15 18 months.
Stress the need to avoid gastrointestinal infection in the infant.

<table>
<tr><td colspan="2">Newborn AZT and NVP dose for prophylaxis</td></tr>
<tr><td>AZT</td><td>4 mg/kg twice daily</td></tr>
<tr><td>NVP</td><td>2mg/kg single dose, as soon as possible after the birth</td></tr>
<tr><td colspan="2">ARV drugs formulation for the newborn</td></tr>
<tr><td>AZT</td><td>10 mg/ml</td></tr>
<tr><td>NVP</td><td>10 mg/ml</td></tr>
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4.2.3 HIV/AIDS AND BREASTFEEDING

All HIV infected mothers should be encouraged to exclusively breastfeed their babies for the first 6 months, after which complementary feeds are introduced and breastfeeding continued for up to 12 months. Breastfeeding should be accomplished with maternal ART or ARV prophylaxis and or infant ARV

prophylaxis. If a mother had previously passed through the PMTCT programme, the reasons for the change in policy on infant feeding in the context of HIV should be explained in simple language:

- Shift of emphasis to HIV-free infant survival
- BMS is associated with infant morbidity and mortality
- Benefits of EBF
- Breastfeeding is made safe by using ARVs.

4.2.4 MANAGEMENT OF ADOLESCENT WITH AIDS

The focus of care of PLWA (especially adolescents) is to provide ideas and strengthen resources to cope with symptoms which impact on the quality of life throughout the disease and to prepare for issues faced near the end of life.

As with any successful work with adolescents, the first step in promoting adherence is establishing a solid therapeutic rapport. Providers must develop a systematic approach that facilitates adherence by addressing four areas of interaction. These are:

- building trust;
- assessing and facilitating readiness to adjust to the realities;
- helping adolescents initiate and practice the new treatment regimen;
- providing on-going support for adherence.

Assessment/Identification of the Problem

History/Examination	• Greet the adolescent/youth warmly. • Introduce self to client and ask general questions to establish rapport. • Take a detailed history. • Conduct a physical examination. • Conduct a mental state examination (as indicated in MSE table in section 6.2.1 on this clinical protocol). • Support the adolescent using the issues raised in the counseling module (ARH training manual).
Management	• Carefully assess the client's cognitive capacity to understand the implications of having AIDS: - Risk reduction behaviours. - Positive living. - Changes in eating pattern e.g. mixed diet. - ARV drugs - use effects and costs. • Encourage the client to involve a supportive adult in his/her care: - Client to identify who the adult is. - Explain that he/she might become sick and may need others to care for him/her. - Link client to home-based care agency in the community.

For some youths, becoming symptomatic may encourage them to fight HIV and may enhance compliance to treatment and positive living. Others may feel overwhelmed and may lose the motivation to live.

	• Inform client that fatigue, pain and difficulty with sleep are 3 symptoms, which occur throughout the course of HIV disease. As the disease advances it may not be possible to eliminate the cause of symptoms. • Show interest in alleviating symptoms. • Treat correctable symptoms. • Warn client about side effects of medications. • Inform the client about other common symptoms such as: anorexia, weight loss, shortness of breath, cough, diarrhoea, fever, skin eruptions, weakness, loss of sensation, confusion, depression and memory impairment. • Meet the sexual needs of the patient as follows: - Provide information on safer sex or non-penetrating sexual practices. - Provide knowledge of appropriate condom use for penetrative sexual intercourse. - Make condoms (male and female) available. - Discuss benefits of abstinence with clients. • Do a spiritual assessment by asking the following: - Do you consider yourself spiritual or religious? - What things do you believe in that give meaning to your life? - What influence does it have on how you take care of yourself? - What role do your beliefs play in re-gaining your health? - Is there a person or group who are really important to you? Are you part of a religious community? - How would you like your health care providers to address these issues? - Include these significant people and the particular belief in the care. ***Cultural and religious beliefs become very important in chronic illness such as HIV/AIDS.***

CHAPTER FIVE

OTHER CHALLENGES FACING ADOLESCENTS

5.1 NUTRITION CHALLENGES

Nutrition is the provision of energy and essential nutrients to maintain optimum growth and development. Nutrients are contained in the foods we eat and include proteins, carbohydrates, fats, vitamins, minerals, fibre and water. An adequate diet contains all kinds of food in the right proportion.

To be healthy, adolescents must have the right amounts and kinds of foods. Adolescents that do not eat enough food become undernourished. Those that do not eat the right amounts of different kinds of foods may suffer from micronutrient deficiencies while those that eat too much food suffer from overweight or obesity.

5.1.1 UNDERNUTRITION

Undernutrition results from chronic inadequate food intake in which an individual does not eat enough to satisfy his/her basic energy and nutrient requirements. Under-nutrition is caused by:

- Inadequate availability of food (food shortage/crop failure)
- Inadequate access to available food (poverty/lack of adequate resources)
- Infections and infestations
- Poor water/sanitation which can cause diarrhoeal diseases
- Loss of Appetite as in anxiety and depression
- Gender inequality and discrimination in intra-household food distribution.
- Voluntary self starvation (weight consciousness)
- Poor food habits (ignorance, superstition, taboos)

Assessment/Identification of the Problems

ASSESSMENT	• Weigh the patient (in kilograms) on a bathroom scale and measure the height (in metres) against a wall. • Assess the level of malnutrition by calculating the body mass index (BMI) for the age (Weight/Height^2). Values below 18.4kg/m^2 indicate undernutrition (adolescent and adults only).
EXAMINATION	• Do a general physical examination. • Check for signs of micro and macro nutrient deficiencies.
MANAGEMENT	• Set goals for weight gain and weight maintenance. • Ensure adequate nutrient intake using low cost nutritious foods (food demonstrations inclusive). • Encourage good dietary habits. • Undertake dietary-counseling sessions with adolescent alone and with parents to understand the issues for effective behavioural change. • Refer the patient to a Nutritionist/Dietician, and a physician if necessary. • Educate on preventive measures: - Advise on establishment of family home garden to increase food availability and accessibility. - Explain the importance of clean environment. - Encourage patient to eat an adequate diet. - Discuss with parents/care providers on the need to improve intra-household distribution of food in favour of the girl – child. - Provide information on the ideal body weight and need for regular exercise. - Encourage personal and food hygiene.

5.1.2 MICRONUTRIENT DEFICIENCIES

Micronutrient deficiency occurs when certain essential vitamins and minerals are lacking in the diet leading to impaired growth and poor health. The most common deficiencies are the lack of iron (anaemia), vitamin A (xerophthalmia) and iodine (goitre), vitamin C (scurvy), and vitamin D (rickets).

Assessment/ Identification of the Problem

<u>Observe the symptoms and signs of each deficiency in the box below:</u>

Micronutrient	Symptoms and Signs of Deficiency
Vitamin A	Dryness of the eye, poor night vision, eye lesions and permanent blindness accompanied by foamy accumulations on the inner eyelids (conjunctiva) that appear near the outer edge of the iris (Bitot's spots).
Iron	Pale conjunctivae (inner eyelid), nail beds, gums, tongue, lips and skin, low resistance to infections.
Iodine	Goitre or swelling of the thyroid gland in the neck and cretinism, which can present as

	mental deficiency or dwarfism.
Vitamin C	Swollen and bleeding gums.
Vitamin D	Bowing of legs.

MANAGEMENT	Advise the adolescent to: - Eat enough fruits, dark green and yellow leafy vegetables. - Take vitamin and mineral supplements including iron and folate. - Diversify diet/ eat a variety of foods. - Use iodized salts for cooking.

5.1.3 OVERWEIGHT AND OBESITY

Overweight and obesity are health problems related to excessive intake of food over and above the body's requirement. Overweight and obesity in adolescents increase the risk of developing diabetes and other diet related cardiovascular diseases in adulthood.

Assessment/Identification of the Problems

ASSESSMENT	• Assess adolescent obesity using a measurement of the body mass index (BMI) (Weight (kg/ Height (m^2). Values above 25 indicate overweight while values above 30 indicate obesity.
MANAGEMENT	• Encourage gradual weight loss through dieting and exercise. • Encourage family support to attend to emotional problem and assist in behavioural changes. • Refer to dietician/nutritionist and physician if necessary. • Advise the adolescent to acquire the following preventive habits: - Eat enough fruits, vegetables and fibre diet. - Avoid sweet and high energy (calorie) foods such as fatty and oily foods, excess carbohydrate diet, sugars, minerals and "junk" food etc. - **Perform regular physical exercises.**

For more information on Nutritional Needs of adolescents, refer to Module 4: Session 1 of the Training Manual of Adolescent Reproductive Health.

5.2 SUBSTANCE USE DISORDERS

Psychoactive substances are compounds that can alter one's state of mind. The problems resulting from substance abuse appear more extensive today than before, probably due to an increase in the availability and number of agents that are subject to experimentation and use. All age groups can be affected, particularly adolescents and young adults.

Disorders associated with the use of these substances include substance dependence, acute drug intoxication and substance withdrawal. Others include tolerance and drug induced psychotic disorders etc.

5.2.1 SUBSTANCE DEPENDENCE

This is a repetitive prolonged use of a habit forming drug to the extent that there is an overriding desire for the drug, a tendency to increase the frequency and quantity used, and the development of withdrawal symptoms when an attempt is made to stop the use of the drug.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and informants and make them comfortable. • Take a history from the patient and key informants noting the following: - Type of drug(s) - Frequency of use - Amount spent on drug - Criminal tendencies/acts - The urge for the drug - Associated physical, social or psychological complications - Family history of drug use
EXAMINATION	• Conduct a mental state examination (MSE) as indicated in the table below. • Conduct a physical examination noting physical injury and damage to body organs.
MANAGEMENT	• Treat any physical injuries and refer to a higher level of care.

Table 5.1 Mental State Examination

MENTAL STATE EXAMINATION	
Appearance and behaviour	Is dressing appropriate? What is the state of personal hygiene? Is behaviour

	rational?
Pattern of speech	Is speech slurred, incoherent or inappropriate?
Mood/affect	Is the mood low (depressed), elated, anxious or irritable?
Evidence of perceptual disorder	Does the patient perceive things (hear voices or see things) that no one else perceives?
Evidence of thought disorder	Does the patient have abnormal beliefs about the people or the environment?
Level of orientation	Is the patient aware of the time, place and people around him?
Insight	Does the patient recognize that he/she has a problem; and is he/she willing to undertake treatment?

5.2.2 ACUTE DRUG INTOXICATION

This often presents as an emergency in health facilities. It is usually the development of reversible behavioural problems following the recent ingestion or excessive exposure to psychoactive substances. Some symptoms and signs of acute intoxication are slurred speech, disinhibition and restlessness following excessive alcohol ingestion; visual hallucinations and aggressive behaviour following cannabis ingestion.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient, the relatives and/or accompanying law enforcement agents. • Take a detailed life history of the patient and the circumstances that surround the acute intoxication. This involves the identification of the drug or substance that gave rise to the intoxication. • Ask about the frequency of the problem, friends, usage etc.
EXAMINATION	• Conduct a mental examination of the patient (See table on mental examination in section 5.2.1). • Conduct a complete physical examination noting areas of injuries to the body if any.
MANAGEMENT	• If the patient is conscious and has no severe injury, he/she should be kept at the primary health facility for observation within 24 to 48 hours. Monitor the vital signs. • If the patient is aggressive and/or violent, give IV Diazepam 10-20mg SLOWLY and IM Chlorpromazine (Largactil) 50mg stat and repeat (Largactil) if necessary. However, if the patient is calm, carry on with the following:

	• Ensure adequate nutrition. • Start the process of counselling and continue even after discharge (follow up). • If the patient is unconscious or suffers harm that is life threatening, refer him/her to a secondary/tertiary health institution. ***Do not give Largactil to a patient with alcohol intoxication.***
FOLLOW UP	• Follow up patients regularly. • Continue counselling.

5.2.3 SUBSTANCE WITHDRAWAL

Substance withdrawal is the manifestation of physical and/or psychological symptoms within the first week of stopping the use of a particular drug that the individual has been taking for a long time.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and key informants and make them comfortable. • Take a history from the patient and key informants noting the following: - Complaints associated with the stoppage of drug use - Type(s) of drug used - Duration and frequency of use - When the use was stopped and the reasons for stopping
EXAMINATION	• Conduct a mental state examination (as indicated in the table in section 5.2.1). • Conduct a physical examination noting the presence of injuries, level of consciousness and damage to body organs.
MANAGEMENT	• When the patient is restless and/or aggressive, admit and give IM chlorpromazine (Largactil) 50-100 mg, 6-8 hourly until patient calms down (except in alcohol withdrawal). • For alcohol withdrawal, give diazepam (Valium) tablets 5-10mg tds until the symptoms subside; then gradually tail it off over 2 weeks. • Refer the patient to a psychiatrist/physician. ***If Largactil is not available, give IV diazepam 10-20mg slowly.***

FOLLOW UP	• Follow up regularly. • Counsel.

5.2.4 DRUG-INDUCED PSYCHOTIC BEHAVIOUR

The use of some psychoactive substances such as cannabis (Indian hemp), amphetamines and alcohol may give rise to psychotic symptoms e.g. hallucinations and delusions.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and the key informants. • Take a history from the patient and key informant/law enforcement agents.. • Ask about the drug used, dosage, frequency. • Ask about background mental health problem. • Take detailed family and social history.
EXAMINATION	• Conduct a mental state examination (as indicated in the box in section 5.2.1). • Conduct a physical examination. ***Physically restrain the patient if violent.***
MANAGEMENT	• If patient is uncooperative, give IV diazepam (Valium) 10-20mg slowly until the patient becomes calm. • Give IM antipsychotic drugs such as chlorpromazine (Largactil) 50-100mg stat, or haloperidol (Serenace) 5-10mg. • Remove the physical restraint and refer the patient to psychiatrist/physician.

5.3 MENTAL HEALTH PROBLEMS

Common mental health problems among adolescents in Nigeria include adjustment, anxiety, mood and conduct disorders, schizophrenia and organic mental illnesses. It is noteworthy that many of the adult psychiatric illnesses start during the adolescent period.

5.3.1 ADJUSTMENT DISORDERS

These are emotional or behavioural problems that occur within one month of exposure to one more identifiable stressful life events and stressors. They are maladaptive reactions to stressors. The stressors could be very traumatic (rape, HIV infection) or minor (loss of a boyfriend/girlfriend, poor report card, change of school).

Assessment/ Identification of the Problem

HISTORY	Welcome the patient and key informants. Take a history and note the following: - Stressful life events: Parental disharmony, examination failure, break-up of "love" relationship, sexual abuse/rape, unwanted pregnancy, etc. - Symptoms and signs: Nervousness, excessive worry, jitteriness, tearfulness, feeling of hopelessness, truancy, excessive fighting, changes in appetite and sleep pattern, etc. -
EXAMINATION	Look for signs like: tearfulness, nervousness, etc.
MANAGEMENT	Counsel patient and family members. If necessary, intervene in school environment.

5.3.2 MOOD DISORDERS

Mood disorders are characterized by a disturbance in the emotions and feelings referred to as "mood". The two major types include (manic episode) and depression (major depressive disorder).

Mania (Manic episode)

This occurs when there is excessive happiness, elation or irritable mood lasting for a few days to one week.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and key informants. • Take a history and note symptoms such as: - Excessive happiness or irritability - Restlessness - Decreased need for sleep - Talkativeness - Disinhibition e.g. sexual promiscuity

	- Excessive unrealistic spending.
EXAMINATION	• Conduct a mental state examination (as indicated in the table in section 5.2.1). • Conduct a physical examination.
MANAGEMENT	If patient is violent or aggressive, refer to Section 5.4.3. (management of violent psychotic behaviour). For a non-violent patient, give haloperidol tablets (Serenace) 5-10mg OR chlorpromazine 50-100mg daily in two divided doses until symptoms subside or remit. Thereafter, taper down medication over 2 to 4 weeks. Refer to a psychiatrist/physician if symptoms persist or recur. ***Watch out for side effects of antipsychotic medication such as tremors, rigidity, excessive salivation, tongue protrusion, up turning of the eyeballs.*** ***If side effects are present, give ARTANE tablets 2.5mg bd and refer to a psychiatrist/ physician*.**

Depression

This occurs when there is extreme unhappiness (depressed mood) and loss of interest or pleasure in daily activities lasting for at least two weeks.

Assessment/Identification of the Problem

HISTORY	• Welcome patient and key informants. • Take a history and note symptoms such as: - Depressed mood (irritable mood is also significant in depressed

	adolescents). - Diminished interest or loss of pleasure in almost all activities. - Poor concentration affecting academic performance. - Thoughts of suicide and death. - Changes in appetite and sleep pattern. - Loss of energy and tiredness - Low self worth and loss of confidence
EXAMINATION	• Conduct a mental state examination (as indicated in the table in section 5.2.1). • Conduct a physical examination.
MANAGEMENT	• Counsel the patient. • Give amitrypline tablets 25mg nocte and build up to 50-75mg nocte over 2-3 days. • Continue amitrypline for up to four months. During this period, the patient should attend follow-up visits at least two weekly. Thereafter, taper off the drug. • If there is no improvement in four weeks or patient is suicidal, refer to the psychiatrist/physician. ***DO NOT GIVE AMITRIPTYLINE TO A SUICIDAL INDIVIDUAL.***

5.3.3 CONDUCT DISORDERS

Conduct disorders are repetitive and persistent patterns of behaviour in which the basic rights of others or major age-appropriate societal norms or rules are violated.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and key informants. • Take a full history of the onset of abnormal behaviour such as stealing, truancy, and aggression to people, destruction of property, etc. • Take a full history of the patient including family history, personal history, childhood development, interpersonal relationships, education history and drug use/abuse.

EXAMINATION	• Conduct mental state examination (as indicated in the table in section 5.2.1). • Conduct a physical examination.
MANAGEMENT	• Counsel the patient and family. • Where conduct disorder persists, the patient should be referred to a psychiatrist for further evaluation and psychological intervention.

5.3.4 ANXIETY DISORDERS

Anxiety is a response to a threat that may be external, internal or arising as a result of a conflict situation. It usually manifests with physical symptoms (excessive heartbeat, sweating, choking feelings, dizziness, etc) and psychological symptoms (sleeplessness, poor appetite, worries/fears, loss of weight, etc.).

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and/or key informants. • Take a history of the illness noting its onset, duration, and the presentation of symptoms and signs.
EXAMINATION	• Conduct mental state examination (as indicated in table in section 5.2.1). • Conduct a physical examination.
MANAGEMENT	• Counsel the adolescent if the anxiety is related to an identifiable situation as follows: - Help the adolescent identify the source of the problem. - Assess the source to know whether it can be changed or not. - Help the adolescent accept problem(s) or change. - Help the adolescent learn to let go of what is past and think positively about the future. - Identify irrational and negative beliefs and help to resolve them. - In addition, the health worker should: - Help the adolescent to accept his/her feelings. - Know his/her vulnerabilities. - Assist in helping him/her to develop talents and interests. - Encourage him/her to become involved with others. • Refer those who do not get relief or who develop more severe disturbance to a Psychiatrist/Physician.

5.3.5 ORGANIC MENTAL ILLNESSES

These are conditions caused by direct abnormalities of brain structure or functions. The underlying cerebral disease may originate in the brain itself or arise as a result of some systemic disease. Cognitive impairment is generally considered the hallmark of organic disorders and this occurs in four major areas: orientation, memory, intellectual functions and judgement.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and key informants. • Take a history of the illness from the key informants to know about the onset and duration. • Ask specific questions about epilepsy, brain trauma, infections and drug history. • Ask about pregnancy, birth and delivery history.
EXAMINATION	• Conduct a physical examination. • Conduct a mental state examination (as indicated in the table in 5.2.1).
MANAGEMENT	• If patient has fever, tepid sponge and give an antipyretic such as IM Paracetamol 3-5cc stat or any other available antipyretic. • Refer to a psychiatrist/physician. • If the patient has seizure attacks due to epilepsy, make him/her comfortable, observe the airway is clear, then refer to a physician. • If the patient has seizure attacks without complete recovery from previous episodes (Status Epilepticus), give IV diazepam 5mg-10mg SLOWLY, set up intravenous drip and refer to a psychiatrist/physician ***For more information on Mental Health and Disorders, refer to Module 6 of the Training Manual on Adolescent Reproductive Health.***

5.4 VIOLENCE & ASSAULTIVE BEHAVIOUR

Violence and assaultive behaviour can manifest in the following ways: physical injuries, attempted suicide (deliberate self harm) and psychotic behaviour.

5.4.1 PHYSICAL INJURIES

Violent behaviour can result in physical injuries to self or others. Such injuries may require emergency management.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and key informants. • Take a history of how the injury was sustained, cause of injury. • Ask whether it is deliberate or an accident(If deliberate see section 5.4.2). • Ask about blood loss, pain, loss of function of affected body parts.
EXAMINATION	• Conduct a thorough physical examination to know the extent and effect of the injury.
MANAGEMENT	• If the injury is superficial and not life threatening, clean the wound and dress as appropriate. • Give IM anti-tetanus toxoid 0.5ml stat and antibiotics e.g. Ampicillin, 500mg 6 hourly for 1 week or amoxycillin 250 mg 8 hourly for 1 week. • If the injury is life threatening, e.g. bleeding profusely, or evidence of internal bleeding (low B.P, rapid pulse), arrest the bleeding where possible and set up an intravenous infusion of 5% normal saline and refer the patient.

5.4.2 ATTEMPTED SUICIDE (DELIBERATE SELF HARM)

These are intentional acts of self-injury that do not result in death. More females attempt suicide than males. Some adolescents who attempted suicide sometimes admitted that the attempt was an effort to gain attention, to hurt a loved one or win back a former lover.

Assessment/Identification of the Problem

HISTORY	• Take a history from the patient and the key informant to obtain information on possible causes of action and the methods used. • Ask about past history of deliberate harm. • Take detailed family and social history. • Ask about stressful conditions lately.
EXAMINATION	Conduct a physical examination to determine the extent of the injury.
MANAGEMENT	• If a poisonous substance has been ingested, gastric washout should be done immediately (except for corrosives agents and petroleum products such as

	kerosene). • Give oxygen if necessary, and refer to 5.9 for further treatment. • Set up an intravenous infusion line. • Treat injuries or clinical conditions as appropriate. • Refer the patient to a psychiatrist/physician. ***Attempted Suicide is a crime punishable by Law.***

5.4.3 PSYCHOTIC BEHAVIOUR

Disturbed/Violent Psychotic Patient

Violence to self or others may be a result of psychotic behaviour.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and key informant (s). • Take a history from the key informants/law enforcement agents. ***Physically restrain the patient.*** • Ask about past history of violence to self and/ or others. • Take detailed family and social history. • Ask about stressful conditions lately.
EXAMINATION	• Conduct a mental state examination (as indicated in the table under 5.2.1). Conduct a physical examination.
MANAGEMENT	• **If violent** - Give 10-20 mg I.V. Diazepam slowly until patient calms down. - Give intramuscular antipsychotic drugs such as IM chlorpromazine (Largactil) 50-100mg stat, or haloperidol (Serenace) 5-10mg stat. - Remove the physical restraint and refer the patient to a psychiatrist/physician. • **Non-Violent Psychotic Patients** - Refer to a secondary/tertiary health institution. ***For more information on Violence and Assaultive Behaviour, refer to Module 5: of the Training Manual on Adolescent Reproductive Health.***

5.5 SEXUAL VIOLENCE

5.5.1. RAPE/SEXUAL ASSAULT

When a girl is raped which may occur in a variety of circumstances, she may present with bleeding that may lead to shock. She may also be quite angry, confused or depressed and there may be problem with movement.

The care provider is responsible for physical (and forensic) examination. Health care provider may be called upon to give evidence.

Assessment/Identification of the Problem

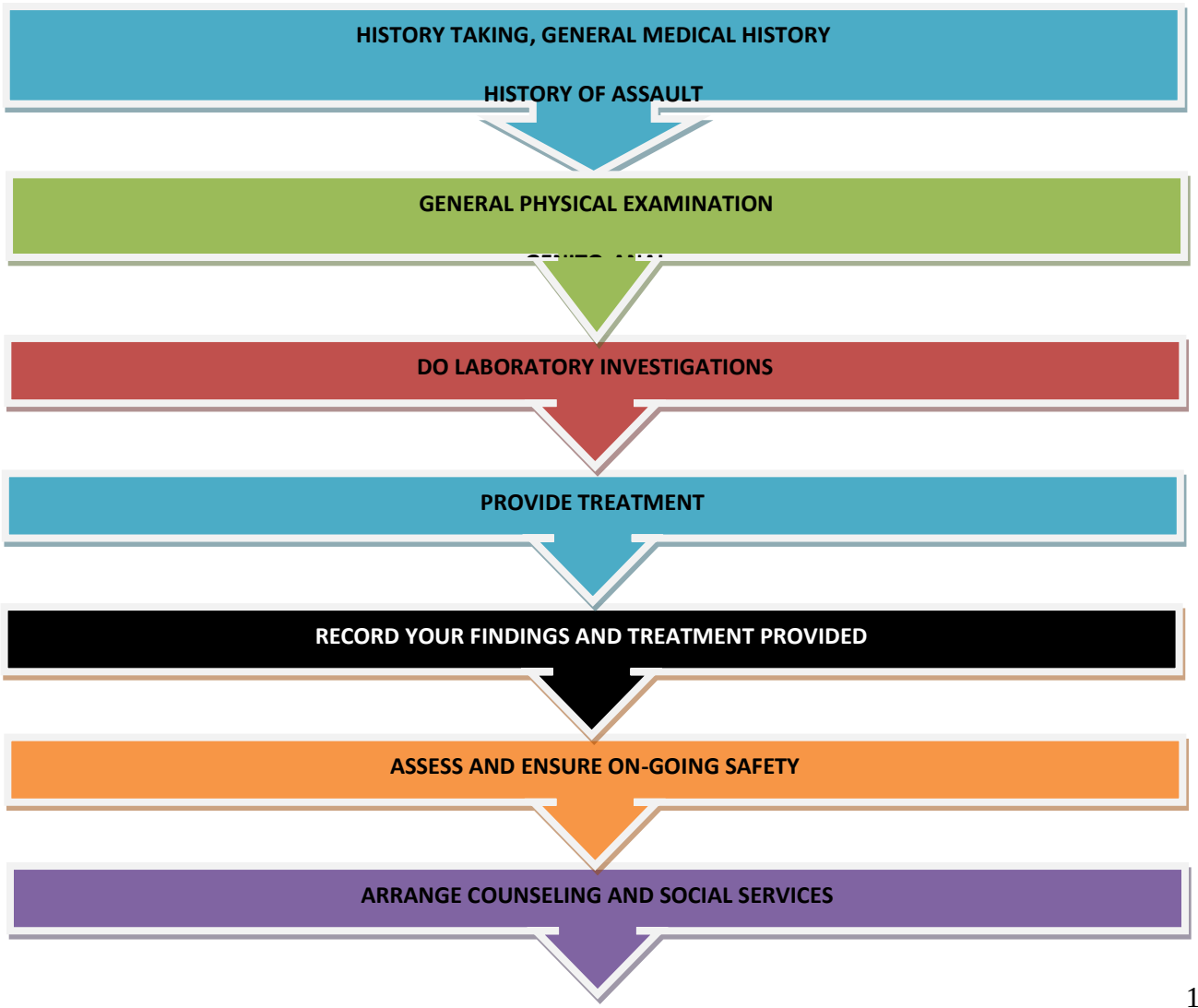
HISTORY	• Greet the patient (if stable) and make her comfortable. • Obtain consent from the client. • Ask about the type of assault(sexual, physical). • Ask about the time of incident, identity, and number of assailant (s), nature of physical contacts, use of weapons, restraints, digital or objects used in penetration, ejaculation and victim's activity that might destroy or alter evidence. • If sexual, ask about the last consented sexual act and type. • Ask about genital bleeding, bruising, dysuria. • Ascertain risk of pregnancy and STI. • Ask about last menstrual period, sexual activity, use of contraceptives.
PHYSICAL EXAMINATION	• Check the vital signs. • Assess the general appearance of the patient from head to toe. • Check for torn clothes and physical injuries. • Look for active bleeding, bruises, abrasions, lacerations, evidence of hair pulled out, semen deposit in the perineum. • Look for vaginal bruises/laceration, bleeding per vagina. • Do a bimanual examination gently to make sure there is no tenderness or enlargement of the uterus to suggest pregnancy(if indicated). **Examine the anus if there is rectal bleeding.**
INVESTIGATION	• A collective paper should be placed under the buttocks of the patient and the pubic hair combed towards the paper to collect any debris(if raped). • A slightly moistened gauze pad should be used to swab any dried secretions, and the location of the dried secretion should be marked on a sketch. • Collect sample of semen deposit carefully from the vagina. • Anoscopy should be done if rectal bleeding is present. • Take blood for packed cell volume (PCV) or haemoglobin. • Do a pregnancy test. • Do HIV screening (see section 4.2 in chapter 4).

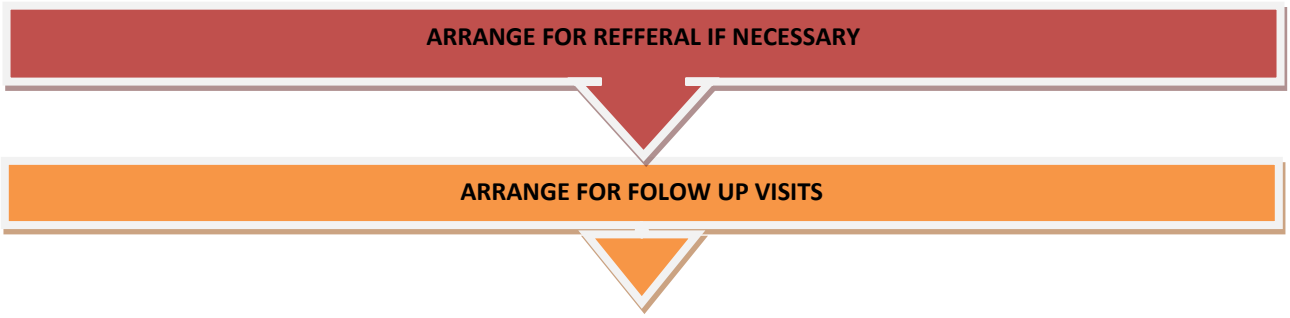
MANAGEMENT	• Reassure the patient. • Clean her and arrange to have the laceration repaired. • Provide support, e.g. allow her to verbalise her pent-up emotions, if possible. • **If in shock or bleeding heavily** Set up an intravenous (IV) drip with 5% dextrose or 4.3% Dextrose in 0.18% Saline. • **If very pale**, take blood for grouping and cross-matching and transfuse appropriately. Where such facilities are not available, use plasma expanders, e.g. Dextran and institute referral process. • **If in stable state** The decision to prescribe antibiotics should be individualized and based on the risks. **Current recommended regimen of prophylactic antibiotics in cases of sexual assault:** - Ceftriaxone, (Rosephine or Oframax), 125 mg IM in a single dose, plus - Metronidazole, (Flagyl), 2 g orally in a single dose, plus - Doxycycline, 100 mg orally 2 times a day for seven days. • If the risk of pregnancy is there and she is not pregnant, give emergency contraceptive if she reported within 72 hours (See Chapter three of this book). • In case of a resultant pregnancy, provide counselling as in Module 9, Session 3 of the National Training Manual on ARH. • Tetanus Toxoid should be given following standard guidelines. • Document all your findings. ***The Nigerian law provides six months status bar on rape cases. This means that the cases must be heard within six months or else the cases will be stricken out of the court and become unbearable. Healthcare providers must therefore ensure that the case history is well documented. Management and forensic results are out on time.***
FOLLOW UP	• A follow-up visit should be made for 2 weeks later. • A repeat pelvic examination is done to assess healing of injuries. • The patient should be assured that her genital anatomy is normal. • Repeat follow-up 5 weeks later to ensure that she is not pregnant.
FURTHER COUNSELLING	• The adolescent who has had an episode of forced sexual intercourse may feel considerably relieved to understand that her introitus is not different from some adolescents who have not had intercourse. • She needs to be reassured that the assault in no way changes her ability to have normal sexual intercourse in the future or to have normal healthy children.

	• Advise on: - Acquisition of self defence skills. - Avoiding dark alleys/Isolated places/single dates. - Dressing in non-sexually suggestive manner. - Avoiding being alone with boys in their rooms. - Avoiding use of alcohol and drugs. • Giving clear communication on sexual limits. • If severely depressed, refer to a psychologist.

It is extremely important to examine the teenager gently so that the examination does not represent a further trauma.

FIGURE 5.1 FLOW CHART ON MANAGEMENT OF ADOLESCENT SEXUAL ASSAULT/RAPE





Under the stress of the crisis, many families may have difficulty deciding whether prosecution will be sought; therefore it behoves the service provider to obtain evidence that is medically and legally appropriate.

5.5.2 POST- TRAUMATIC STRESS DISORDER

An adolescent who has had sexual assault may suffer from post-traumatic stress disorder. This consists of the re-experience of the trauma through dreams and waking thoughts, persistent avoidance of reminders of the trauma and numbing of responsiveness to such reminders, and persistent hyper-arousal.

Post-traumatic stress disorder usually develops some time after the trauma. The delay can be as short as one week or as long as 30 years. She may present with fears of not having a successful marriage, children, or a normal life; markedly diminished interest or participation in significant activities; feeling of detachment or estrangement from others; restricted range of affect (e.g. unable to have loving feelings); difficulty falling or staying asleep; irritability or outbursts of anger; difficulty in concentrating; hyper-vigilance and exaggerated startle response.

Assessment/Identification of the Problems

HISTORY	• Greet the patient (if stable) and relations and make them comfortable. • Take history of the time and type of incident, age of the patient. • Ask about thoughts or perceptions, images, dreams, illusions, hallucinations, flashback episodes of the incidence. • Ask about the avoidance of stimuli that are associated with the incidence(e.g. inability to recall important aspect of the incident etc).
EXAMINATION	• Do a General physical examination. • Look for signs associated with the type of trauma/incident. • Do a mental state examination(behaviour, memory, orientation etc).
MANAGEMENT	• The major approaches are support, encouragement to discuss the event, and education regarding a variety of coping mechanisms (for example, relaxation). • The use of sedatives and hypnotics can also be helpful. • If severely depressed, refer to a psychologist/psychiatrist for pharmacotherapy and psychotherapy.

5.6 HARMFUL PRACTICES

Procedures, activities and beliefs in traditional societies, which in the light of modern medical and health practices, have clearly been shown to have negative effects on the health of the people concerned. They are activities carried on any individual, or activities that if any individual undertakes can jeopardize his or her health status.

The common types are Female Genital Cutting, female infanticide, facial/body markings, child prostitution, forced marriage etc.

5.6.1 IMMEDIATE HEALTH COMPLICATIONS OF FEMALE GENITAL CUTTING

These include pain, acute urinary retention, shock, injury to adjacent tissue, bleeding, infection leading to fever, tetanus, gangrene, septicaemia, failure of the wound to heal and in some cases death.

Assessment/Identification of the Problem

HISTORY	• Greet and make relatives/patient comfortable. • Reassure the patient and her relatives that she could be helped. • Ask about the time and the instruments used for the genital cutting. • Ask about the amount of blood loss, dizziness, pain and discharge from the site of cutting. • Ask about tetanus toxiod immunisation history. • Ask about leaking urine/faeces from the perineum.
EXAMINATION	• General Physical examination • Genital examination to ascertain the degree of genital cutting • Checking for signs of sepsis/tetanus
INVESTIGATION	• Packed cell volume • Swab for m/c/s

MANAGEMENT	• If in shock or bleeding heavily, set up an IV drip with 5% Dextrose or 4.3% in 0.18 Saline. • If very pale, take blood for grouping and cross-matching and transfuse appropriately. • Where such facilities are not available, use plasma expanders and institute referral process. • Meanwhile monitor vital signs. • Tetanus toxoid should be given following standard guidelines. • Counsel parents and relatives. **If stable and presenting early;** • Maintain haemostasis by tying bleeding vessels after wound toileting. • Prescribe prophylactic antibiotics. A recommended regime is: - Ceftriaxone, 125mg IM in a single dose, plus. - Metronidazole, 200 mg orally 3 times a day for seven days. - Doxycycline, 100 mg orally 2 times a day for seven days. • Tetanus Toxoid should be given following standard guidelines. • Reassure the patient. ***It is extremely important to examine the client gently so that the examination does not represent further trauma.***

Urinary tract infection

Following genital cutting or infection, a girl may complain of urethral discomfort during urination (dysuria), a sensation that immediate voiding cannot be delayed (urgency), a persistent feeling of the need to void even after the bladder has been emptied (frequency), inability to prevent immediate voiding (incontinence), cystitis, occasionally without symptoms, fever, chills, and costo-vertebral angle pain if pyelonephritis develops.

Urinary tract infection may ascend from the urethra (urethritis), to the bladder (cystitis), to the kidney (pyelonephritis).

Assessment/Identification of the Problem

HISTORY	• Greet the patient and make her comfortable. • Reassure the patient or her relatives that she could be helped. • Ask about history of frequency, urgency, hematuria, suprapubic pain and nocturia.
EXAMINATION	• Conduct physical examination. • Check for suprapubic tenderness.

INVESTIGATION	• Obtain mid-stream specimen of urine (MSU) for microscopy and if available, culture and sensitivity. ***The urinary tract is considered infected if the bacterial count in a clean-catch specimen exceeds10^5/uL. White blood cells in a urine sample may actually reflect contamination of urine by vaginal secretions, possibly in association with vaginitis.*** ***Repeat MSU and if bacteriuria is present, a microscopy, culture and sensitivity would be mandatory.***
MANAGEMENT	• Prescribe antibiotics (see table below).

Table 5.2 COMMON ANTIBIOTICS USED FOR THE TREATMENT OF URINARY TRACT INFECTION

ANTIBIOTICS	DOSAGE
Amoxcillin	500 mg 3 times daily for a week
Augmentin	375mg tds or 625mg bd (adult dose)
Trimethoprim 80mg Sulfamethoxazole400gm (Septrin)	2 tablets 2 times daily for a week
Ciprofloxacin	500mg b.d for one week
Cephalosporins: Cephalexin	250 – 500 mg 4 times daily for a week
Nitrofurantoin	50 – 100 mg orally 4 times daily for a week
Aminoglycosides: Gentamycin	5 mg/kg/d in 2 divided doses i.m.

Genital Infection

Following genital cutting, the girls may complain of acute pelvic pain, fever and tender adnexae.

Assessment/Identification of the Problems

HISTORY	• Welcome the patient and make her feel comfortable. • Reassure her that she can be helped. • Take a history (age, medical history especially history of the genital cutting, Where? Who? When?). • Ask about pelvic pain, fever, low abdominal pain. • Ask about foul smelling vaginal discharge.
EXAMINATION	• Do a general physical examination. • Check for abdominal tenderness.

	• Check vital signs. Do a genital examination to assess extent of trauma and colour, smell of discharge.
INVESTIGATION	• Collect vaginal discharge using a swab stick for M/C/S. • Packed cell volume.
MANAGEMENT	Prescribe antibiotics (See table of common antibiotics for UTI).

It is extremely important to examine the teenager gently so that the examination does not represent a further trauma.

5.6.2 DELAYED COMPLICATIONS OF FEMALE GENITAL CUTTING

Cryptomenorrhoea

Genital cutting may cause closure of the vulva by adhesion of the labia minora. When the uterus begins to menstruate, the blood remains hidden behind the obstruction. This is referred to as Cryptomenorrhoea.

Such a teenager with normal sexual development may complain of primary amenorrhoea, intermittent abdominal pain, possible difficulty with micturition and palpable lower abdominal swelling.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and make her feel comfortable. • Reassure her that she can be helped. • Take a history (age, medical history especially history of the genital cutting Where, Who? When?).
EXAMINATION	• Do a genital examination to assess the extent of occlusion. • Check for suprapubic bulginess. • Check for bulging and bluish membrane at the lower end of the vagina.
INVESTIGATION	• Do Ultrasound to check for the presence of internal female reproductive organs.
MANAGEMENT	• Reassure her and refer her to a gynaecologist for incision.

Once the diagnosis of cryptomenorrhoea is made, surgical treatment is urgently required since every menstrual episode dilates the genital tract further and threatens permanent impairment of reproductive function.

Gynaetresia

Genital cutting can result in complete or partial obstruction, narrowing, adhesions and strictures in any part of the genital tract.

It can lead to gross distortion and bizarre adhesions. The effects naturally vary with the site and extent of the obstruction. The girl may present with retention of discharge, apareunia (inability to engage in sexual intercourse as a result of closed vaginal orifice) or dyspareunia (painful intercourse) and urinary symptoms.

Assessment/Identification of the Problem

HISTORY	• Greet the patient and make her feel comfortable. • Reassure her that she can be helped. • Take a history (age, medical history especially history of the genital cutting Where? Who? When?). • Ask about the use of substance on the genital area.
EXAMINATION	• Do genital examination to assess the extent of occlusion.
MANAGEMENT	• Explain to the patient and refer to a gynaecologist.

Fistulae

Genital cutting may lead to communications between the genital tract and the urinary or alimentary tracts, and may occur singly or in combinations. The commonest is the vesico-vaginal fistula. Such a girl may present with haematuria and incontinence. A rare but interesting syndrome is one in which a uterovesical fistula causes haematuria during menstruation, the patient remaining free from urinary incontinence.

Assessment/Identification of the Problem

HISTORY	• Greet the patient and make her feel comfortable. • Reassure her that she can be helped. • Take a history (age, medical history especially history of the genital cutting Where, Who? When?). • Ask about leakage of urine and or faeces.
EXAMINATION	• Do genital examination to assess the extent and size of the fistula. • Perform a gentle speculum examination.
INVESTIGATION	• If necessary, request for a hysterosalpingography (HSG). • Urine M/C/S.
MANAGEMENT	• Refer to a specialist centre with gynaecological services. • Meanwhile, prescribe a bland cream, e,g, zinc/castor oil or Vaseline, to apply to the vulva to limit the excoriations.

The woman with a constant dribble of urine is in a miserable plight with contaminated and smelly clothing and vulva, the latter becoming excoriated. This emphasizes the need for efficient treatment

Psychological Trauma

An adolescent who had had genital cutting may suffer from post-traumatic stress disorder. Post-traumatic stress disorder consists of the re-experience of the trauma through dreams and waking thoughts, persistent avoidance of reminders of the trauma and numbing of responsiveness to such reminders, and persistent hyper-arousal.

Post-traumatic stress disorder usually develops some time after the trauma. The delay can be as short as one week or as long as 30 years. She may present with fears of not having a successful marriage, children, or a normal life; markedly diminished interest or participation in significant activities; feeling of detachment or estrangement from others; restricted range of affect (e.g. unable to have loving feelings); difficulty falling or staying asleep; irritability or outbursts of anger; difficulty in concentrating; hypervigilance and exaggerated startle response.

Assessment/Identification of the Problem

HISTORY	• Greet the patient (if stable) and relations and make them comfortable. • Take a good history (time and type of incident, place, age of patient).
EXAMINATION	• Do a general physical examination. • Do systemic examination. • Carry out examination based on the type of trauma or areas affected. • Carry out vital signs.
MANAGEMENT	• The major approaches are support, encouragement to discuss the event, and education regarding a variety of coping mechanisms (for example, relaxation). • The use of sedatives and hypnotics can also be helpful. • If severely depressed, refer to a psychologist/psychiatrist for pharmacotherapy and psychotherapy.

5.7 SEXUAL DYSFUNCTIONS

MALE

5.7.1 IMPOTENCE

Failure to have an erection may be caused by both physical and psychological conditions. An adolescent male may present in the clinic with the anxiety of infertility in the future, guilt or difficulties with relationships. He may complain of absence of sex desire or failure to obtain an erection of the penis despite libido.

Assessment/Identification of the Problem

HISTORY	• Greet the boy and make him comfortable. • Reassure the boy that he could be helped. • Ask history of present and past relationship. • Ask about medical, drug, sexual, academic, sleep history. • Ask about alcohol and smoking history. • Ask about age of attainment of spermache, nervousness and anxiety. • Ask about early morning erection. • If there is erection. Ask if adequate for penetration. • Ask about failure of opposite sex to respond to his advances, debility, physical or mental exhaustion. ***Impotence can occur in men handling pesticides and other chemical toxins. It is not uncommon in chronic alcoholics.***
EXAMINATION	• Do a general physical examination. • Examine sexual developmental characteristics with special attention to the genital organs (size, consistency, descent of the testes).
INVESTIGATION	• Do a blood sugar level test. • Hormonal assay.
MANAGEMENT	• Allay the boy's fears and encourage him to be hopeful • (This ***requires much time and patience, and the attitude must always be one of emphatic encouragement***). • Observe the sleep pattern overnight to determine whether he attains the Rapid Eye Movement (REM) level of sleep (at which time, he would have erection). This could be observed by **parents** or **guardians** at home. • In the absence of erection, investigate for an organic lesion (e.g. hormone assays, etc) and refer the patient to a urologists/physician. • The boy is helped if he knows that impotence is a common problem and that he is not unique. • If he has an erection, reassure the boy and organise psychotherapy session and sexual counselling. • The female partner has an important role to play. She must be made aware that, even if the fault is not hers, her full co-operation and active assistance are essential to a cure. Amongst other things, she should be warned that no matter how exasperating the situation may become, recriminations can only do harm.

5.7.2 PREMATURE EJACULATION

The boy usually complains of very quick ejaculation faster than can be explained by the human sexual response cycle usually uncontrollable by the person. Erection may be strong or weak but is always fleeting and ejaculation takes place before, or immediately after, penetration. They may experience depression, feelings of anxiety, lack of sexual satisfaction, borne out of the fact that he cannot satisfy the sexual partner.

Assessment/Identification of the Problem

HISTORY	• Welcome, the boy and make him comfortable. • Reassure the boy that he could be helped. • Ask about drug use (depressants), sexually transmitted diseases. • Ask about any past injuries of the spinal column. • Ask about present and past relationships, nervousness, anxiety. • Ask about the time he ejaculates before or soon after penetration (should be less than 5 minutes). • Ask about the frequency of this problem and whether it occurs with different or same sex partners.
EXAMINATION	• Do a general physical examination. • Examine sexual developmental characteristics with special attention to the genital organs (size, consistency, descent of the testes).
MANAGEMENT	**Based on identified problems;** • If it is sexually transmitted diseases associated, treat according (see chapter 4 of this book). • If it is due to past injuries, refer appropriately. • If due to performance anxiety and other non pathological causes, then teach them to exercise. Suspension of ejaculation by truncating stimulation intermittently will help (Start and stop method). • Pelvic floor exercises involving the deliberate contraction of the muscles used to interrupt micturition may allow the boy to gain control over ejaculation. • Use of condom may also prolong the ejaculation time. • Use of a local anaesthetic ointment may reduce penile stimulation. If this exercise fails, provide information on other ways they can satisfy their partners despite their disability (***Note: the partner may need to be involved in the process)*** and then refer to a specialist.

If he is able to train himself to prolong the time as he wants, temporarily loss of erection during the exercise is normal as it will resume following stimulation.

5.7.3 RETARDED EJACULATION

Retarded ejaculation is the persistent or recurrent delay in, or complete absence of orgasm – and therefore presumably ejaculation – after a normal period of sexual excitement which should be sufficient to sexually arouse a man to the point of orgasm and ejaculation. The boy may complain of tiredness/fatigue during sexual intercourse, loss of erection following prolonged act of sexual intercourse. Their partners may also complain of overstaying.

Assessment/ Identification of the Problem

HISTORY	• Welcome, the client and make him comfortable. • Reassure the client that he could be helped. • Ask about drug use (depressants), sleep pattern, distraction from worry. • Ask about anxiety of pleasing his partner and relationship problem. • Ask about any past injuries of the spinal column. • Ask about present and past relationships. • Ask about the frequency of this problem and whether it occurs with different or same sex partners. • Ask about alcohol and smoking habits.
EXAMINATION	• Do a general physical examination. • Examine sexual developmental characteristics with special attention to the genital organs (size, consistency, descent of the testes).
INVESTIGATION	• Hormonal assay (if necessary)
MANAGEMENT	***Treatment of delayed ejaculation depends on severity of the disorder and on its causes.*** • If no ejaculation ever, refer to a urologist. Absence of ejaculation during sexual intercourse can be solved using sex therapy. • Recommend foreplay until orgasm without penetration to enable the boy ejaculate in a less threatening environment. • He should proceed to have a lengthy foreplay before penetration. • As the boy gains more control, advise penetrative sex without foreplay or with foreplay as desired by the couple. • Treat identified hormonal imbalance or refer to specialist. • If on chronic medication, allay his fears and if it is drug abuse, counsel and refer appropriately.

5.7.4 PRIAPISM

Priapism is a rare disorder that consists of prolonged erection, usually painful, and not associated with sexual stimulation. It is an involuntary prolonged erection unrelated to sexual stimulation and unrelieved by ejaculation. As with many medical emergencies, the saying **"time is tissue"** holds true for priapism. The blood in the corpora cavernosa becomes sludge-like rather than clotted.

PRIAPISM IS A MEDICAL/SURGICAL EMERGENCY

Assessment/Identification of the Problem

HISTORY	• Welcome, the client and make him comfortable. • Reassure the client that he could be helped. • Ask about the duration of erection and the presence of pain. • Ask about past medical, drug history and personal relationships. • Ask about family history of leukaemia, sickle cell disease. • Ask about the use of drugs to enhance erection. • Ask about past surgeries if any. ***About 25% of cases are associated with leukaemia, metastatic carcinoma. In most cases the cause is unclear.***
EXAMINATION	• Check for obvious erection.
INVESTIGATION	• Full blood count and differential • Genotype • Duplex doppler ultrasound of the penis if available
MANAGEMENT	• Admit for observation. • If the erection does not subside in few hours, ice water enema/pack may lead to resolution. • Give sedative 10mg valium orally. • If no relief, refer for surgery. • Counsel on the prevention of future occurrence.

Even though one of the surgical methods mentioned above relieves the erection, inability to achieve an erection thereafter is a common sequela.

FEMALE

5.7.5 VAGINISMUS

This is an involuntary and occasionally painful spasm of the external perivaginal muscles. Where the vagina has contractions that render it tight, difficult or impossible to penetrate such a patient may present with complaints of difficulty in penetration, painful intercourse, and vaginal injury/bleeding.

The term is most often reserved for the occlusive vaginal spasm that occurs with penile entry during coitus, but it may also occur during pelvic examination or during the insertion of a tampon.

Assessment/Identification of the Problem

HISTORY	• Greet and make the client comfortable. • Reassure her that she could be helped. • Take history suggestive of urinary tract infection. • Ask about negative early conditioning such as sexual abuse/ rape, domestic violence from men, genital cutting. • Ask about religious proscriptions against free sexual expression. • Ask about the context in which sexual activity occurs, partner involved, frequency of occurrence etc. • Ask about fear of pain associated with penetration. • Ask about anxiety about sexual contact.
EXAMINATION	• Conduct a gentle genital examination (check for bruises, oedema, genital cutting). ***Diagnosis requires careful evaluation if the patient attempts to avoid the examiner's fingers by moving away, crossing her legs etc.*** ***Forcible entry should be avoided. With patience and assurance, the service provider can usually manage to insert one finger for purposes of gynaecological examination and confirmation of diagnosis.***
MANAGEMENT	• Therapy consists of reassurance and sex education. • Recommend use of lubricant e.g. KY jelly, in case of genital cutting. • Counsel the client in case of drugs, use of pessaries, context and partner involved. • If there is injury, treat and instruct to abstain from sex until injury has healed. • If these fail, refer for **systematic desensitisation and deconditioning**. - **Deconditioning** can be accomplished by using graduated vaginal dilators in a series of clinic visits. Between visits, the patient should practice dilation below

	the point of pain and should be specifically instructed not to force dilation. Her visits should continue until the dilator can be passed without pain as gradual vaginal enlargement occurs. • Psychotherapy to help overcome the feelings that caused the situation in the first place should continue during these visits. Relaxation exercises should also be taught. • It is best to postpone coitus until the largest dilator can be passed with ease. • At home, the partner can participate by gently inserting a well-lubricated finger intravaginally, eventually proceeding to the insertion of the erect, lubricated penis; initially, the penis should simply be held in the vagina without thrusting motions. • Recommend pelvic floor (Kegel muscle) exercises: - The girl should insert her clean lubricated finger gently into the vagina. - Attempt to contract and relax the muscles of the vaginal wall around the fingers. Repeat exercise daily until the patient gains control of her ability to relax the vaginal wall. - Attempt penetrative sex without moving the penis forward and backward. - Repeat these until the patient is able to relax during penetrated sex. • If the vaginismus is related to premature ejaculation or erectile failure on the part of the male partner, repeated anticipation and frustration on the part of the girl may produce recurrent pelvic congestion. • Treatment for the boy's problem is then required in addition to re-educative treatment for the girl.

5.7.6 DYSPAREUNIA

It refers to painful intercourse that may or may not be associated with bleeding, discharge from infection or previous trauma. The girl may cry during sexual intercourse.

Assessment/Identification of the Problem

HISTORY	• Greet and make the patient comfortable. • Reassure the patient that she could be helped. • Take a history about genital cutting, context in which sexual experience takes place, partner involved, past sexual experience, frequency of sexual abuse, size of partners' phallus, congenital abnormality). • Ask exactly when coital pain is experienced: at intromission, during deep vaginal penetration, with penile thrusting, or during orgasm. • Ask about history of vagina discharge, lack of vagina lubrication and suprapubic pain.
INVESTIGATION	• Depending on the cause. • If there is vaginal discharge, take vaginal swab for M/C/S.
MANAGEMENT	• If bruised, clean and treat e.g. with antibiotics. • If it is due to genital cutting, recommend lubricant e.g. KY jelly.

	• If there is vaginal discharge, treat using the syndromic management as described in Chapter 6 of this Manual. • Take specimen for laboratory investigation and treat accordingly. • If there are no abnormalities, a common cause of dyspareunia is inadequate vaginal lubrication combined with attempted forceful insertion of the erect penis. Therefore, recommend KY jelly and prolong foreplay. • If there is an abscess or congenital abnormality, refer to the gynaecologist.

5.7.7 ANORGASMIA OR ORGASMIC FAILURE

In the past, the sexually unresponsive woman was labelled as being frigid – a pejorative term that was more accusatory than diagnostic; consequently the more clinical expression of orgasmic failure is preferred.

The complaints may include lack of interest in sexual activities, feeling of being abnormal, not being liked by peers or feeling of being alienated.

Assessment/Identification of the Problem

HISTORY	• Greet and make the patient comfortable. • Reassure the patient that she could be helped. • Take a history of sexual abuse, congenital malformation, drug use and menstrual pattern. • Explore the psychological basis in social and cultural conditioning during childhood e.g. fear of punishment for disapproved behaviour, of submission to a man, or of pregnancy; hostility towards men; conflicting loves of contradictory sexual attachments, such as strong devotion to a parental figure or unrecognised homosexual feelings.
EXAMINATION	• Conduct genital examination, check for congenital malformation.
INVESTIGATION	• Conduct laboratory investigations including buccal smear, karyotyping and hormone assays where available.
MANAGEMENT	• Therapy consists of reassurance and sex education. • If there are no abnormalities and the girl has never experienced orgasm, she may need instruction on how to masturbate as a necessary first step in understanding, feeling, and enjoying the sexual responses of her body. • Refer to a therapist to design masturbatory exercise, which the girl can teach herself. In turn she must teach her partner the techniques that will bring her to a high state of arousal. The techniques can be transformed, with the partner's assistance, into a phase of lovemaking ultimately leading to actual intercourse and vaginal orgasm. • If genital abnormalities are discovered during physical examination or from laboratory investigations, refer to a gynaecologist.

5.8 INJURIES AND ACCIDENTS

Adolescents with injuries following road traffic accidents, sports, substance abuse, violence and burns may present in the Youth-Friendly Clinic to seek first-aid treatment before being referred to centres with accident and emergency (A & E), neurosurgery and plastic surgery units.

5.8.1 ACUTE INJURIES

Assessment and Identification of the Problem

HISTORY	• Welcome the adolescent and make him/her comfortable. • Take a quick history of the traumatic experience.
EXAMINATION	• Take vital signs. • Conduct a physical examination. • Determine if there is any fracture or other injuries.
MANAGEMENT	• Institute rest immediately to minimize haemorrhage, injury, and swelling. • For haematomas (collection of blood in soft tissue), place a bag of crushed ice over the injured part. Wrap an elastic bandage over the injury and keep in place for about 10 minutes. • Immobilise fractures with a splint and support dislocated joints with a sling. • For bleeding injuries, ensure haemostasis with a suture or with a firm elastic bandage dressing. Give analgesics as required. • Refer to centres with facilities for management, e.g. X-ray, CT Scan, etc. if there are fractures. ***Prolonged application of ice can cause vasodilation, increased swelling, pain and tissue destruction. Therefore, ice should be removed if vasodilation occurs or after 10 minutes, but can be reapplied 10 minutes later.***

5.8.2 COMMON SPORTS INJURIES INVOLVING ADOLESCENTS

Metatarsal Stress Fractures

During sporting activities, the second, third and fourth metatarsals are usually susceptible to fractures because of their thin diaphyses. However, the first metatarsal is usually less at risk while the 5th is relatively at risk.

The adolescent will usually present with forefoot pain, often following an intense impact. This disappears within seconds of stopping the exercise. On successive exercising, the pain returns more intense than previously, ultimately becoming so severe that it may prohibit exercise and persist even with the adolescent lying in bed.

Assessment and Identification of the Problem

<table>
<tr><td>HISTORY</td><td>Welcome the adolescent and make him/her comfortable.
Take history of injury, pain, swelling at the site of impact, loss of function etc.</td></tr>
<tr><td>EXAMINATION</td><td>Conduct a physical examination (palpating the swollen area causes pain at the fracture site).</td></tr>
<tr><td>INVESTIGATION</td><td>An x-ray usually is not sensitive enough to diagnose the fracture until a callus forms 2 to 3 weeks after the injury.</td></tr>
<tr><td>MANAGEMENT</td><td>• Advise the adolescent to stop all sporting that require running. The adolescent can adopt alternatives as follows:
<table><tr><th>Site of Injury</th><th>Alternate Sports</th></tr><tr><td>Lower leg and foot

Upper leg</td><td>Bicycling, swimming

Jogging, swimming</td></tr></table></td></tr>
</table>

	<table><tr><td>Lower back</td><td>Bicycling, swimming, jogging</td></tr></table> • Instruct the youth to wear sports shoes with adequate shock-absorbing qualities; and after healing, running on grass or other soft surfaces is encouraged. • Apply casts if necessary. ***Casts are rarely needed, if applied, they should be left on for only 1 to 2 weeks because they can cause significant muscle atrophy and delay rehabilitation. Healing usually takes 3 to 12 weeks.***

Achilles Tendinitis

The Achilles tendon has 2 major functions during running. The calf muscle (i) lowers the forefoot to the ground after heelstrike and (ii) raises the heel during "toeing off": Achilles tendinitis is caused by any force on the tendon, which is greater than its inherent strength.

Pain is greater when the patient gets up in the morning and often feels better with continued walking. Similarly, pain increases when exercise is begun and often feels better as exercise continues.

Assessment/Identification of the Problem

HISTORY	• Welcome the adolescent and make him/her comfortable. • Take history of trauma, pain, swelling at the site of impact, loss of function etc.
EXAMINATION	• Check the Achilles tendon; is tender when squeezed between the fingers.
MANAGEMENT	• Inform the youth to stop running and try alternate exercises. • Instruct the youth to reduce tension on the tendon by - Placing a heel lift in the shoes. - Stretch the hamstring muscles as soon as this does not cause pain. • Refer to the orthopedic surgeon if necessary.

Head Injuries

Head injury is the leading cause of death in men and boys. Mortality in severe injury approaches 50% and is only little reduced by treatment. Few head injuries occur in isolation, and most cases require simultaneous attention to other severely traumatized parts of the body.

Acute Head Injury

Acute head injury, if mild, may be characterised by transient post-traumatic loss of consciousness unaccompanied by gross structural lapses in the brain. In more severe injuries, there may be severe brain oedema producing decorticate rigidity or decerebrate rigidity (jaws clenched, neck retracted, all limbs extended).

Assessment/Identification of the Problem

HISTORY	• Take a quick history from the adolescent (if conscious) or the relatives. • Quickly determine the extent of injury through symptoms and signs as best as possible. ***Patient may be initially conscious after a head injury however, loss of consciousness may manifest within 24-72 hours after injury.***
EXAMINATION	• Identify the following signs and symptoms: - Swelling or depression on any part of the head. - Bleeding or CSF leakage from the nose, ears and mouth. - Level of consciousness. - Irregular/shallow breathing. - Dilated or slowly responding pupils. - Rigidity of the neck, arms and legs. - Headache.
MANAGEMENT	• Keep a clear airway by positioning (recurrent). • Extend the angle at the jaw with a pillow. • Secure a clear airway with an oral and endotracheal tube (if available). • Control acute bleeding.

	• Avoid displacing the spine or other bones and thereby injuring the spinal cord or blood vessels. • A careful assessment is made of the state of consciousness, breathing pattern, pupil size and reaction to light, oculomotor activity, and motor activity in the limbs. • Measure neurological signs, such as blood pressure, pulse, temperature frequently since any deterioration demands prompt attention. • Set up an IV line and determine if there is internal bleeding . • Refer immediately to secondary or tertiary centre.

Chronic Head Injury

Chronic head injury may not produce symptoms until some weeks after trauma.

Assessment/Identification of the Problem

HISTORY	• Take a quick history from the adolescent (conscious) or the relatives. • Quickly determine the extent of injury through symptoms and signs as best as possible. • Ask about Increasing daily headache. ***Symptoms may not present until weeks after the injury.***
EXAMINATION	• Identify the following signs and symptoms: - Fluctuating drowsiness and/or confusion. - Mild to moderate hemi paresis (weakness of half of the body).
MANAGEMENT	• Refer immediately to a secondary or tertiary centre.

5.8.3. SPINAL CORD INJURY

Injury to the spinal cord can result in a rapid swelling of the cord with a rise in intradural pressure, as well as haemorrhage (extradural, subdural or subarachnoid). Laceration or transections of the cord leaves permanent dysfunction.

Acute Transverse Cord Injury

Acute transverse cord lesion causes immediate flaccid paralysis and loss of all sensation and reflex activity (including autonomic functions) below the level of the injury. The flaccid paralysis gradually changes over hours or days to spastic paralysis, which gradually changes over hours or days to spastic paraplegia.

Assessment/Identification of the Problem

HISTORY	• Welcome the adolescent and make him/her comfortable. • Take a quick history of the traumatic experience.
EXAMINATION	• Conduct a physical examination. • Note the following signs of acute transverse and injury: - Immediate flaccid paralysis. - Loss of all sensations and reflex activities below the level of injury (spinal shock). - Urinary incontinence. - Spastic paraplegia may follow later. • Take the vital signs. ***In less complete spinal injuries, partial motor and sensory losses do occur, howeve,r other symptoms are not as severe as in transverse cord iniurv. but reauire immediate and expert manaaement.***
MANAGEMENT	• Handle all accident victims suspected of a spinal injury with great care. • Treat all injuries as potentially unstable until the extent is known. • Move patient en block when necessary and transport on a firm, flat board or door, with careful padding to stabilize his/her position without excessive pressure. • Ensure proper alignment of the spine (by traction (where possible). • Transfer immediately to health centres with facilities for managing spinal cord injuries.

5.8.4 BURNS

Burns refer to the tissue injuries arising from thermal, electrical or chemical contact with the human body. This often leads to soft tissue damage, oedema and loss of body fluids. Systemic effects, such as hypovolemic shock, infection, or respiratory tract injury, are greater threats to life than the local effects of the burns.

Assessment/Identification of the Problem

HISTORY	• Welcome the adolescent and relatives and make them comfortable. • Take a detailed history: place of accident, whether closed or open space; what the adolescent was doing; any explosion; source of burns (i.e. thermal, electrical, or chemical); duration of exposure; steps already taken to eliminate the burning agent; adolescent's suspicion of additional injuries.

	• Note allergy, medications, presence of heart, pulmonary, or renal disease, diabetes, any other medical or psychiatric disorders (the injury may represent physical abuse or a suicidal attempt) smoking and drinking habits.
EXAMINATION	• Conduct a complete physical examination to detect any pulmonary, cardiac, neurologic or renal disease. • Determine the severity of the injury judged by the quantity of tissue involved. This is represented by the percentage of the body surface area (% BSA) burnt, and by the depth of the burns. • Estimate the height and weight of the adolescent to allow calculation of his/her BSA. • Estimate the extent of the burn (%BSA) with the RULE OF NINES: - Head and neck: 9% of BSA - Each hand and arm (including deltoid): 9% - Each foot and leg as far up as the interior gluteal fold: 18% - Anterior and posterior trunk including buttocks: 18% each; and - Perineum: 1% • Reasonably classify the severity of the burns as follows: **Small** **< 15% BSA** **Moderate** **15-49% BSA** • Determine the depth of the burns: - **First Degree**: Burns are red, very sensitive to touch, and usually moist. There are no blisters, and the surface markedly and widely blanches to light pressure. - **Second Degree**: May or may not have blisters. The wound base is sensitive to touch and may blanch to pressure. - **Third Degree**: May present with blisters. The wound may be bright red because of the fixed haemoglobin in the subdermal region. It is generally anaesthetic or hypoesthetic (insensitive to touch).
MANAGEMENT	• Institute fluid replacement: This is related to the extent of the burn. Use a wide bore venous cannula (e.g. size 16 to 18) in 1 or 2 peripheral veins (set up drip). • Relieve pain with analgesic in minor burns. • Give a tetanus toxoid booster to patients immunized within the last 4 to 5 years. • Give broad spectrum antibiotics. • Provide aseptic wound dressing. • If a burn is moderate or severe, refer to a health centre with facilities for burns management.

5.9 POISONINGS

Poisoning is the most common cause of non-fatal accidents in the home. Common serious poisonings in adolescents are due to aspirin, caustic substances (sulphuric acid), lead, iron and hydrocarbons (kerosene, pesticides, petrol).

5.9.1 ASPIRIN AND OTHER SALICYLATE POISONING

Adolescents occasionally ingest massive doses of aspirin and other salicylate either to procure abortion or inflict self-harm. Presenting symptoms may include acute abdominal pain, vomiting blood and shallow breathing.

Assessment/Identification of the Problem

HISTORY	• Welcome patient's relatives. • Take history from parents/guardian. • Ask about history of abdominal pain, vomiting, blood and shallow breathing.
EXAMINATION	• Do a quick general physical examination. • Observe signs related to poisoning.
MANAGEMENT	• Do a gastric lavage even 6 to 8 hours after ingestion or induce emesis with drugs such as Ipecac syrup. If not available give soapy water to drink or hand washing liquid detergent in water or try to induce vomiting by inserting a hand or blunt instrument into the patient's throat. • Give IV fluids in severe cases. • Keep intake and output fluid chart. • When vomiting reduces: - Give a dose of activated charcoal orally or by stomach tube. - In mild cases give oral fluids alone e.g. ORS, Milk, or fruit juice. - Give vitamin K to correct gastric bleeding. • Monitor vital signs. ***The life-threatening symptom of aspirin poisoning is the vomiting.***

5.9.2 ACID POISONING

Acid poisoning may result from intentional acts of self-injury and may or may not result in death. Patients may present later with difficulty in swallowing.

Assessment /Identification of the Problem

HISTORY	• Welcome patient and relatives. • Take history from parents/guardians. • Ask about history of abdominal pain, vomiting, blood and shallow breathing.
EXAMINATION	• Do a quick general physical examination. • Observe signs related to poisoning.
MANAGEMENT	• Acid Inhalation (Corrosive burns). - Treat for pain. - Treat for shock if evident. - Hospitalise for about 48 hours. - Give intramuscular antibiotics. - Set up IV fluids and give IV antibiotics e.g. Ampicillin 500mg 6 hourly for 48 hours. • Acid Ingestion. - Treat for local pain. - Give plenty of water or milk drink to dilute acid. - DO NOT GIVE EMETIC drugs. - Remove contaminated clothing if any. - Wash the skin. - Hospitalise for observation. • Skin contact with acid. - Flush with water for about 5 minutes. - Reassure the client. - Remove contaminated clothing. - Observe client for 6 hours.

5.9.3 ALKALI POISONING

Adolescents may ingest caustic soda for such reasons as self-harm or attempts to procure an abortion. Corrosion of the mouth cavity and the food passage (Oesophagus) may result.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and relatives. • Take history from patient and relatives.
EXAMINATION	• Do a general physical examination. • Observe signs present. • Check vital signs. ***Even in the absence of mouth lesions strong alkalis can burn the oesophagus.***
MANAGEMENT	• Observe the vital signs. • Treat for shock, if evident. • Relief of pain is important. • Dilute the chemical by giving water or milk drinks. • Do not give emetic drugs. • NO GASTRIC LAVAGE. • Check for burns in the mouth. • Start antibiotic therapy (as in acid poisoning). • Refer to higher level of care if necessary. ***Gastric lavage and/or emetic drugs will enable the alkali to burn the surface area, again. This might endanger client's life.***

5.9.4 ACUTE ALCOHOL POISONING

Adolescents could ingest large amounts of alcohol as this is a period when they are prone to experimentation and peer pressure. They could present with features of alcohol intoxication (section 4.2.2), which could rapidly progress to a state of stupor or coma.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and relatives. • Take history from patient and relatives.
EXAMINATION	• Do a general physical examination. • Observe signs present. • Check vital signs.
MANAGEMENT	• Procure emesis. • If not successful, do a gastric lavage. • Monitor temperature, pulse, respiration and Blood pressure. • IV glucose to prevent hypoglyceamia. • Reassure relatives. • Refer to physician.

5.9.5 HYDROCARBON POISONING

These are substances such as petrol, kerosene, paint thinners and DDT.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and relatives. • Take history from patient and relatives. • Ask about vomiting, drugs given at home.
EXAMINATION	• Observe client for the following: - Choking - Cyanosis - Malaise - CNS symptoms include lethargy, coma and convulsions.
MANAGEMENT	• Give emetic drugs or carry out gastric lavage if not convulsing. • Give activated charcoal.

	• Start IV fluids. • Give diazepam to prevent and control tremors and convulsions. • Keep intake and output record. • Refer if necessary.

5.9.6 BARBITURATES POISONING

Adolescents may ingest massive amounts of barbiturates (phenobarbitone) either for self-harm or mistakenly, taking an overdose of these sleeping tablets and anti epilepsy drugs. Shallow breathing and unconsciousness may result.

Assessment/Identification of the Problem

HISTORY	• Welcome the patient and relative. • Take history from the patient and relatives. • Ask about drug use and background psychiatry condition.
EXAMINATION	• Do a general physical examination. • Observe signs present. • Check vital signs.
MANAGEMENT	• When client reports early, use emetic drugs to encourage vomiting. • Carry out a gastric lavage if up to 24 hours after ingestion. • Give Oxygen. • Monitor vital signs. • Correct any dehydration. • Must be hospitalised. • Refer to psychiatrist. ***If unconscious, use lavage and activated charcoal with a cuffed endotracheal tube.***

5.10 CHRONIC DISEASE

A chronic illness is defined as one that lasts for a substantial period of time or that has sequelae that are debilitating for a long time. Chronic medical condition is one that interferes with daily life for longer than three months in a year or requires hospitalization for more than one month in a year.

5.10.1 DIABETES MELLITUS

Diabetes mellitus is a clinical syndrome characterised by hyperglycaemia due to absolute or relative deficiency of insulin.

Assessment/Identification of the Problem

History	• Welcome the client. • Ask about family history of diabetes. • Ask about dietary history. • Ask about polyuria, polydipsia, weight loss. • Ask about life styles (smoking, activities, food habits). • Ask about history suggestive of malnutrition in utero (e.g birth weight) from client's parents. • Ask about proneness to infection. • Ask about malaise and generalised body weakness.
Examination	• Do a general physical examination. • Take weight and height of the patient. • Calculate his or her Body Mass Index.
Investigations	• Fasting blood sugar OR random blood sugar • Hours post prandial blood test • Urinalysis • Full blood count • Electrolyte, urea and creatinine **Diagnostic criteria** **whole blood glucose (mmol/l)**
Management	**Principle of Management** • ***Non drug management.*** • ***Counselling:*** - Diet control - Exercises • ***Drug management.*** - Oral hypoglycaemic agents - Insulin ***Refer to a physician / specialist after making the diagnosis.***

5.10.2 EPILEPSY

Epilepsy means recurrent seizures usually occurring in the absence of fever. A single seizure is not epilepsy but an indication for investigation.

Assessment/Identification of the Problem

History	***History taking cannot follow strict rules and has to be adapted to each individual case and person. History may be obtained from the patients, eye witnesses and parents.*** • Ask about the description, frequency and time of seizures. • Ask about the activity the patient engaged in when the seizure occurred. • Ask about prodrome (a long term indication of a forth coming attack): Changes in behaviour such as irritability, sleepiness, feeling of hunger, hypothermia (low body temperature <35^0C) distant feeling and the likes. • Ask about aura (first symptoms of the seizures). • If already on antiepileptic drugs, ask about drug compliance.
Examination	• Do a general physical examination. • Look for signs of dysmorphic syndromes (abnormal facial features). • Do a skin examination with particular interest in skin manifestation of neurocutaneous syndromes. • Do a eye and visual field examination to detect papilledema and field cuts associated with focal brain lesions.
Investigation	• Electroencephalography (EEG) • CT scan or MRI to detect structural lesion if indicated • Blood urea and electrolytes • Liver function tests • Blood glucose • Serum calcium, magnesium • Full blood count, Erythrocyte sedimentation rate
Management	• Immediate care of seizures ***<u>First aid</u>*** Move person away from danger (Fire, water, machineries etc). Turn patient to semi prone position after convulsion ceases. Ensure airway is clear. Do not insert anything in the mouth. Seek urgent medical attention.

Follow –up	• If on follow up at your health centre, counsel on trigger factors for seizures and restrictions. **TRIGGER FACTORS FOR SEIZURES** **Sleep deprivation.** **Alcohol (particularly withdrawal).** **Recreational drug misuse.** **Physical and mental exhaustion.** **Flickering lights, including TV and computers screens.** **Intercurrent infections and metabolic disturbances.** **Uncommonly: loud noises, music, reading, hot baths.** **RESTRICTIONS** **Until good seizure control, work or recreational activities above ground level, with dangerous machines, open fire or water should be avoided.** **Cycling and driving should be discouraged until certified by the physicians.**

5.10.3 ASTHMA

Asthma is a condition characterised by reversible airway narrowing with associated respiratory symptoms, typically difficulty in breathing.

Assessment/Identification of the Problem

History	• Welcome and make the client comfortable. • Ask about dyspnoea (difficulty in breathing) and when it started. Also ask about- - Chest tightness/pain. - Wheezing. - Coughing. - Previous episode of similar symptoms. - History of possible precipitant/ allergens (smoke, dust, cold weather, pollen etc). • Ask about family history of asthma. • Medication history (previous and in current episode). • N.B: Based on the severity of the presentation in the clinic, relief should be provided before history taking.
Examination	• Do a general physical examination. • Check airway. • Look for evidence of respiratory distress (subcoastal and intercoastal recession, flaring of alae nasi, cyanosis etc). • Count respiratory and heart rates. • Examine the chest- including auscultation for wheeze/ rhonchi.
Investigations	• Chest X Ray. • Pulse Oximetry and Blood gas analysis. • Peak Expiratory Flow Rate (Post attack). • Electrolyte, urea and creatinine.
Management	**Principle of management** • Maintain a patent airway and *give intranasal oxygen.* • *Hydrate the patient.* • *Treat acute presentation with nebullized salbutamol and steroids- if not available give intravenous aminophylline SLOWLY.* • *Commence on oral drugs- post attack.* • *Counselling- Avoid triggers and follow up client.* **REFER WHEN NECESSARY**

5.10.4 SICKLE CELL DISEASE

Sickle cell disease is a group of inherited conditions characterised by abnormal haemoglobin that is prevalent in the black race. There are two major types- Sickle Cell Anaemia and Sickle Cell Trait.

Assessment/Identification of the Problem

History	• Welcome and make the client comfortable. • Ask about when client was first diagnosed and where. • Ask about previous hospital admission and for what. • Ask about previous blood transfusion.

	• Ask about family history. • Ask about routine medication and clinic attendance. • Ask about sexual development.
Examination	• Do a general physical examination. • Take weight and height measurements. • Check for pallor and jaundice. • Check abdomen for enlarged organs.
Investigations	• Repeat haemoglobin genotype if not sure. • Periodic PCV check. • Any other pertinent investigation.
Management	**<u>Principle of management</u>** • Counselling- adequate intake of fluids, avoid high altitudes etc • Routine medication – folic acid , multivitamins and anti-malaria prophylaxis • Regular follow up • Adequate and prompt management of crisis ***REFER WHEN NECESSARY.***

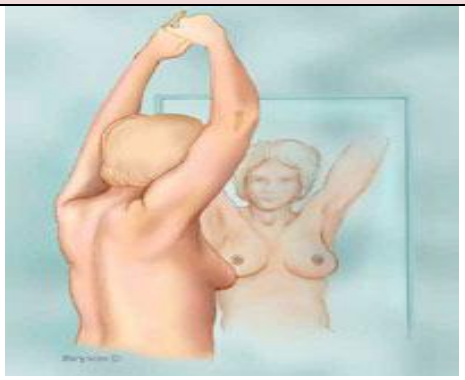
5.11 OTHERS

5.11.1 BREAST SELF EXAMINATION (BSE)

Most breast lumps are detected by women themselves during breast self-examination. By examining the breasts every month, a woman will be accustomed to the normal look and feel of her breasts. If there is a change, she will see and/or feel it. Therefore, teaching women to examine the breasts monthly is important to maintaining good health.

Inform the client that it is best to examine the breast 3 days after cessation of the menstrual period when the breasts are less likely to be swollen or painful.

Table 5.3 Self Breast Examination Procedures

STEPS	PROCEDURES	PICTURES
1	Begin by looking at your breasts in the mirror with your shoulders straight and your arms on your hips. Here's what you should look for: • Breasts that are their usual size, shape, and color; • Breasts that are evenly shaped without visible distortion or swelling. If you see any of the following changes, bring them to your doctor's attention: • Dimpling, puckering, or bulging of the skin; • A nipple that has changed position or an inverted nipple (pushed inward instead of sticking out); • Redness, soreness, rash, or swelling.	
2	Now, raise your arms and look for the same changes.	
3	While you're at the mirror, look for any signs of fluid coming out of one or both nipples (this could be a watery, milky, or yellow fluid or blood).	***PICTURE SAME AS ABOVE***

4	• Next, feel your breasts while lying down, place a folded towel or pillow under the shoulder of the breast being examined. Use your right hand to feel your left breast and then your left hand to feel your right breast. • Use a firm, smooth touch with the first few finger pads of your hand, keeping the fingers flat and together. Use a circular motion, about the size of a quarter. • Cover the entire breast from top to bottom, side to side — from your collarbone to the top of your abdomen, and from your armpit to your cleavage. • Follow a pattern to be sure that you cover the whole breast. You can begin at the nipple, moving in larger and larger circles until you reach the outer edge of the breast. • You can also move your fingers up and down vertically, in rows, as if you were mowing a lawn. This up-and-down approach seems to work best for most women. • Be sure to feel all the tissue from the front to the back of your breasts: for the skin and tissue just beneath, use light pressure; use medium pressure for tissue in the middle of your breasts; use firm pressure for the deep tissue in the back. • When you've reached the deep tissue, you should be able to feel down to your ribcage.	
5	• Finally, feel your breasts while you are standing or sitting. • Many women find that the easiest way to feel their breasts is when their skin is wet and slippery, so they like to do this step in the shower. • Cover your entire breast, using the same hand movements described in Step 4.	

If your breasts are usually lumpy, note the number of lumps felt and their locations. Next month, note if there are any changes in the number, size or shape (smooth or irregular). Using the same technique every month will help you know if any changes occur.

Instructions for BSE

8. Inform the client that it is best to examine the breast 3 days after cessation of the menstrual period when the breasts are less likely to be swollen or painful.
9. Although BSE can be performed at anytime of the day, doing so during bath will allow the hands to move easily over the wet skin.

However, note that the breasts can be examined while standing up or lying down. When lying down, place a folded towel or pillow under the shoulder of the breast beina examined.

If your breasts are usually lumpy, note the number of lumps felt and their locations. Next month, note if there are any changes in the number, size or shape (smooth or irregular). Using the same technique every month will help you know if any changes occur.

5.11.2 BED WETTING (ENURESIS)

The involuntary and repeated passage of urine while asleep in an adolescent can be quite embarrassing and be a source of worry and low esteem. It is therefore necessary that healthcare providers know how to manage such situations when they come across them. It occurs in about 3% of those aged 12 years and may persist in 1% at age 18. It is commoner in boys than girls. It appears to be familial, and is sometimes associated with sleep disorders, or an organic ailment such as urinary tract infection (UTI), individual or family psychopathology, diabetes or pelvic mass.

Before the age of 3 years, it is mostly physiologic manifesting delayed neuromuscular maturation of the lower urinary tract, posterior urethral valve in boys or distal urethral stenosis in girls.

Assessment/Identification of the Problem

HISTORY	• Take a careful history of the following: - Duration of enuresis - Symptoms suggestive of urinary tract infection such as dysuria or frequency - Disturbances of sleep - Emotional disturbances or stressful conditions

EXAMINATION	• Conduct a physical examination to exclude pelvic mass.
INVESTIGATIONS	• Test urine for sugar. • Perform urinalysis.
MANAGEMENT	• Treatment can be in three ways: - Motivational counselling in which the adolescent assumes an active role by keeping a calendar to record wet and dry nights, urinating before going to bed and avoiding fluid intake 3 hours before sleeping time. Punishments for wet nights are avoided while positive reinforcement is given for dry night. - Alarm clock or other means can be used to wake up the client at intervals during the night. - The use of imipramime, 50mg orally, 1 hour before bed can be used if the other two methods fail to help. • If these three methods fail, refer to a urologist.

SECTION B:

MINIMUM STANDARD FOR ADOLESCENT/ YOUTH-FRIENDLY HEALTH SERVICES IN NIGERIA

ADOLESCENT/YOUTH-FRIENDLY HEALTH SERVICES

Services are termed as adolescent- or youth-friendly if they have policies and attributes that make them attractive to young people and provide comfortable and appropriate setting for meeting the needs of young people, and retain their clientele for follow-up and repeat visits. Such services are developed and provided in a way that recognizes that the challenges, difficulties, and obstacles faced by young people are different from those of other age groups.

CHARACTERISTICS OF AN ADOLESCENT/YOUTH-FRIENDLY HEATH CENTRE

Based on the experiences of youth-serving organisations, certain characteristics of youth-friendly health facilities have been identified and include the under-mentioned ones.

Community Support

- Community members are well informed about the existence of the centre, and the nature of the health and other services it provides; they acknowledge its value and are supportive of its activities.

Youth participation

- Young people are well informed about the nature of the health and other services that the adolescent/youth-friendly health care facility provides, and about how and when to utilise them.

- Young people actively participate in the activities of the health facility.

Youth friendly Policies

- The policies of the health care facility guarantee confidentiality of the information given by the clients as well as the clients' record and the information they contain.

- The facility does not withhold the provision of medically appropriate drugs and health-related products (such as contraceptives) based on age and marital status considerations.

- The facility does not operate cumbersome and time-consuming case-registration, case-retrieval and consultation procedures.

- The facility provides all or most of the health services that young people need 'under one roof'.

- The facility has strong linkages with organisations that provide health and social services that it does not have, by ensuring that an effective and user-friendly referral system is maintained.

- The staff of the facility are conscious of the fact that young people may not be able to pay for needed services at the point in time, and are able to reduce or waive payment in deserving cases, as well as operate flexible payment schedule in relevant cases in line with the policy of the facility.

Adolescent and Youth Friendly staff

- The staff are technically competent to provide high quality services to young people, and are interested and concerned about the health and development of the age group.

- The staff are easy to relate to, trustworthy and enjoy working with young people.

- The staff are able and willing to devote adequate time for each patient-consultation.

MINIMUM BASIC PACKAGE FOR ADOLESCENT/YOUTH-FRIENDLY HEALTH SERVICES IN NIGERIA

The minimum basic package for adolescent/youth-friendly health services (AYFHS) in Nigeria is based on the WHO criteria, suitably adapted to meet the Nigerian situation. The following constitute the three basic components for AYFHS:

- Education and Communication
- Health and Life Style
- Recreational Activities

(i) Education and Communication

- Information and education on adolescent development and sexual reproductive health issues
- Information and education on basic health and lifestyle
- Life and livelihood skills training

(i) **Health and Life Style**

- General health services (malaria and other endemic diseases, injuries, accidents and dental health)
- Contraceptive services
- Management of sexually transmitted infections
- Maternal health services and post-abortion care
- HIV related services including voluntary counselling and testing
- Management of sexual violence
- Mental health services including health promotion, preventive and treatment services
- Referral systems

(ii) Recreation services

- Sports activities
- Games
- Educational/audiovisual entertainment

ESTABLISHING ADOLESCENT/YOUTH-FRIENDLY HEALTH SERVICES

Securing the support of stakeholders, including community and religious leaders, parents and other youth handlers and youth leaders is critical to the establishment of effective adolescent/youth-friendly health services. Community involvement is also important in the planning of the services to ensure its acceptability by the

people. The opinion of the primary target group – adolescents and youths – must be sought and taken into consideration in the design of the service facility, service hours and packaging of services.

An assessment of the socio-demographic and economic characteristic of the population (particularly the young people), available youth-targeted services and other resources for meeting the needs of young people, and health and development challenges of young people should be undertaken as part of preliminary steps to establishing AYFHS in any community. The result of the assessment should form a critical input into the planning of services. A work plan should be developed to detail the various stages, timing, the implementing individuals and cost of each activity listed for implementation. Activities to be undertaken to ensure good quality service include appropriate citing and structure of service facility, and training of health workers.

Service Facility

In setting up AYFHS, there are certain important elements that have to be considered.

(i) Location

Service facility should be located in a place convenient for young people, and where they can easily access. Where possible, service facility should be located to other facilities that are frequented by young people. In all cases, the location to be selected must be such that afford young people sufficient privacy.

(ii) Layout/Structure of the Service Facility

To meet the needs of young people, health care service facilities need to have facilities for treatment, counseling as well as recreational activities. A reception area with opportunity for indoor games and with friendly staff, with volunteer youth staff where possible, particularly provides a welcoming environment to young people.

Based on the above, facilities providing AYFHS should be appropriately demarcated to have a minimum of three rooms for the following:

- Reception/registration room – this should be separate from the reception room used by other age groups.
- Waiting room which can also serve for health education and behaviour communication change activities and should have audio-visual facilities.
- Consultation/counseling room.

(iii) Staff

Staff should be adequately trained and skilled in dealing with young people, and able to provide adequate counseling and treatment services. Volunteer youth workers should also be encouraged to work in the health facility.

(iii) **Supplies**

Ensure adequate supplies of necessary furniture, medical equipment, drugs and logistics including contraceptives, management information system forms, and clinical protocols.

(v) Referrals and Networking with other Community-based Youth Resources

AYFHS should provide appropriate higher referral services to higher level of care, where necessary for further management of cases. A two-way referral should be maintained between all health services serving young people within a community. Specially designed cards should be exclusively designed for use of young people to ensure that they receive prompt attention at all levels of services to where they may be referred. AYFHS should also network with other community-based resources that address the needs of young people, including religious, legal, and vocational and skill-acquisition services. Service providers in the health facility should maintain a directory of all youth-serving organisations and resources available for addressing the needs of young people.

Note: The Minimum Basic Package for Adolescent/Youth-Friendly Health Services in Nigeria is currently being reviewed.

SECTION C:

EFFECTIVE YOUTH PARTICIPATION IN ADOLESCENT/YOUTH-FRIENDLY HEALTH SERVICES

EFFECTIVE YOUTH PARTICIPATION IN YOUTH FRIENDLY HEALTH SERVICES

BASIC COMPONENTS OF ADOLESCENT/YOUTH-FRIENDLY SERVICES

- Education and Communication
- Health and Life Style
- Recreation Activities

Definition

Youth's participation can be defined as youths partaking in, and influencing processes, decisions and activities in youth friendly services at all levels.

In this context, all youths should be involved, irrespective of their gender, disability, education, health and other consideration.

INFORMATION EDUCATION AND COMMUNICATION

Youths should be involved in research on issues that affect them; its magnitude and behavioral patterns to enable them design appropriate interventions.

Youths should be involved in design, development and dissemination of IEC materials and other information, including research findings.

Youths who have been trained should be involved in facilitating IEC training sessions.

HEALTH AND LIFE STYLE

- Youths should be involved in clinical and non-clinical services based on their educational background, experience and capacity in partnership with experienced youth friendly service providers. This will include youth volunteers/peer educators from the community.
- Youths should be involved identifying appropriate location of youth friendly facilities to ensure acceptability, accessibility and utilization.
- Youth should participate in all bodies/organs where decisions affecting their health and welfare are taken.
- Youths should be trained and re-oriented to take lead in encouraging health-seeking behaviour of their peers.
- Youths should be involved in developing resource files of youth-friendly agencies/institutions to facilitate effective referral system.
- Youths should be involved in feedback, follow-up mechanisms and data collection of youth-related services.
- Youths should be involved in the rehabilitation of emotionally displaced youth. This will include post abortion care, sexually abused, youths living with HIV/AIDS, drugs/substance abuse etc.

RECREATIONAL ACTIVITIES

- Youths should be involved in identifying, selecting and management of recreational facilities/activities where youth friendly services are rendered e.g. snookers, Ayo games.
- Youths should assist in the creation, designing and selection of audio-visuals to be utilized for youth related activities.
- Youths should be supported to design recreational activities that reflect youth related issues, which are relevant in their community.

CAPACITY BUILDING

Capacity building for youth will be useful to strengthen the potentials of the youths toward effective participation in all the above highlighted areas. This will also enhance ownership and sustainability of the activities/programme. These however, should not be a prerequisite for youth participation.

KEY AREAS WHERE CAPACITY BUILDING IS NECESSARY

Key areas will include:

- Leadership training – to enhance individual self-esteem, creative ability, self-evaluation, charismatic qualities and respect.
- Communication skills - Interpersonal communication and counseling skills.
- Administrative and Managerial skills – Examples: computer skills, library skills, management information system (MIS) part-time working period to have experience in the youth-friendly services etc.
- Training in technical and vocational skills for in/out of school youths e.g. video and audio production, photograph, barbing, tie and dye, catering, knitting, hairdressing etc.

Note: The implementation of these basic components must BE EVALUATED with the active participation of the youths with the feedback utilized to improve the quality of service.

APPENDIX

FREQUENTLY ASKED QUESTIONS

MALE PUBERTY

Why is it that I have so little hair on my face and body?

Understanding the reason for the question:
The adolescent may feel inadequate when compared to his peers.
Points to make in responding to this question:
The amount of hair on the face and body changes as a boy grows older, and varies from individual to another and from boys in one family to another. You may have less body hair because your puberty may be delayed. When puberty occurs, your body hair is likely to increase as well. If you have already gone through puberty and still do not have much body hair, you will need to accept this (Many completely healthy and well men have little facial and body hair).

My penis seems small when compared to those of my friends. Am I normal?

Understanding the reason for this question:
This question may come from the belief that the size of the penis determines the "maleness" of the person. The boy may be anxious about not being normal.
Points to make in responding to this question:
Two boys of the same age may have differences in the sizes of their penises depending on their family traits. This has nothing to do with your maleness or sexual function. If you are still in your early years of your pubertal development there is still time for your penis size to increase.

FEMALE PUBERTY

Why have my periods not yet started? Why are my breasts smaller than those of my friends?

Understanding the reason for the questions:
All adolescents – boys and girls – are concerned about whether what is happening to their bodies is normal or not.
Points to make in responding to this question*:*
There is significant variation in the size of the breast between individuals. The size of your breast can

depend on a number of things including, how far you are through the process of puberty (your development), and the normal variation in girls in the amount of fat deposited in their breasts.

Breast development is one of the early signs of puberty, and usually starts to occur a few years before the periods start. You will need to eat a healthy and nutritious diet, have adequate exercise and wait for your breasts to develop with time as you go through puberty. Different girls go through puberty at different rates depending on their family traits and their nutrition. Almost all girls go through the process of puberty with no problems.

DYSMENORRHOEA

Will I be able to have a child normally in the future?

Points to make in this response:

Pain with menstrual periods does not affect one's ability to bear children. It is a common phenomenon and is easily managed.

My friends say this problem becomes less after childbirth. Is that right?

Points to make in this response:

The pain usually tends to lessen after a woman bears a child. This is believed to be due to the stretching of the cervix (the mouth of the uterus) during child-birth and the damage to some of the nerve fibres in the area.

SEXUALITY AND PREGNANCY

How does someone get pregnant?

Understanding the reason for the question:

The adolescents may have questions or doubts about this.

Points to make in this response:

Pregnancy occurs when a man inserts his penis into his female partner's vagina and discharges semen within. The sperms in the semen travel up the vagina and into the uterus seeking to find and fertilize an egg that is released by the woman's ovary. The few drops of liquid which leave the penis before a man discharges semen contain sperms, and so pregnancy can occur when a couple have sex without a

condom and penis is withdrawn before ejaculation

How is it that some people have sex without contraception sometimes and still do not get pregnant whereas others get pregnant after having sex only once?

Understanding the reason for the question:

The adolescents may have questions or doubts about this.

Points to make in this response:
There are many factors that determine whether an act of sexual intercourse results in a pregnancy. For example, one key factor is the timing of sexual intercourse. If it takes place close to the time of ovulation the chances of getting pregnant are greater

GENITAL INFECTION

Can douching my vagina (i.e. washing it with water or with products such as soap) help to prevent any infections or other problems?

Points to make while responding to the question*:*

It is better to avoid douching, as it tends to wash away the body's natural protective secretions. Using products such as soap inside the vagina can cause irritation and lead to pain and discomfort. Just wash the outer part of the genital area every time you go to the toilet and pat it dry with a clean cloth or paper towel.

Will I become completely cured?

Points to make in responding to this question*:* The kind of infection that you have is usually caused by bacteria – a type of germ that can be definitively cured. If the infection does not clear up with the treatment you are given or if the problem recurs, please come back for assessment and treatment.

Will I be able to become a father/mother in the future?

Points to make in responding to this question:

The types of infections that cause sores on the genitals (e.g. syphilis) generally do not impact on your ability to become pregnant/father a child. However, other kinds of sexually transmitted infections (e.g. gonorrhoea) can affect your ability to become pregnant/father a child.

When could I have sex again?

Points to make in responding to this question:

You can have sex again, after you have completed your treatment and are completely cured. If you have been advised to have your partner treated, it is important that he/she completes treatment and is completly cured before you have sex again. If not, you are likely to get the infection again from him/her.

NUTRITION AND LOOKS

My friends say that pimples can be worsened by eating fried foods. Is that true?

Points to make in responding to this question:

No, this is not true. The oiliness of the skin that leads to pimples is due to hormonal changes that occur inside the body and has nothing to do with fried foods.

I want my skin to look lighter, is it okay to use skin lightening agents?

Understanding the reason for the question*:*

It would be useful to explore why the adolescent wishes to lighten his/her skin. It would possibly be because they feel they would look better that way and because of social pressure to look fairer.

Points to make in responding to this question:

The most important things in determining your skin colour are: the colour of your parent's skin and how much exposure you have to the sun. It may be harmful and unhealthy if you try to alter your skin colour using skin-lightening creams or other products. People from hot and sunny climates tend to have darker skin. This dark skin helps to protect their bodies from the strong sun in these climates. If you try to change your skin colour with lightening agents you may lose this natural protection.

Skin lightening agents can have side effect. Some agents contain chemicals which can cause:

- more pigmentation,
- premature ageing (wrinkling) of the skin,
- damage to the skin that may make you more susceptible to skin cancer.

Why is my weight is so low/why am I so thin?

Understanding the reason for the question:

The adolescent may be concerned about how they appear in the eyes of their peers. They are also afraid that being too thin may make them less able to do day to day activities.

Points to make in responding to this question*:*

Some people are naturally thin because their parents are thin. Others are thin because the food they eat does not give them the nourishment they need to match the work they do. Still others are thin because they have long standing illnesses. However, remember that even if you feel you are thin, as long as you feel fit and strong enough to carry out your everyday activities, you are fine.

Why am I so fat?

Understanding the reason for the question*:*

The adolescent may be concerned about how they appear in the eyes of their peers. They are also afraid that being too fat may make them less able to do day to day activities.

Points to make in responding to this question:

The reason you are overweight is because the food you eat gives you too many calories over and above what you need for the type of work you do. Also, the level of exercise you do is not enough to use up the extra calories.

Can I do something to lose weight?

Understanding the reason for the question:

The adolescent is anxious to know how they may quickly make themselves look good and be more accepted by their peers.

Points to make in responding to the questions:

Discuss with them about how they could lose weight by restricting the amount of food they eat and by doing more physical activity, including sport. Discuss how to limit the time they sit in one place for prolonged periods of time, such as watching television, spending long periods working on a computer etc. Discuss the importance of maintaining contact with friends and joining in social activities.

Can I do something to put on weight?

Understanding the reason for the question:

The adolescent is anxious to know how they may quickly make themselves look good and be more accepted by their peers.

Points to make in responding to the question:

Discuss with them about how they could gain weight by increasing the amount of energy rich food they eat and by possibly limiting their physical activity, including sport. Provide advice on healthy eating.

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