



Ministry of Health

Sexually Transmitted Infections Training Manual

2021



World Health Organization





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Disclaimer

The reviewers of this manual have made every effort to ensure the accuracy and appropriateness of drug dosages and treatment regimen presented. The treatment regimen described are based on best available evidence of STI prevalence and drug sensitivity patterns locally and globally. Where local data is lacking or inconclusive, the reviewers have relied on WHO and CDC reviews. The ministry will not be held liable for any problem arising from failure to adhere to this manual.





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Acronyms

AIDS: acquired immune deficiency syndrome

ART: Anti-retro viral therapy

BCC: Behavioral change communication

Bid: Twice a day

BV Bacterial vaginosis

FTA: Flouriscent Treponema antibody

GUD: Genital ulcer disease

ELISA Test: Enzyme-linked immunosorbent assay

HBsAg: Hepatitis B surface antigen

HBV: Hepatitis B virus

HIV: human immunodeficiency virus

HPV: human papillomavirus

HSV-2: herpes simplex virus type 2

HTS: HIV testing Services

HIVST: HIV self-test

IM: Intra-muscular

IU: International Unit

IUD: Intra-uterine disposal

IV: Intra-venous

LEEP: Loop electrosurgical excision procedure

LGV: Lymphogranuloma venereal

MSM: Men who have sex with men

NAAT: nucleic acid amplification test





PCR: polymerase chain reaction

PICO: population, intervention, comparator, outcome

PID: Pelvic inflammatory disease

Po: per os/Orally

Qid: Four times a day

PrEP: pre-exposure prophylaxis

RDT: Rapid diagnostic test

RPR: rapid plasma reagin

Stat Immediate dose

STI: sexually transmitted infection

TCA: Trichloro-acetic acid

Tid/Tds: Three times a day

TPHA: Treponema pallidum haemagglutination assay

TPPA: Treponema pallidum particle agglutination assay

TV: Trichomonas vaginalis

UDS: Urethral discharge syndrome

UNAIDS: United Nations Programme on HIV/AIDS

UNFPA: United Nations Population Fund

UNICEF: United Nations Children's Fund

VCT: Voluntary counseling and testing

VDRL: Venereal Diseases Research Laboratory

VDS: Vaginal discharge syndrome

VIA: Visual inspection of the cervix with acetic acid





Glossary

Acute: Of abrupt onset, in reference to a disease. Acute often also connotes an illness that is of short duration, rapidly progressive, and in need of urgent care.

AIDS: Acquired immune deficiency syndrome. The most severe manifestation of infection in persons with the human immunodeficiency virus (HIV)

Algorithm: A decision and action tree. Also termed a “flow chart”. Like a map that guides health workers through a series of decisions and actions.

Asymptomatic: Without symptoms. Usually describes a person who tests positive for an infection, but who shows no clinical symptoms of the disease.

Bacterial vaginosis: Overgrowth of bacteria species which normally are present in low levels in the vagina. Bacteria include Gardnerella, Bacteroides, Mycoplasma hominis, Mobiluncus, Peptostreptococcus.

Chancroid: An infectious venereal ulcer caused by Haemophilus ducreyi. Common in tropical countries.

Chlamydial infection: A highly infectious disease caused by Chlamydia trachomatis. It is passed on during sexual contact. In women, it most commonly infects the cervix, vagina, urethra, and rectum. In men, it most commonly infects the urethra and rectum.

Compliance: The extent to which a patient takes his or her medication according to the prescribed schedule. Also termed “adherence”.

Condylomata lata: Lesions associated with syphilis in the secondary stage. They are typically large, raised, grey to white lesions found in warm, moist areas such as the mouth or perineum.

Confidentiality: When data or information is not made available or disclosed to unauthorised persons or processes.

Counselling: A dialogue between a client and a service provider that is aimed at enabling the client to cope with stress and take personal informed decisions regarding his/her health condition.





Donovanosis (Granuloma inguinale): A genital ulcer disease caused by *Calymmatobacterium granulomatis*. It is common to some (sub)tropical areas, including southern Africa. Symptoms include painless, progressive ulcerative and highly vascular lesions, which bleed easily on contact.

ELISA Test: Enzyme-linked immunosorbent assay. A type of enzyme immunoassay (EIA) for determining the presence of antibodies to HIV in the blood or oral fluids.

Epidemiology: The branch of medical science that deals with the study of incidence, distribution, and control of a disease in a population.

Gonorrhoea: A common infectious disease caused by the bacterium *Neisseria gonorrhoea*. It can infect mucosal surfaces, including genitals, eyes and rectum. Most infected men develop and seek treatment for urethritis. Most infected women are asymptomatic or have mild and nonspecific symptoms, and thus remain untreated for longer.

Herpes simplex virus (HSV): A virus that can cause several types of viral infections. There are two types: HSV-1 and HSV-2. HSV-1 typically causes vesicles found around the mouth and lips (oral herpes or cold sores). HSV-2 usually infects the genitals, resulting in lesions on or near the genitals. **HIV:** Human immunodeficiency virus. A virus that destroys the immune system, ultimately leading to AIDS.

Index case: The patient who presents to the health facility with an STI.

Multiple concurrent partnerships: The practice of people having more than one sexual partner within the same time period.

Pap smear: A screening test for cervical cancer based on the examination under the microscope of cells collected from the cervix, smeared on a slide and specially stained to reveal premalignant (before cancer) and malignant (cancer) changes, as well as changes due to noncancerous conditions such as inflammation from infections.

Pelvic inflammatory disease (PID): Includes a range of upper-genital-tract inflammation, including any combination of endometritis, salpingitis, tubo-ovarian abscess, and pelvic peritonitis. It is generally caused by a contiguous spread of organisms ascending from the cervix via the endometrial cavity to the fallopian tubes





and beyond. This seems to be the most common mechanism for the development of PID.

Prevalence: The number of cases at any time during the study period, divided by the population at risk.

Private sector: Private sector refers to involvement by businesses, charitable organisations or individuals.

Public sector: Public sector refers to involvement by government, whether national or local/municipal.

Rapid plasma Reagin test: A blood test for syphilis. It is fast, easy, inexpensive, and is often used for syphilis screening. It can be quantified by its titre. By itself, it does not confirm the presence of *Treponema pallidum*, the causative agent.

Rapid test: Test for HIV or syphilis that yields same-day results.

Sensitivity: The performance of a test (or other diagnostic criteria) among persons with disease. The probability of a positive test among persons with disease.

Specificity: The performance of a test (or other diagnostic criteria) among persons without disease. The probability of a negative test among persons without disease.

STI: Sexually transmitted infections. These are spread by the transfer of organisms from person to person during sexual contact. Also sexually transmitted disease (STD).

Symptomatic: Having obvious signs of disease such as ulcer, discharge, swelling, fever, diarrhoea, enlarged glands, oral candida, herpes, or skin problems.

Syndrome: A set of signs and symptoms that tend to occur together and which reflect the presence of a particular disease or an increased chance of developing a particular disease.

Syphilis: A chronic infectious disease caused by a spirochaete (*Treponema pallidum*). It is transmitted either by sexual contact or passed from mother to child in utero. It progresses through three stages, which are characterised respectively by local formation of chancres, ulcerous skin eruptions, and systemic infection leading to general paresis.





Trichomoniasis: A vaginal infection caused by *Trichomonas vaginalis*. Almost always sexually transmitted. When present, signs and symptoms consist of frothy grey or yellow-green vaginal discharge or pruritus (severe itching)





Module 1: Background

Sexually Transmitted Infections (STIs) affect both men and women and almost half of all STIs occur in people younger than 25 years old. Exposure to STIs can occur anytime you have sexual contact. The contact is usually vaginal, oral and anal sex and through other routes such as needle sharing, needle pricks, during pregnancy, delivery and breastfeeding. Other infected people may be asymptomatic but still infectious.

1.1 Global Sexually Transmitted Infections Overview

According to World Health Organisation (WHO) data based from 2009 to 2016, in 2019, more than 1 million sexually transmitted infections are acquired every day worldwide. Each year there are an estimated 376 million new infections with one of four STIs: chlamydia (127 million), gonorrhoea (87 million), syphilis (6.3 million) and trichomoniasis (156 million). More than 500 million people are estimated to have genital infections with herpes simplex virus (HSV).

More than 290 million women have human papilloma virus (HPV) infection, which is the primary cause of cervical cancer. An estimated 240 million people are living with chronic hepatitis B globally. The burden of STIs varies by region and sex, and the burden is greatest in resource-limited countries. The global incidence rates in 2016 were estimated to be 34 new cases of chlamydia per 1000 women and 33 per 1000 men; 20 new cases of gonorrhoea per 1000 women and 26 per 1000 men; 40 new cases of trichomoniasis per 1000 women and 42 per 1000 men.

The WHO African Region had the highest numbers of new cases of gonorrhoea and trichomoniasis amongst women and men with over 65 million occurring in Sub-Saharan, and the WHO Region of the Americas had the highest numbers of new cases of chlamydia and syphilis among both men and women. The majority of STIs have no symptoms or only mild symptoms that may not be recognised as an STI. The sequelae of untreated STIs include adverse birth outcomes such as still births, neonatal death, low birth weight and congenital deformities.

Although progress has been made in preventing the mother-to-child transmission of syphilis since 2012, the decline has not been substantial, since an estimated 661 000 cases of congenital syphilis occurred in 2016. The number of cases of congenital



syphilis per 100 000 live births fell from 539 in 2012 to 473 in 2016, indicating that more efforts are needed to accelerate the interventions for sustainable and greater impact.

Of the 661 000 cases of congenital syphilis in 2016, more than 350 000 occurred as adverse birth outcomes, including stillbirths and neonatal deaths. Other complications include, pelvic inflammatory disease (PID), ectopic pregnancy and infertility.

Much can be done to control the spread of STIs, alleviate harmful consequences and vastly improve quality of life. To address this critical health need and enable countries to reach health target set by the Sustainable Development Goals (SDGs), the World Health Organisation developed the Global Health Sector strategy on sexually Transmitted infections 2016-2021.

1.2 Eswatini Sexually Transmitted Infections Overview

In Eswatini, behaviours that pose high risks for STI and HIV transmission include; Low levels of knowledge about STIs and HIV; Inconsistent condom use; Multiple sexual partners; Gender disparities leading to unequal power in sexual decision-making and Inappropriate health seeking behaviour for STIs.

1.3 Eswatini Sexually Transmitted Statistics

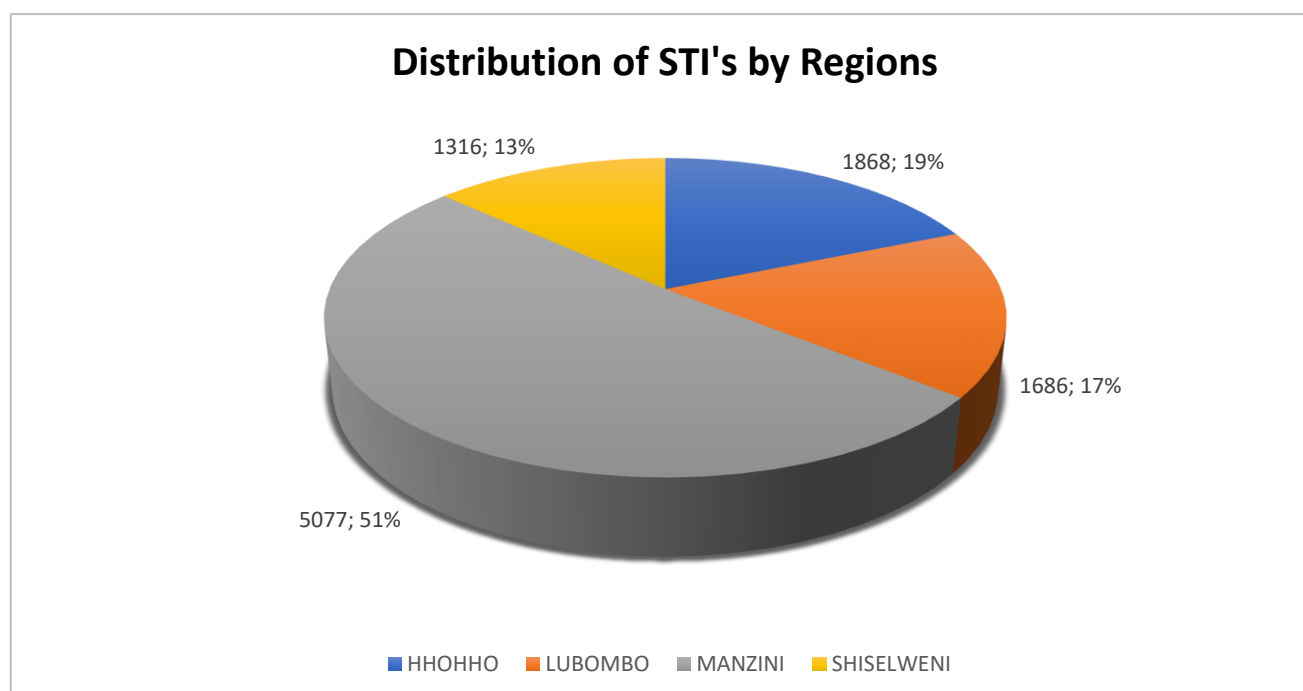


Figure 1: Prevalence of STI by Region CMIS January to April 2021

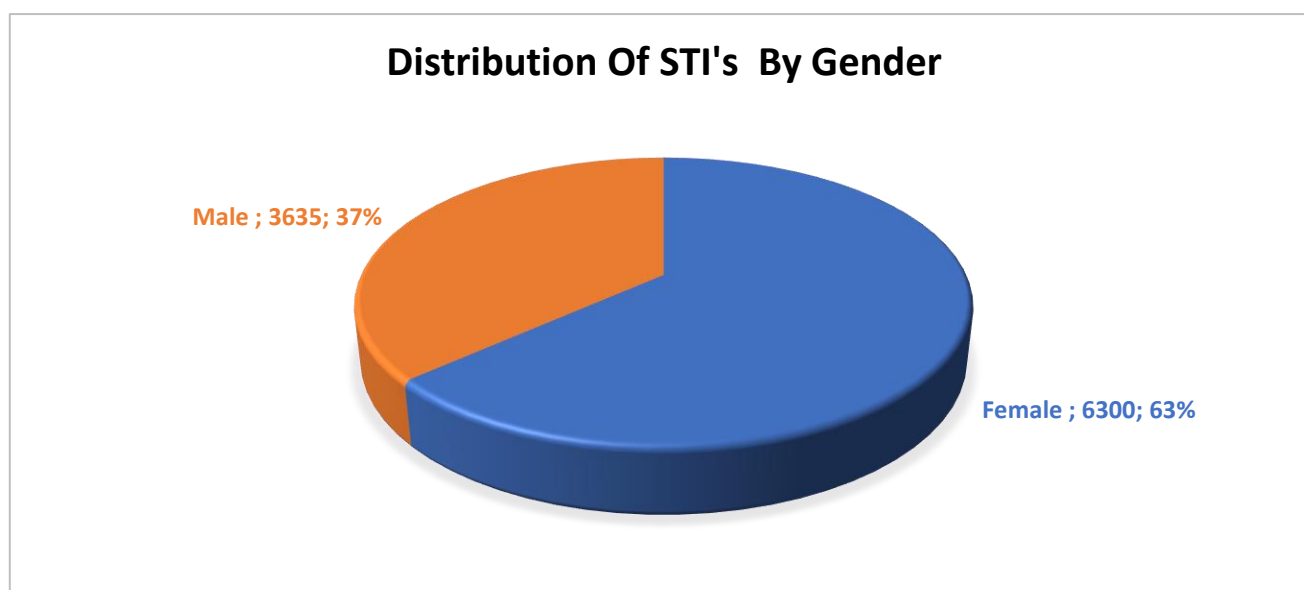


Figure 2: Prevalence of STI by Sex CMIS January to April 2021

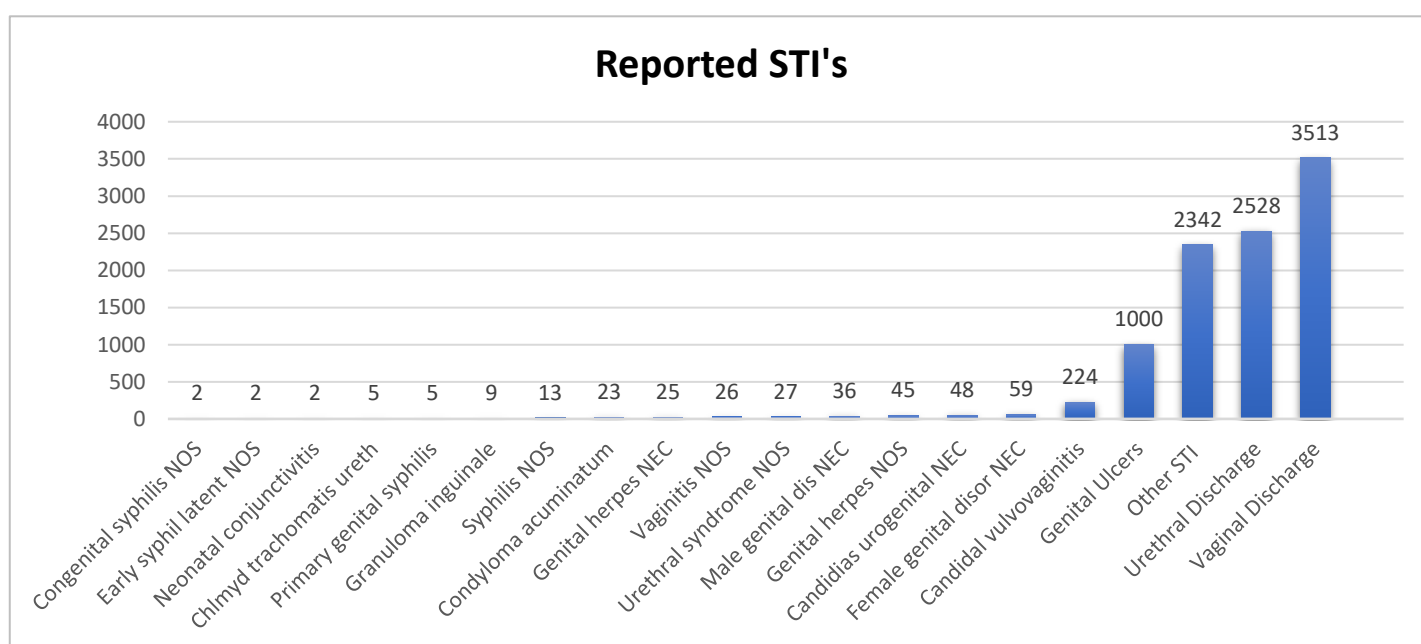


Figure 3: Prevalence of STI's by Condition and syndrome, CMIS January to April 2021





1.4 Introduction

Sexually Transmitted Infections (STI) are infections that are passed from one person to another through sexual contact. Bacteria, viruses and parasites can cause STI's.

There are more than 20 types of STIs, including the following, just to name a few:

- Gonorrhoea
- Genital herpes
- Chlamydia
- Syphilis
- Pubic lice
- Trichomoniasis
- HIV (Human Immunodeficiency Virus)
- HPV (Human Papilloma Virus)
- Pelvic Inflammatory Disease.

The bacterial STIs (syphilis, chlamydia, and gonorrhoea) and parasitic infection (trichomoniasis) are curable while the viral STIs (human papilloma virus, HIV, herpes simplex virus and hepatitis B) are incurable but managed with treatment, and can be deadly if not well managed. STIs affect both men and women, but in many cases, the health problems they cause can be more severe in women.





1.5 The Anatomy of the Female and Male Reproductive System

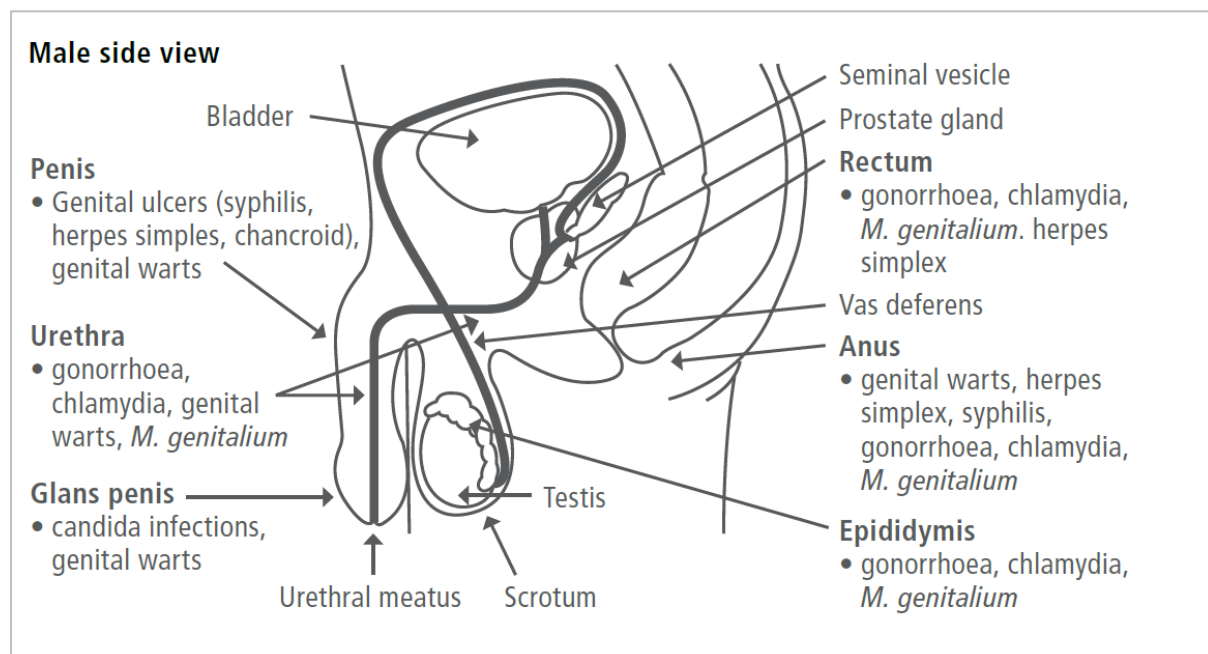


Figure 4: Side view of the male reproductive system

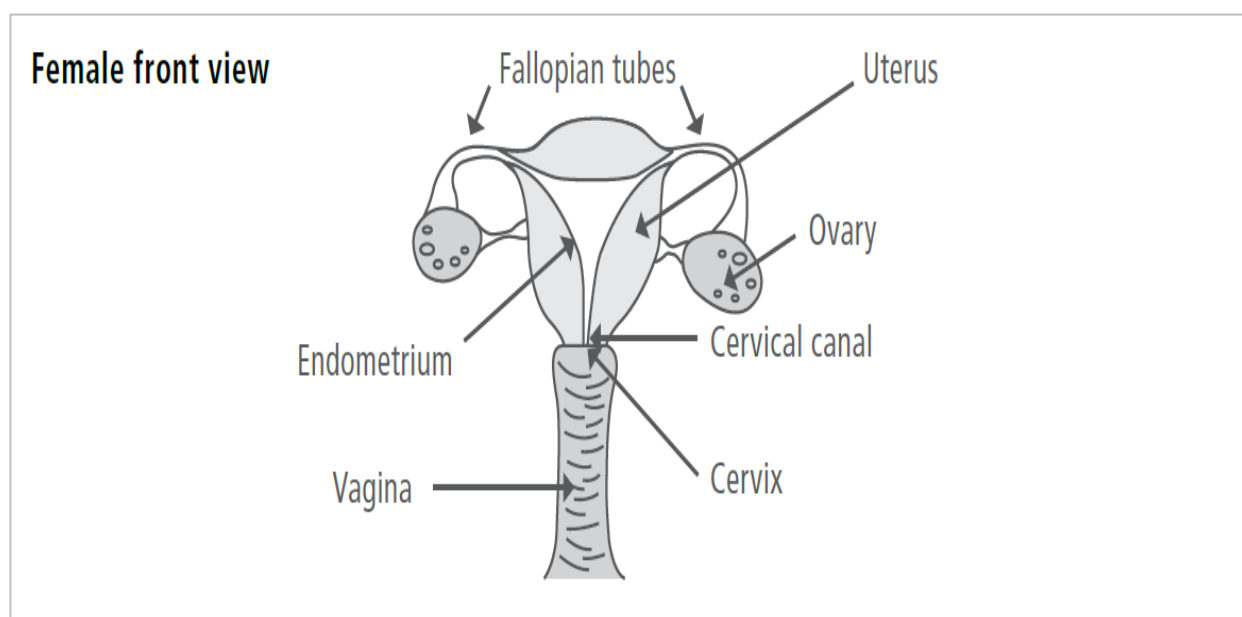


Figure 5: Front view of the female reproductive system



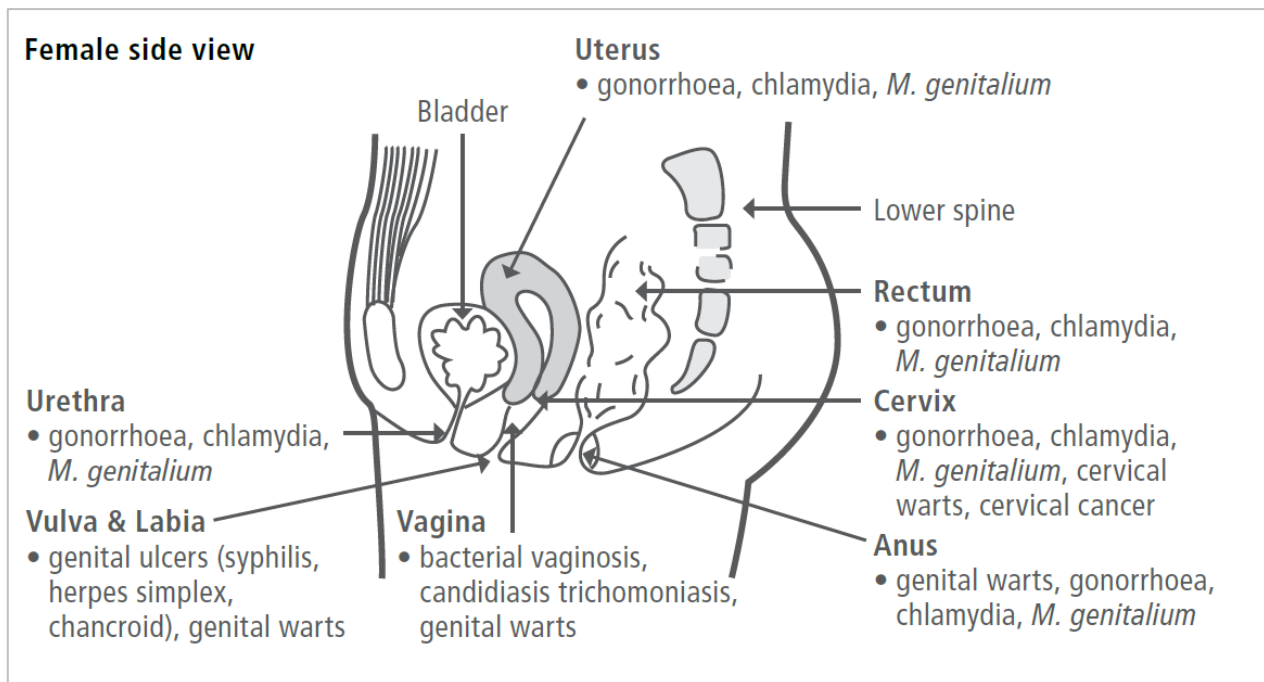


Figure 6: Side view of the female reproductive system

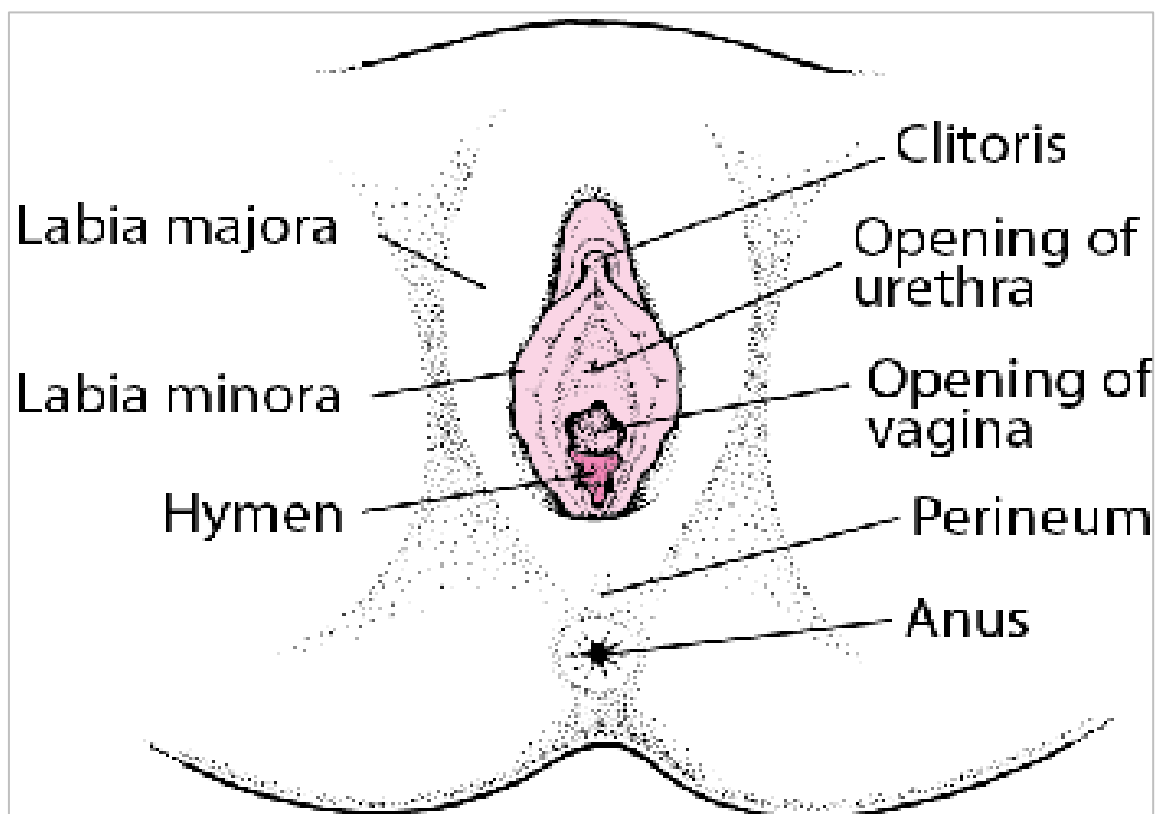


Figure 7: Front view of the female reproductive system





1.6 Common signs and symptoms include:

- Unusual discharge from the penis or vagina
- Sores or ulcers or growths on the genital area
- Pain on urination (dysuria)
- Frequent urination (polyuria)
- Itchiness and redness in the genital area
- Blisters or sores in or around the mouth
- Abnormal vaginal odour
- Anal itching, soreness or bleeding
- Abdominal pains
- Fever.

1.7 Prevention and Management

Effective prevention and management is one of the cornerstones of STI control as it prevents the development of complications and sequel. It decreases the spread of these diseases in the community and offers a unique opportunity for targeted education about HIV prevention and other STI's. Appropriate treatment of STI at the first contact between patient and health care provider is therefore an important public health measure.

1.8 Essential Components

For individuals seeking evaluation for STI, appropriate care consists of the following:

- **History taking:** demographic information including behavioural and medical risk assessment.
- **Physical examination:** particularly of genital, anal and oral area,
- Establishment of a **syndromic diagnosis**
- **Curative therapy:** using the most effective antimicrobials for the pathogen, at the first point of call by the patient
- Providing a **Health Promotion Package**
- **Clinical follow:** up and referral where necessary.





1.8.1 History Taking and Assessing STI and HIV Risk

1.8.1.1 Gathering Patient Information

Information gathering strategies:

- Explain that all information will be kept confidential
- Develop a rapport so the patient can feel relaxed and comfortable
- Explore the patient's concerns by practicing active listening
- Use a dynamic discussion between you and your patient as a means of taking the history, which should include an assessment of the patient's risk level
- Take note of nonverbal cues.

Patient information to be gathered

Collect the following information during your patient centred discussion:

1. Name
2. Age, Gender
3. Physical address
4. Marital status
5. Presenting symptoms
6. History of presenting symptoms.

Discharge: duration, consistency, odour, color and amount:

- Burning, urgency and/or frequency of micturition
 - Swelling and/or pain in the groin
 - Lesion: location (vaginal, anal and oral), pain, ulcer, blister, bruises, indurations, rash, cracking
 - Lower abdominal pain in women: painful vaginal intercourse (dyspareunia)
 - Rectal discharge or pain
 - Difficulties with urination or defecation
 - Itching and/or discomfort in the perineum, peri-anal, and pubic areas
 - Non-itchy skin rashes or warty lesions.
7. Past medical and gynaecological history:
 - Ask all females if they have ever been screened for cervical cancer
 - HIV status and proof of current status/ testing history
 - Any chronic illness e.g. diabetes mellitus, If HIV+ and whether or not on ART





- Medication history
- Any known allergies.

8. Social history:

- Alcohol or other recreational drug use/intravenous drugs) including, frequency and quantities consumed.

9. Taking sexual history:

- A sexual history must be acquired from patients before examining them and managing their sexual health problems. The patient must be assured that the information he/she provides to service providers is held in strict confidence. The service provider should do a behavioural risk assessment of the patient to explore the possibility of risk behaviours, including:
 - are you currently sexually active?
 - last sexual encounter
 - sexual exposure sites (oral, anal and vaginal),
 - multiple concurrent partnerships or sexual networks,
 - Condom use with regular and/or casual sexual partners.



Steps to consider while taking sexual history

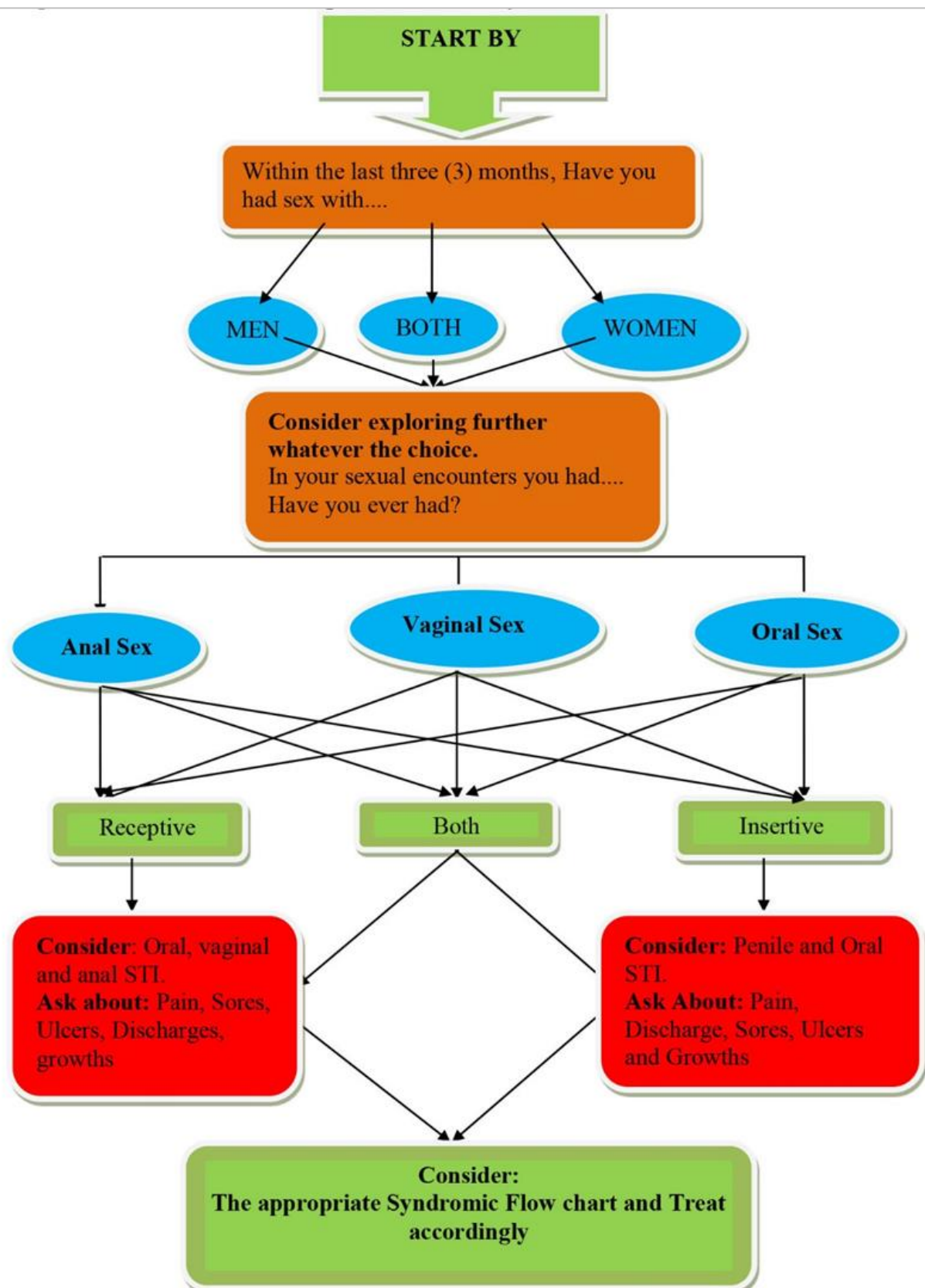


Figure 8: Steps to consider while taking sexual history

**10. Past STI history:**

- Were you ever treated for STI's before and when?
- For which syndrome? Were you an index or contact?
- If index, was your partner(s) treated?
- Did you take and finish your medication? A thorough sexual history will guide appropriate risk reduction and prevention counselling. There are several barriers to open and honest discussions of sexual health issues between patient and service provider.

1.8.2 Physical examination**1.8.2.1 Preparation for the exam**

- Explain what you will be doing and ask for consent
- Prepare patient for exam by describing actions in advance
- Ensure privacy
- Make sure your patient is comfortable
- Always follow the Universal Safety Precautions.

1.8.2.2 Universal Safety Precautions

- Hand washing before and after any direct contact with patient and wearing gloves.
- Safe collection and disposal of needles (hypodermic and suture) and sharps (scalpel blades, lancets, razors, scissors), with required puncture- and liquid proof safety boxes in each patient-care area.
- Prompt and careful cleaning up spills of blood and other body fluids.
- Using a safe system for hospital-waste management and disposal.

1.8.2.3 General guidelines for conducting the exam

- Examine in a private, well-lit room
- The patient should undress from the chest down and lie on the couch/examining table
- Cover the patient with a sheet - only expose the parts you are examining
- Male patients may be examined while standing if necessary
- Perform bimanual and speculum exam gently with minimum discomfort Use a language the patient can understand to describe the physical findings





1.8.2.4 Physical examination of the female

- During a general body examination, look for rashes, swellings, and sores on chest, back, and abdomen
- Inspect skin of palms, forearms, hands, lower abdomen, and inguinal areas
- Inspect pubic hair for lice and nits
- Inspect and palpate external genitalia, inspect perineum and anus. Note any discharge, ulcers, and or growths
- Palpate neck, axillae, supra-clavicular areas, epitrochlear areas, and area under the chin for enlarged lymph nodes, inguinal lymph nodes and femoral adenopathy
- Be sure to describe the size, location, and appearance of any ulcers or warts.

1.8.2.5 Bimanual examination of the female

- When inspection of the vagina and cervix is complete, remove speculum and insert index and middle fingers into the vagina
- The exam is carried out with the two fingers inside the vagina and the other hand placed on the lower abdomen
- Check for adnexal mass and tenderness
- Check for cervical motion tenderness by gentle moving cervix laterally
- Withdraw the fingers smell and inspect the glove for discharge.

1.8.2.6 Speculum examination for female

The patient should lie with her legs bent at the knees and the feet and knees separated. A good, bright light source is necessary in order to inspect inside the vagina.

- Separate the labia and insert a warm, well-lubricated bivalve speculum and inspect the vaginal walls and the cervix
- Look carefully for ulcers, warts, and cervical and vaginal discharge
- If the patient has never undergone screening for cervical cancer, or has not been screened for 2 years or more, screening, i.e. a Pap smear or visual inspection of the cervix with acetic acid (VIA), should be undertaken at this time. If the materials and/or expertise for a cervical cancer screening test are not available, the patient should be encouraged to attend / referred to a clinic providing these services.





NB: Remember that if a patient has extensive, painful genital ulcers, it may not be possible to perform a speculum examination.

How to perform a speculum examination?

A speculum is a medical device used to examine inside the vagina? A speculum examination is often performed alongside a bimanual examination as part of a good practice gynaecological workup, especially for women with anogenital symptoms. Metal specula must be sterilized before use, and plastic specula must not be reused.

Before a speculum examination, the patient should be informed about the device, what the health-care provider is going to do and the patient reassured that the procedure should not be painful but if the patient is uncomfortable or experiences pain, the procedure will be discontinued. Explain that the patient needs to remove the underwear and lie on the examination couch, covering herself with the sheet provided. The patient must be provided with privacy to undress. In preparation for performing a speculum examination.

The following steps should be taken:

- The patient should have an empty bladder to make the examination more comfortable;
- The speculum should be properly sterilized before use.
- All the secondary equipment needed should be laid out ready on a trolley, such as warm water, gloves, swabs and a waste disposal bin.
- The light source should be prepared and tested before beginning the procedure;
- The privacy screen, curtain or door should be closed for the examination.

The procedure should be done as follows:

- Wet the speculum with clean warm water before inserting it;
- Insert the first finger of the gloved hand in the opening of the woman's vagina (some clinicians use the tip of the speculum instead of a finger for this step). As the finger is put in, it is gently pushed downward on the muscle surrounding the vagina, and then the speculum is inserted slowly while asking the woman to relax her muscles;
- With the other hand, the speculum is held with the speculum blades together between the index and middle fingers and turned sideways as the speculum





is slipped into the vagina, while taking care not to press on the urethra or clitoris because these areas are very sensitive.

- When the speculum is halfway in, it is turned so the handle is facing downward. (Note: some examination couches do not have enough room to insert the speculum with the handle down – in this case, it is turned up)
- The blades of the speculum are then gently opened a little while searching for the cervix.
- The speculum is then moved around slowly and gently until the cervix can be seen between the blades – at this point the screw (or otherwise lock on the speculum) can be tightened so it will stay in place.
- Now the cervix can be examined, in good light, and it should look pink, round and smooth. There may be small yellowish cysts, areas of redness around the opening of the cervix (cervical os) or a clear mucoid discharge – these are normal findings.
- Look for signs of cervical infection by checking for yellowish discharge or easy bleeding when the cervix is touched with a swab and any abnormal growths or sores.
- Note whether the cervical os is open or closed and whether there is any discharge or bleeding.
- If there was blood in the vagina, the clinician should look for any biological tissue coming from the cervix, which could be signs of induced abortion or miscarriage.
- If any specimens are to be taken, this would be the stage to perform endo-cervical swabs, swabs from the posterior fourchette of the vagina – as well as biopsy, if applicable.
- To remove the speculum, it should first be gently pulled out until the blades are clear of the cervix. Then the blades are brought together but not completely closed to avoid pinching the vaginal wall and gently pulled out, turning the speculum gently to look at the walls of the vagina.
- The patient can then be thanked and informed that the procedure has been completed and to get dressed while the patient's privacy is observed. After that, the patient can wash her hands and be asked to sit down to receive feedback on the findings of the examination.





- The health-care provider should remove the gloves before touching anything, wash hands and sit with the patient to give feedback on the examination findings. As noted above, the next step is either to establish the diagnosis at this stage after the history taking and examination and manage the patient syndromically using the appropriate flow chart(s) based on the examination findings or proceed to perform any additional diagnostic tests.

1.8.2.7 Physical examination of the male

- Inspect skin of the neck, chest, back, hands, palms, forearms, lower abdomen, inguinal areas and thighs. Look for rashes and sores.
- Palpate neck, axillae, supra-clavicular areas, epitrochlear areas, and area under the chin for enlarged lymph nodes.
- Inspect skin of the genitals, perineum and buttocks. Look for rashes and sores.
- Inspect pubic hair for lice or nits.
- Inspect penis including the meatus, with retraction of the fore skin.
- Look for genital ulcers, urethral discharge and other abnormalities.
- If a discharge is present, note whether it is coming from the urethra.
- If there is no obvious discharge, give urethra a gentle squeeze and massage forward to try to express discharge.
- Palpate scrotal contents. Note presence or absence of genital ulcers or buboes.
- Palpate groin, feeling for inguinal lymph nodes and buboes.
- Be sure to describe the size, location and appearance of any ulcers or warts.

How to perform an ano-scopy examination?

Ano-scope is an instrument used for visualizing the anus and lowest portion of the rectum. It is tubular and can be inserted with a lubricant into the anal canal. Once inserted, the examiner visualizes the walls of the anus and lower rectum using an appropriate light source. It can be used to identify abnormalities, such as haemorrhoids, inflammation and tumours in this part of the gastrointestinal tract.

Ano-scopy can be performed within a health-care facility if sufficient training has been undertaken and equipment such as an examination couch, gloves, a light source and lubricants are available. No special preparations are needed, such as





emptying the bowels or topical anaesthetic. However, some health facilities apply a topical anaesthetic 30 minutes before the procedure.

Caution is needed among patients who have undergone recent anal surgery or are known to have anal fissures. Before performing the procedure, the patient should be informed about the device, what the health-care provider is going to do and the patient informed that the procedure is painless, but pressure similar to that of a bowel movement may be felt. In preparation for performing anoscopy.

The following steps should be taken:

- The anoscope should have been properly sterilized before use.
- All the secondary equipment needed should be laid out ready on a trolley, such as lubricant, gloves, light source and cotton swabs, preferably with large tips.
- Privacy should be assured – a privacy screen, curtain or door that can be closed for the examination. **The procedure should be carried out as follows:**
 - Lie the patient down in the left lateral position.
 - Separate the buttocks or ask the patient or an assistant to help and examine the perianal area for warts, haemorrhoids or polyp prolapses.
 - Perform a digital rectal examination with a lubricated, gloved index finger, taking note of sphincter tone and any prostate abnormalities.
 - Remove the finger and change glove to a new one.
 - Lubricate the anoscope and insert it into the anus gently and, pointing the anoscope towards the umbilicus, advance it completely into the anus or as far as the patient can tolerate;
 - Remove the obturator of the anoscope to examine the anal mucosa, removing any faecal matter with a swab.
 - Check for blood, mucus, pus or haemorrhoidal tissue.
 - Gently remove the anoscope, when done, and observe the sides of the anal canal in the process.
 - The health-care provider should remove the gloves before touching anything, and both the provider and the patient must wash their hands before the provider sits with the patient to give feedback on the examination findings. Any observation of suspicious growths or bleeding lesions should be referred for gynaecological assessment.





1.8.3 Health Promotion Package

- Educate, ensure compliance, and counsel on treatment.
- Promote abstinence or condom use during treatment.
- Provide, promote correct and consistent condom and lubricants use.
- Issue notification slip for each sexual partner and emphasize the importance of partner treatment and continue to make follow up of partner treatment during review visits.
- Offer HIV counselling and testing, as per National Integrated Management HIV Guidelines.
- Offer Pre exposure prophylaxis as per guidelines
- Offer voluntary medical male circumcision
- Provide cervical cancer screening at first contact or follow-up visit.

1.8.3.1 Health education and risk reduction counselling

A consultation for an STI is a unique opportunity to provide education and risk reduction counselling on the prevention of STI's and HIV to people most at risk of infections. Education encourages patient behaviour change and is an integral part of syndromic STI case management. It must be an interactive process that involves assessing what your patient already knows about STI's and then building on that knowledge.

The aims of risk reduction counselling and education for STI patients are to:

- Help patients re-examine long-standing habits and situations that are putting them at risk
- Prevent further transmission to others
- Help patients remain free of infection in the future
- Promote partner/s notification, treatment and education
- Promote treatment adherence
- Enhance coping with the STI and its social consequences.

If risk factors are identified, providers should encourage patients to adopt safer sexual behaviours. Counselling skills (e.g. respect, compassion, and a non-judgmental attitude) are essential to the effective delivery of prevention messages.



**The key issues to discuss with an STI patient are**

- What STI the patient has, its implications and treatment, and the importance of complying with treatment (the right patient, the right drug, the right dose, the right route, and the right time.)
- The risk for acquiring & transmitting HIV infection
- The need for safer sex practice e.g. Consistent correct condom use, reducing promiscuity
- Methods of lowering their risk of acquiring STI's and HIV, including abstinence/, being faithful to sexual partner(s), correct and consistent use of male and or female condoms with lubricants when necessary.
- Discuss any barriers the patient perceives to practice safe sex
- What changes the patient can and will make in their sexual behaviour
- The importance of seeking health care promptly
- Talking about partners, and confirming the three essential decisions:
 - a) To complete their treatment,
 - b) To reduce any risk sexual activities, and
 - c) To see that their sexual partners are completely treated.

1.8.3.2 Condom promotion and supply

Condom promotion, demonstration and distribution are critical components of effective STI case management. The STI consultation provides an opportunity to promote and supply condoms, as patients should be more receptive to understanding their usefulness in decreasing their future exposure to STI/HIV.

- Demonstration of correct use – including partner negotiation skills for condom use, and
- Provision of condoms to the patient and advice on further condom supply.

NB: Refer to National Condom Distribution Guideline for more information.

1.8.3.3 Notification and management of sexual partner(s)

Notification and management of sexual partner(s) is one of the most important components of STI case management. It helps to break the cycle of transmission and prevent the development of potential STI complications. Both men and women with STI may be asymptomatic, thus, partner notification and management offer an





opportunity to identify and treat people who otherwise would not have seek treatment.

It also offers an opportunity to provide focused STI and HIV education to individuals who are by definition at high risk of infection. There is good evidence that partner notification is an effective means of detecting untreated STI's. Effective management cannot be achieved without partner notification and treatment.

Principles of partner management

Partner notification should be conducted in such a way that all information remains confidential. The process should be voluntary and non-coercive. The health care provider is also required to show respect and a non-judgmental attitude. Management of sexual partners is based on knowledge of the index patient's diagnosis. The following strategies can help for the treatment of partners in addition to the strategy currently used in the country:

- Offer immediate treatment of all patient's sexual partners (i.e. provide same treatment as the patient even if the partner(s) have no sign of STI)
- It might also be possible to give prescription for his/her partner if the index case is not willing to bring his/her partner in for care especially for Female Sex-workers who usually have casual partners.
- In addition to the STI being treated, the partner should also be assessed for other STI's.

The strategy selected will depend on several factors, which include: the risk of infection, the seriousness of the disease, the likelihood of a person returning for follow-up, the availability of effective treatment, and the likelihood of spread if treatment is not given.

Approaches to partner management

There are two approaches mainly the passive and active contact tracing. The HCW needs to discuss both approaches with the patient and agree on which one best suits the patient. In some cases, both approaches can be utilized.

Passive contact tracing (also known as patient referral)

In passive contact tracing it is the patient who takes responsibility for contacting partners and asking them to come for treatment. An infected patient is encouraged





to notify partner(s) of their possible infection without the direct involvement of health care providers. News of STI can be especially damaging when a patient or partner hears of their partner's infidelity for the first time. Such events might lead to marital breakdown, divorce, verbal or physical abuse, loss of home or livelihood, or even ostracism from the social group. Because of these and other reasons, many patients might feel unwilling or unable to discuss the STI with partners, so the service provider's aim is to help the patient decide what to do.

An index patient might approach partner(s) in several ways:

- By directly explaining about the STI infection and the need for treatment;
- By accompanying a partner to a health facility;
- By giving each partner a contact slip asking him or her to get treated.

The success of patient referral is dependent on index patient, partner motivation, the quality and appropriateness of counselling received by the index patient. Moreover, its success depends on the skills of the service provider: what you say to the patient, how you say it and, equally important, how you listen to the patient and respond to what he or she says. The service provider needs to:

- Explain that the patient's partner(s) need to be treated so that the patient is not re-infected and his/her partners don't suffer the consequences of untreated STI
- Remind the patient how to avoid re-infection (abstain, be faithful, use condoms, get all partners treated);
- Help the patient learn how to communicate with partner (s);

Active contact tracing (also known as provider referral)

This is where a member of the health team contacts the partner(s) of a patient with STI. Provider referral can be expensive, and can be perceived as a threat to patient confidentiality if the patient is not informed in advance that this might occur.

1.8.3.4 HIV testing Services (HTS)

The underlying principle to increasing access to HTS in a patient with STI is that HIV is also an STI and the individual is at a high risk of being HIV positive thus:

- To screen all STI patient for HIV and also screen all HIV positive patients for STI's





- Observe the 5Cs confidentiality, consent, counselling, connection and correct results.

1.8.3.5 Voluntary Medical Male circumcision (VMMC)

The benefit of circumcision has not been shown against gonococcal or chlamydial infections in men. Similarly, women's risk for chlamydial and gonococcal infections has not changed due to male circumcision. However, in light of the high prevalence of genital ulcer syndrome and HIV infection in the SADC region, it is recommended that male circumcision procedure should be offered routinely as a part of STI care. Service providers should explain the benefits of male circumcision to all sexually active uncircumcised male presenting to the health facility, whether as patient or partner.

1.8.3.6 Cervical cancer screening

Cervical cancer kills more women than any other cancer, and its incidence is on the rise. The human papilloma virus (HPV) is the main cause of cervical cancer, and women with HIV are at an elevated risk of developing this cancer. Therefore, cervical cancer screening should be undertaken on all women presenting with STI's, and especially HIV positive women. Ideally, all women who have been sexually active should be screened for cervical cancer every 2 years or more, screening should be undertaken during the speculum examination. Screening includes:

- Visual inspection of the cervix with acetic acid (VIA)
- A pap smear.

If the materials and/or expertise for either of these tests are not available, the patient should be referred to a health care facility providing these services. (National Referral Protocol to be adhered to)

NB: If a woman has extensive ulcerations that impede speculum insertion, or if the woman is bleeding heavily on her menses, set another appointment which would be ideal for cervical cancer screening.

1.8.3.7 Follow up visit for patients with STI's

The importance of a follow up visit is to ensure cure and to exclude incubating STI's. Some patients may not respond to the initial syndromic treatment hence re-assessment may be necessary. The response to treatment might not be as expected when patients with STI have concomitant HIV infection. Moreover, HIV counselling and





confidential testing can be re-offered during a follow up visit, if testing was refused on the initial visit. Offer the option of HIV self-testing following national guidelines.





Module 2: Genital Discharge Syndrome

2.1 Description

Genital discharge is one of the leading sexual transmitted infections in the country. It is characterized by the presence of purulent or mucopurulent discharge.

2.1.1 Etiology

The main etiological agents of this syndrome are *Neisseria Gonorrhea*, *Chlamydia Trachomatis*, *Trichomonas Vaginalis*, *Candida Albicans* and *Bacterial Vaginosis*.

The following table shows the causative organisms with their signs and symptoms, treatment options in Eswatini. The WHO recommendations are included for comparison purposes.

2.1.2 The causative organisms with their signs and symptoms and treatment options

Type of pathology	Signs and Symptoms	Treatment options for Eswatini	WHO recommendations
Gonorrhea	Yellowish discharge, foul odor, pain and frequency in micturition, dyspareunia	Ceftriaxone 500mg IM stat Or Cefixime 400mg orally stat	First line Ceftriaxone 500mg IM stat or Cefixime 400mg orally stat Second line Spectinomycin 2g IM Stat
Chlamydia	Clear or cloudy discharge, dysuria early in the morning, the opening of the penis is often red and stuck together with dried secretions. Urgency in micturition dyspareunia	Azithromycin 1g orally stat / doxycycline 100mg	First line Azithromycin 1 gram, orally, single dose or Erythromycin 500 mg, orally, 4 times a day for 7 days Second line Ofloxacin 200–400 mg, orally, twice daily for 7 days (Doxycycline to be given only if Gonorrhoea therapy did not include Azithromycin)





Trichomoniasis	Greenish yellowish frothy discharge accompanied by a fishy foul smell. Dysuria, dyspareunia, frequency on micturition.	Metronidazole 2 grams orally in a single dose	First line Metronidazole 2 grams, orally, in a single dose or Metronidazole 400 mg or 500 mg, orally, twice daily for 7 days Second line Tinidazole 2 grams orally, single dose or Tinidazole 500 mg orally, twice daily for 5 days
Candidiasis	Curd like discharge, itchiness, erythematous mucous membrane on affected area	Clotrimazole pessary 500mg intra-vaginally once nocte	First line Clotrimazole pessary 500mg intra-vaginally once nocte or Miconazole vaginal pessaries, 200mg inserted at night for 3 nights Second line Fluconazole 150 mg (or 200mg), orally, single dose or Nystatin, 200,000-unit vaginal tablet, inserted at night for 7 nights
Bacterial vaginosis	Erythematous mucous membrane, a greenish white discharge with unpleasant fishy odor.	Metronidazole 2 grams orally in a single dose	First line Metronidazole 2 grams, orally, single dose Second line Clindamycin 300 mg, orally, twice daily for 7 days or Metronidazole 400mg or 500mg orally twice daily for 7 days

Table 1: Causative organisms with their signs and symptoms and treatment options





2.2 Male Urethral Syndrome (MUS)



Figure 8: Male Urethral Syndrome

2.2.1 Description

It is an abnormal urethral discharge characterized by unusual color and foul odor. Male patients complaining of urethral discharge and/or dysuria should be examined for evidence of discharge. Origin of the discharge needs to be identified: urethritis causes discharge from the meatus.

2.2.2 Etiology

The major pathogens causing urethral discharge in *N gonorrhea* and *C. Trachomatis* and sometimes *T. vaginalis*

2.2.3 Syndromic treatment for MUS

- Ceftriaxone, 500 mg I.M stat
- Plus**
- Azithromycin, 1 g orally stat

2.2.4 Treatment options for Urethral Discharge Syndrome

Recommended treatment regimens for gonococcal infections:

First-line:

- Ceftriaxone, 500 mg IM stat. OR Cefixime, 400 mg orally stat.

Second-line:

- Spectinomycin 2 g IM stat, OR Gentamycin, 240 mg IM stat.





Recommended treatment regimen for chlamydial infection:

First-line:

- Azithromycin 1 g orally as a stat dose

Second line:

- Doxycycline 100 mg orally BD for 7 days
- Erythromycin 500 mg QID for 7 days
- Ofloxacin 400 mg orally BD for 7 days

NB: for anorectal infection: **doxycycline** is preferred over azithromycin.

Recommended treatment regimens for trichomonas infection is metronidazole 2g orally stat.



Flowchart for syndromic treatment of male urethritis (MUS)

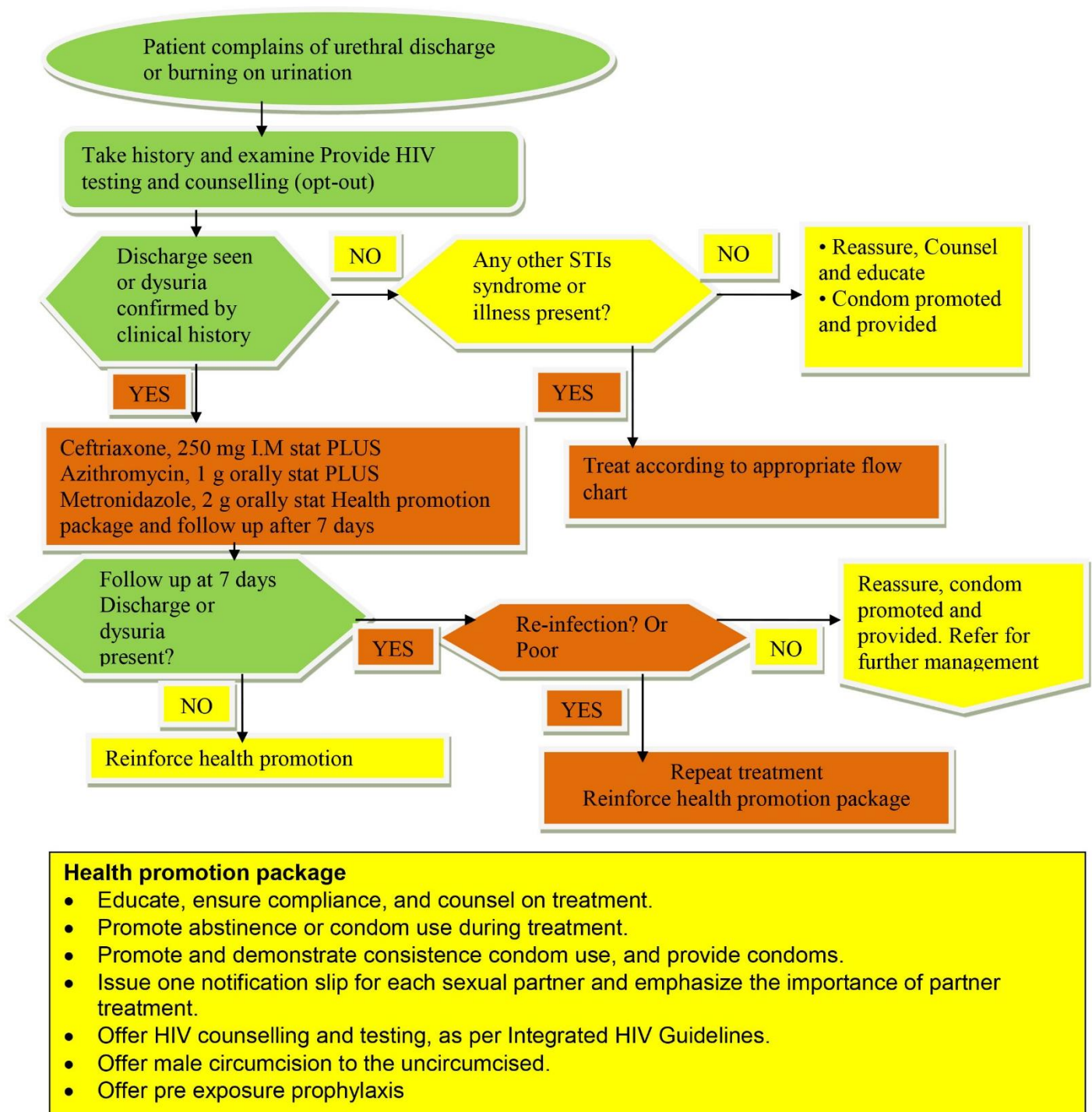


Figure 9: flowchart for syndromic treatment of male urethritis (MUS)



2.3 Scrotal swelling (SSS)

2.3.1 Description

Inflammation of the epididymis usually manifests itself by acute onset of unilateral testicular pain and swelling, often with tenderness of the epididymis and vas deferens, and occasionally may present with erythema and oedema of the overlying skin. It is common in men under 35 years. When epididymitis is accompanied by urethral discharge, it is commonly associated with gonococcal and/or chlamydial infection.

2.3.2 Etiology

responsible micro-organism: *E. coli*, *Klebsiella*, and *P. Aeruginosa*. In pre-pubertal children, mumps epididymo-orchitis is usually noted within a week of parotid enlargement.

2.3.3 Clinical features

- The patient usually complains of unilateral pain and swelling of the scrotum with a urethral discharge which develops over 1-2 days
- Scrotal swelling may be seen following trauma or testicular torsion and this required immediate referral for surgical or urological opinion.
- On inspection, the scrotal sac appears distended and on palpation, both testicles and the epididymis are swollen and tender. Differential Dx: Testicular torsion, testicular trauma, inguinal hernia, hydrocele and haematocoele.

2.3.4 Syndromic treatment of scrotal swelling

- Ceftriaxone, 500 mg IM stat.

Plus

- Azithromycin, 1 g orally per week for 2 weeks

Plus

- Combined with bed rest and scrotal support until local inflammation and fever subside.

Monitor treatment response by scheduling a follow-up visit seven days after initial clinic visit.





2.3.5 Treatment options of scrotal swelling

for complicated gonococcal infection:

- First-line: Ceftriaxone, 500 mg IM stat. OR Cefixime 400mg PO stat
- Second-line: Spectinomycin, 2 g IM stat, OR Gentamicin, 240 mg IM stat.

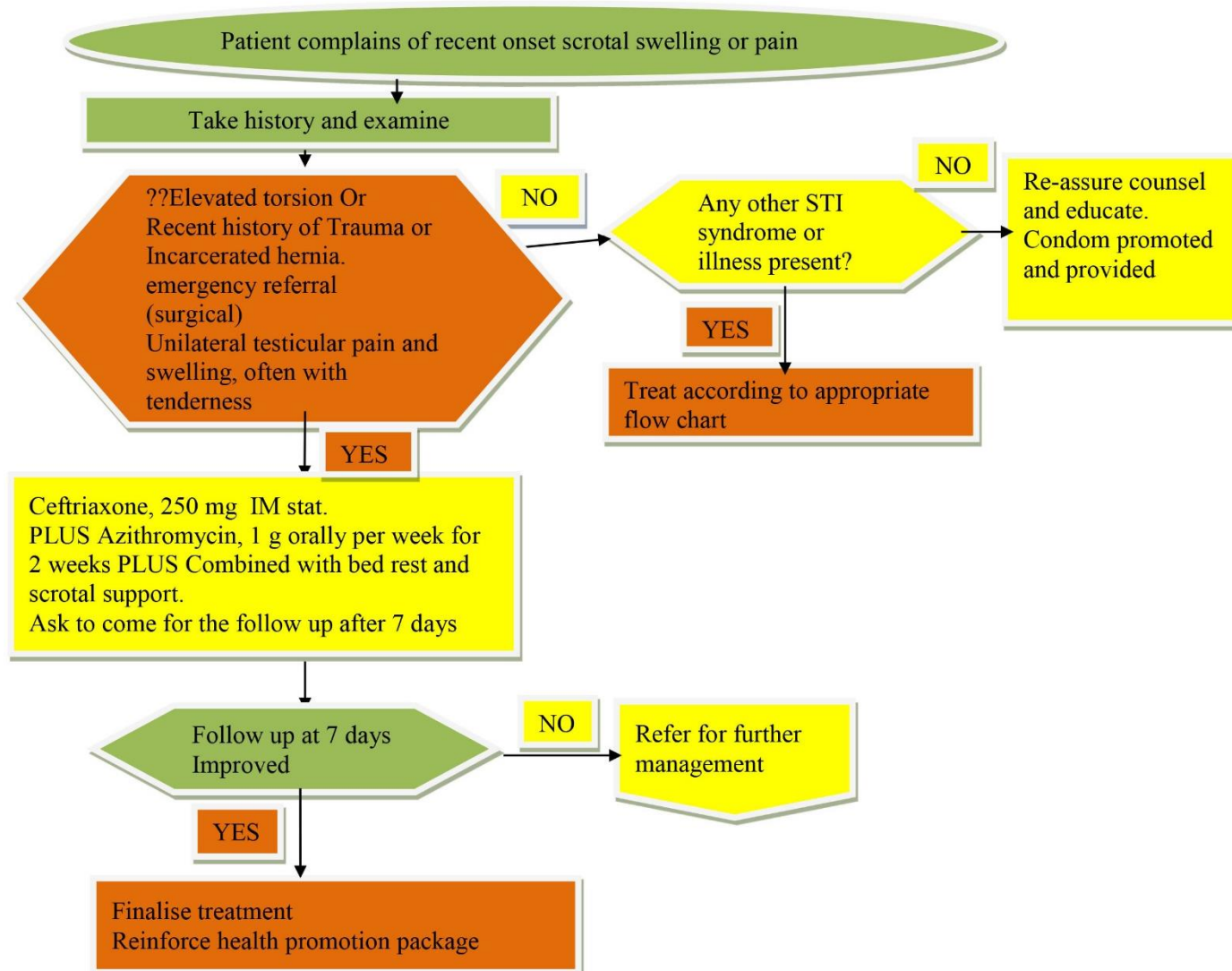
for complicated chlamydial infection:

- First-line: Azithromycin, 1 g orally per week for 2 weeks.

Second-line: Doxycycline, 100 mg orally BID for 14 days, OR Erythromycin, 500 mg orally QID for 14 days.



Flowchart for syndromic treatment of scrotal swelling



Health promotion package

- Educate, ensure compliance, and counsel on treatment.
- Promote abstinence or condom use during treatment.
- Promote correct and consistent condom use also provide condoms and lubricants.
- Issue one notification slip for each sexual partner and emphasize the importance of partner treatment.
- Offer HIV counselling and testing, as per Integrated HIV Guidelines.
- Offer voluntary medical male circumcision.
- Offer pre exposure prophylaxis as per guideline.

Figure 10: flowchart for syndromic treatment of scrotal swelling



2.4 Vaginal Discharge Syndrome (VDS)



Figure 11: Vaginal Discharge Syndrome

2.4.1 Description

VDS is vaginal discharge characterized by abnormal vaginal discharge in terms of increased quantity and or unusual color or mal-odor.

2.4.2 Etiology

N gonorrhea and C. Trachomatis can cause cervicitis

2.4.3 Vaginal pathology

T. vaginalis, C. albicans and bacterial vaginosis.

2.4.4 Clinical features

The vaginal discharge is characterized by:

- Increased secretions
- Change in color or consistency or foul odor of the secretions
- Itching and soreness of the affected area
- Painful urination
- Pain during sexual intercourse.

2.4.5 Syndromic treatment of Vaginal Discharge Syndrome (VDS)

- Ceftriaxone 500mg im stat (WHO recommends the use of ceftriaxone 500mg im stat)

Plus

- Azithromycin 1g orally stat



**Plus**

- Metronidazole 2g orally stat
- NB: In case VDS is due to vaginitis, conduct risk assessment, if negative the treatment regimen should cover organisms causing bacterial vaginosis and candidiasis infection:
- Metronidazole* 2g orally, stat dose

Plus

- Clotrimazole pessary 500mg intra-vaginally once nocte

Patients taking metronidazole should be cautioned to avoid taking alcohol while on these drugs and up to 24-48 hours after the last dose.

Types of Pathologies and Management

Vaginitis	Cervicitis
Caused by bacterial vaginosis, Trichomoniasis and candidiasis	Caused by N. gonorrhoeae and C. trachomatis
Most common cause of complaint of vaginal discharge	Less common cause of vaginal discharge
Easier to diagnose, even without speculum examination	Difficult to diagnose even with speculum examination
No serious complications, but some adverse outcomes of pregnancy occur	Major complications, including PID, infertility, ectopic pregnancy
Treatment of partner unnecessary, except for T. vaginalis	Need to treat sex partner(s)

Table 2: Types of Pathologies and Management

2.4.6 Treatment options for vaginal discharge syndrome

Vaginal discharge syndrome due to cervicitis, OR when risk assessment is positive, OR where speculum examination is not possible. The treatment regimen should cover organisms causing gonococcal, chlamydial and trichomonas infections.

- Ceftriaxone 500mg IM stat OR Cefixime 400mg orally stat

Plus

- Azithromycin, 1g orally stat (OR erythromycin 500mg QID x 7 days)

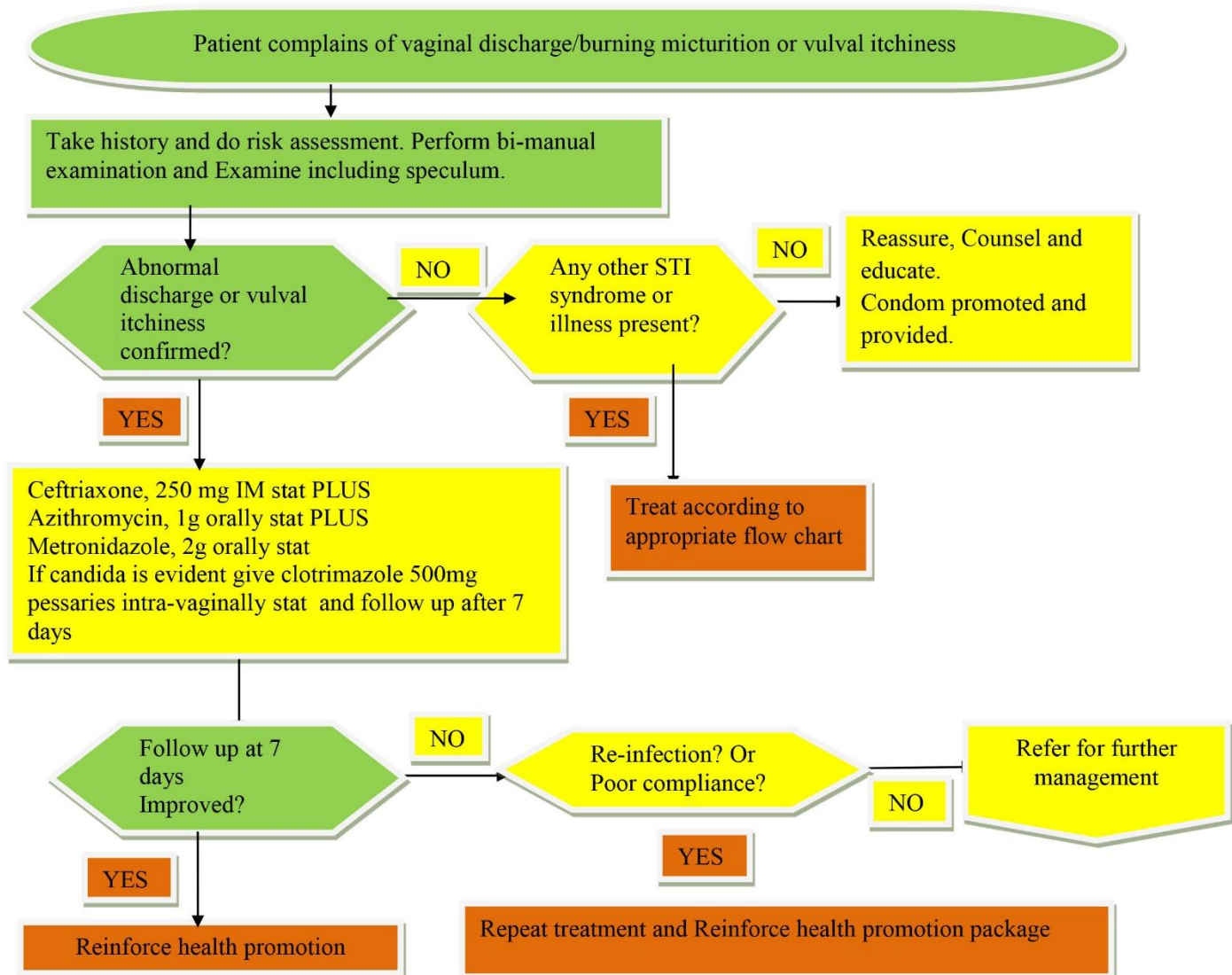
Plus

- Metronidazole 2g orally stat



If vulval edema, itching, excoriations or curd-like discharge present ADD:
Clotrimazole pessary 500mg intra-vaginally stat.

Flowchart for syndromic treatment of vaginal discharge syndrome



Health promotion package

- Educate, ensure compliance, and counsel on treatment.
- Promote abstinence or condom use during treatment.
- Promote correct and consistent condom use also provide condoms and lubricants.
- Issue one notification slip for each sexual partner and emphasize the importance of partner treatment.
- Offer HIV counselling and testing, as per Integrated HIV Guidelines.
- Offer voluntary medical male circumcision.
- Offer pre exposure prophylaxis as per guideline.

Figure 12: flowchart for syndromic treatment of of vaginal discharge syndrome



2.5 Pelvic Inflammatory Disease

2.5.1 Description

Lower abdominal pain is one of the major signs of pelvic inflammatory disease which may be accompanied by cervical motion tenderness on bimanual examination, a complaint of back pain, lower abdominal tenderness with or without guarding on abdominal examination.

2.5.2 Etiology

The most common etiologic agents in PID include *N. Gonorrhea*, *C. trachomatis*, and several anaerobic bacterial species found in the vagina

2.5.3 Clinical features

1. Lower abdominal pain
2. Dyspareunia
3. Menometrorrhagia
4. Dysuria
5. Pain associated with monthly period
6. Fever
7. Occasional nausea and vomiting.

2.5.4 Syndromic treatment of PID

Ceftriaxone 500 Mg IM Stat

Plus

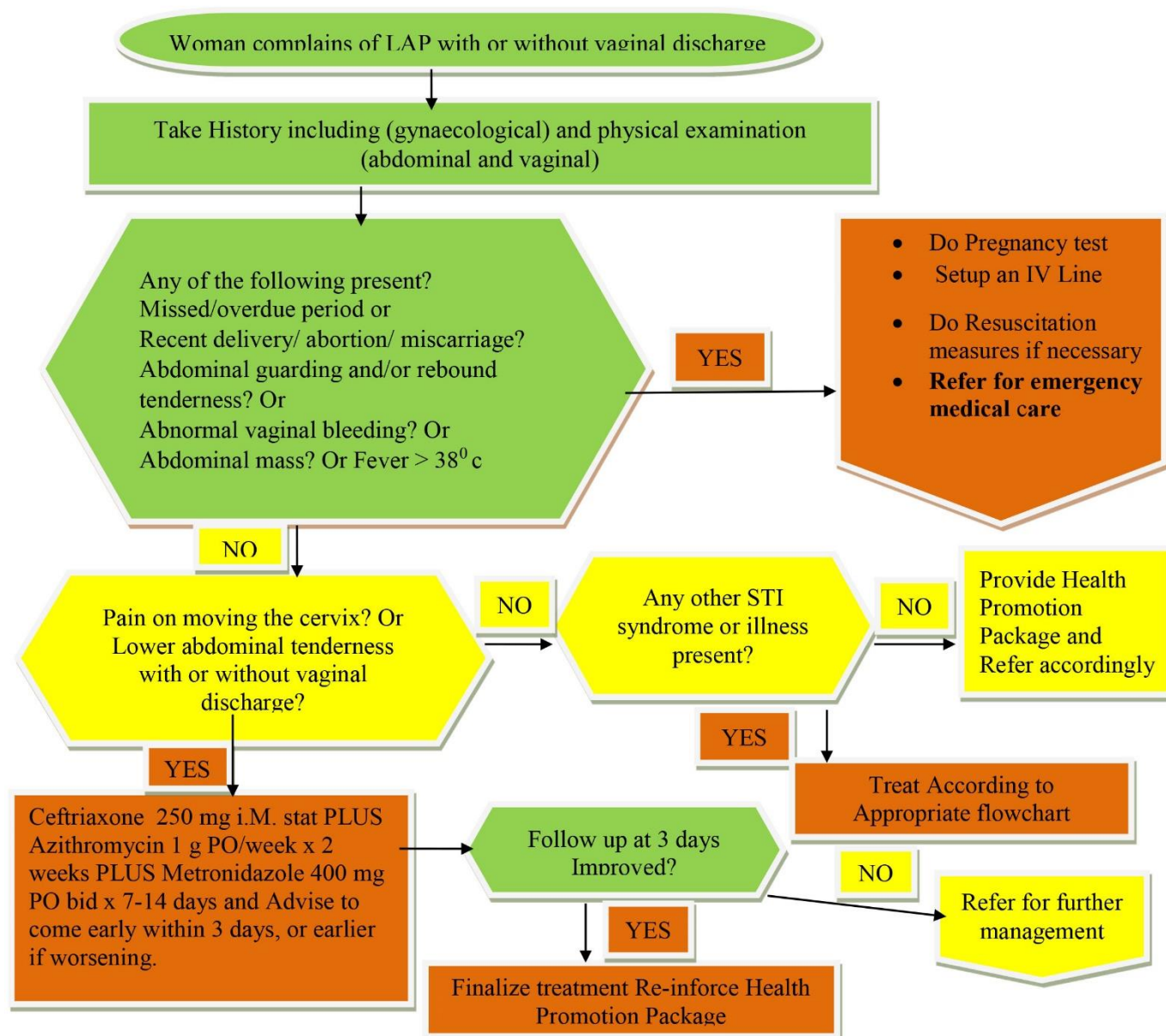
Azithromycin 1g orally weekly for two weeks

Plus

Metronidazole 400mg orally BD for 7 days to 14 days



flowchart for syndromic treatment of pelvic inflammatory disease



Health promotion package

- Educate, ensure compliance, and counsel on treatment.
- Promote abstinence or condom use during treatment.
- Promote correct and consistent condom use also provide condoms and lubricants.
- Issue one notification slip for each sexual partner and emphasize the importance of partner treatment.
- Offer HIV counselling and testing, as per Integrated HIV Guidelines.
- Offer voluntary medical male circumcision.
- Offer pre exposure prophylaxis as per guideline.

Figure 13: flowchart for syndromic treatment of pelvic inflammatory disease



2.6 Anorectal Discharge

2.6.1 Description

Anorectal symptoms and anorectal STIs are prevalent among men who have sex with men, female sex workers, transgender people and heterosexual women who engage in anal sexual intercourse

2.6.2 Etiology

N.gonorrhea, *C trachomatis*, *Campylobacter*, *Salmonella* and amoebiasis

2.6.3 Sexual practices that may be associated with anorectal infections

Specific high-risk sexual behaviour associated with anorectal infections include:

- receptive anal sex,
- oro-anal contact (anilingus or rimming), fisting
- inserting a hand into the rectum or vagina),
- fingering (touching another's genitals or anus using fingers or digital-vaginal penetration),
- nudging (unprotected penile-anal external contact without penetration),
- dipping (partly inserting or briefly inserting the penis into the anus without a condom, followed by immediate withdrawal) and
- sharing sex toys.

2.6.4 Anatomical sites of infection

- Anal infections: infections of the anus and perianal area involving the stratified squamous epithelium
- Proctitis: infections from the dentate line to the recto-sigmoid junction a common site for gonococcal and chlamydial infections and HSV
- The dentate line is the line between the simple columnar epithelium of the rectum and the stratified epithelium of the anal canal, usually defined as being at the level of the anal valves)
- Proctocolitis: infections of the rectum and colon a common site for infections with *Shigella*, *Campylobacter*, *Salmonella* and cytomegalovirus and amoebiasis.

2.6.5 Clinical Features

Asymptomatic anorectal infections are not uncommon, although precise data is scarce. Anorectal infections may be associated with:





- anorectal pain,
- itching,
- discharge,
- bleeding,
- sensation of rectal fullness (tenesmus)
- constipation and mucus streaking of stools.

2.6.6 Examination

An examination for anal infections includes:

- an external examination of the anus and,
- where available, an anoscopy.
- In asymptomatic infections, anoscopy can be performed, possibly with Gram-stained smear and a count of the number of polymorphonucleated leukocytes to screen for STIs.
- However, an anoscope is not available in most primary point-of-care settings, therefore an external examination may be the only practical procedure to observe a discharge, ulcers or external warts.

Recommended treatment regimens for anorectal infections

Infections covered	First-line options	Effective substitutes
N. gonorrhoea	Ceftriaxone 500 mg, intramuscularly, single dose plus Azithromycin 1 gram, orally, single dose	Cefixime 400 mg, orally, single dose plus Azithromycin 1 gram, orally, single dose
C. trachomatis	Doxycycline 100 mg orally, twice daily, for 7 days or Doxycycline for 21 days (to cover rectal lymphogranuloma venereum) if suspected or confirmed on NAAT (to be given only if dual therapy did not include azithromycin)	Erythromycin 500 mg, orally, 4 times a day for 14 days (to be given only if dual therapy did not include azithromycin)





Syphilis (26) (if ulcer present)	Benzathine penicillin 2.4 million units intramuscularly, single dose People with a positive syphilis test and no ulcer: administer the same dose at weekly intervals for a total of three doses	Doxycycline 100 mg orally, twice daily for 14 days Erythromycin 500 mg 4 times a day, orally, for 14 days Extend treatment to 30 days if syphilis serology is positive
Genital herpes	Recurrent infection: Acyclovir 400 mg, orally, 3 times a day for 5 days or Acyclovir 800 mg, orally, 3 times a day for 3 days	Recurrent infection: Valaciclovir 500 mg, twice daily for 3 days

Table 3: Recommended treatment regimens for anorectal infections





Module 3: Genital Ulcer Syndrome



Figure 14: Genital Ulcer Syndrome

3.1. Descriptions

3.1.1 Genital ulcer

disease is characterized by ulcerating lesions on the penis scrotum, vulva, vagina, or perineum. Lesions of Syphilis and Chancroid vary in appearance and may be indistinguishable from one another. Syphilis usually produces a single painless ulcer with firm border that feels like the tip of the nose. Chancroid usually produces a soft painful pus with irregular shaped borders. Syphilis and Chancroid may cause enlarged lymph nodes.

3.1.2 Primary syphilis

Is characterized by an ulcer (syphilitic chancre) at the site of infection that develops after an incubation period of about three weeks from sexual contact but can range from nine to 90 days. The ulcers are usually single lesions and painless. People with Syphilis may not seek medical care until they have symptoms of secondary Syphilis i.e rash, hair loss, sore throat, malaise, headache, weight loss, fever or swollen lymph nodes.

If not treated, the ulcer will heal without scarring after some 2–10 weeks. The infection may then progress to the secondary stage. **Secondary syphilis** sets in about six weeks to six months after infection. In some instances of secondary syphilis, especially among immunosuppressed individuals, the chancre may still be visible at the time secondary manifestation of syphilis occur.





3.1.3 Early latent syphilis

As its name implies, latent syphilis has no clinical manifestations. The lesions of primary syphilis and those of secondary syphilis have resolved spontaneously and the infection goes into latency. Early latent syphilis is infection of less than two years in duration, as designated by the WHO, based on the infectiousness of syphilis and its response to therapy during this stage of infection.

During the first two years (primary, secondary and early latent) of syphilis infection, the individual is infectious to the sex partner and there is a high risk of transmission to the fetus during pregnancy. In addition, nearly 25% of those with syphilis in the first year of infection will relapse and develop manifestations of secondary syphilis, termed mucocutaneous relapse.

3.1.4 Late latent syphilis

An infection of more than two years in duration without clinical evidence of treponemal infection is referred to as **late latent syphilis**. In late latency, the individual with untreated syphilis is less and less likely to transmit the infection to a sex partner and to the fetus during pregnancy as the latency progresses.

3.1.5 Late latent syphilis is diagnosed with serological tests

Nontreponemal and treponemal tests are mostly reactive (positive) in early latent and late latent syphilis, but nontreponemal tests, such as the VDRL, may become negative in late latent syphilis. A negative treponemal test at this stage of infection can be taken as sufficient to rule out the diagnosis of syphilis. Once the specific treponemal tests are positive, they remain reactive for the person's lifetime. Therefore, these tests cannot be used for monitoring the response to treatment.

3.1.6 Anogenital ulcers

Refers to those located on the genital or anal areas and may be painful or painless. A negative serological test for syphilis when anogenital ulcers have been present for less than three weeks does not definitively exclude syphilis, since antibodies may not yet be present to be detected by a serological test for syphilis.

The first-episode of genital herpes infections are those in which the person does not have a previous history of genital herpes, and they are often associated with systemic and local symptoms of fever, headache, malaise and myalgia, usually in the first 3–4





days. Locally, there may be pain, itching, dysuria, vaginal or urethral discharge and tender inguinal lymphadenopathy.

Among both men and women with primary genital HSV infection, the presentation is with blistering or ulcerative lesions on the external genitalia. The lesions may start as papules (pimples) or vesicles (blisters), which spread rapidly over the genital area. The lesions may last up to 15–20 days until crusting and/or healing. Crusting does not occur on mucosal surfaces.

3.1.7 Clinical presentation – symptoms

Lesions of chancroid begin as an erythematous papule within hours to days of sexual exposure. Over the following 1–2 days, the papule evolves into a pustule that breaks down and becomes a painful ulcer. People usually seek health care at the stage of the painful ulcer. Among men, the ulcers are usually on the penis (foreskin, shaft and sometimes on the glans), and as many as 50% develop unilateral or bilateral painful inguinal lymph nodes. Large, painful, fluctuant lymph nodes (buboes) may also occur. If not treated, buboes may suppurate and form fistulae or ulcers.

In women, ulcers of chancroid are on the vulva, and anal ulcers from autoinoculation may occur. Ulcers among women may be asymptomatic, especially when they are internal. Women do not frequently present with inguinal adenopathy because of the different lymphatic drainage.

3.1.8 The following diagnostic tests are used

1. darkfield microscopy – syphilitic treponemes from lesions of primary syphilis observed (see section on microscopy); a negative dark-field result does not exclude syphilis;
2. molecular detection – PCR testing can directly detect *T. pallidum* from lesion samples; and – serology – both nontreponemal (such as RPR) and treponemal tests (such as TPHA and rapid syphilis strip test) are negative in the early phase of primary syphilis, taking 1–4 weeks after the chancre appears to become reactive. A negative RPR or rapid syphilis test therefore does not exclude syphilis at the primary syphilis stage. Tests should be repeated at four and 12 weeks from the initial testing to be certain if the person does not receive treatment.
3. serology – both nontreponemal (such as RPR) and treponemal tests (such as TPHA and a rapid syphilis test) are almost always reactive (positive) in secondary syphilis, and usually in high titre.





3.2 Etiology

The relative prevalence of causative organisms for genital ulcer disease (GUD) varies considerably in different parts of the world and may change dramatically over time. The most common cause of GUD in Sub-Saharan Africa is as a result of infecting with herpes simplex virus type 2 (HSV-2), as well as HSV type 1. The other causes frequently identified among people presenting with genital ulcer disease are *Treponema palladium* (syphilis) and *Chlamydia trachomatis* serovars L1–L3, causing lymphogranuloma venereum and, less so, *Haemophilus ducreyi* (chancroid).

3.3 Clinical features

- Patients with GUS may present with single or multiple ulcers, with or without pain.
- Lymph nodes in the groin may also be enlarged and painful.
- Herpetic lesions that have a classical onset with a prodrome of itch.





Syphilis Testing Algorithm

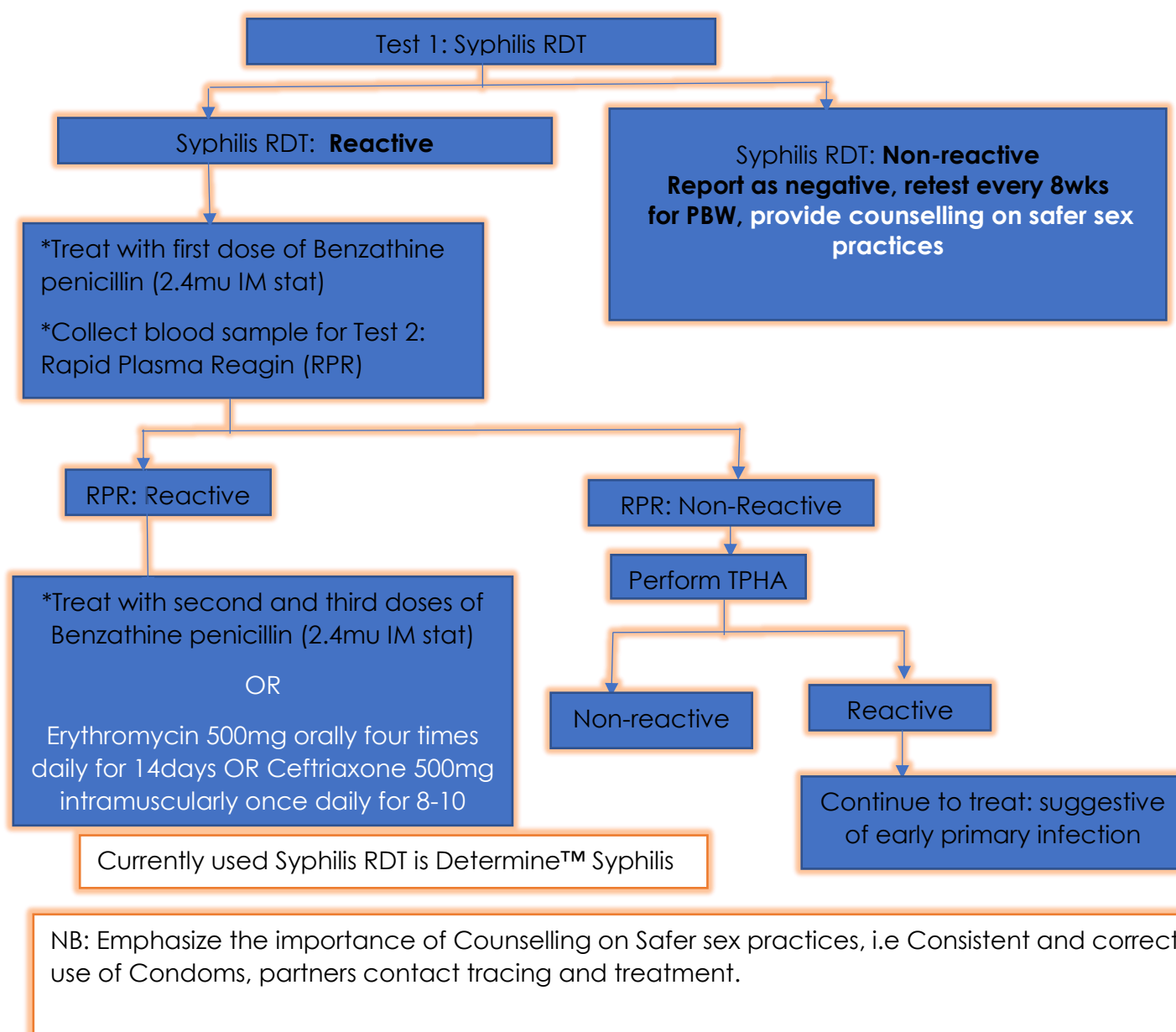


Figure 15: Syphilis Testing Algorithm

3.4 Syndromic treatment for genital ulcer syndrome

- Benzathine Penicillin, 2.4 million units I.M stat PLUS
- Azithromycin, 1g, orally stat PLUS
- Acyclovir, 400mg orally TDS for 7 days
- **In pregnant women** who are allergic to penicillin: Give Erythromycin base/stearate 500 mg orally QID for 14 days.





3.5 Treatment Options

Recommended treatment regimens

If ulcer(s) alone or ulcer(s) along with herpetic vesicles are visible* Treat for syphilis, chancroid and herpes. Regimen should include:

- Benzathine Penicillin*, 2.4 million units I.M stat, PLUS
- Azithromycin, 1g orally stat; OR Ceftriaxone, 500mg I.M stat; OR Ciprofloxacin, 500mg orally BID for 3 days; OR Erythromycin, 500 mg orally QID for 7 days (to treat chancroid) PLUS
- Acyclovir, 400mg orally TDS for 7 days (to treat genital herpes). NB: Penicillin-allergic patients treat with: Erythromycin 500mg 6 hourly for 14 days.

Recommended regimen for genital herpes:

- First episode: Acyclovir, 400mg orally TDS for 7 days;
- Recurrent episodes: Acyclovir, 800mg orally TDS for 3days

The chronic and recurrent nature of the illness should be explained to the patient, who should be advised to avoid sexual contact until the lesions are completely healed.

For people with confirmed anogenital ulcers, WHO suggests the following;

1. Treat syndromically for syphilis and herpes simplex virus on the same day.
2. Treat for herpes simplex virus if the ulcer is recurrent or vesicular, and treat for syphilis if the person has no history of recent treatment for syphilis (in the past three months).
3. Treat for chancroid only in geographical settings where cases are reported or emerging.





Flowchart for syndromic treatment of genital ulcer syndrome

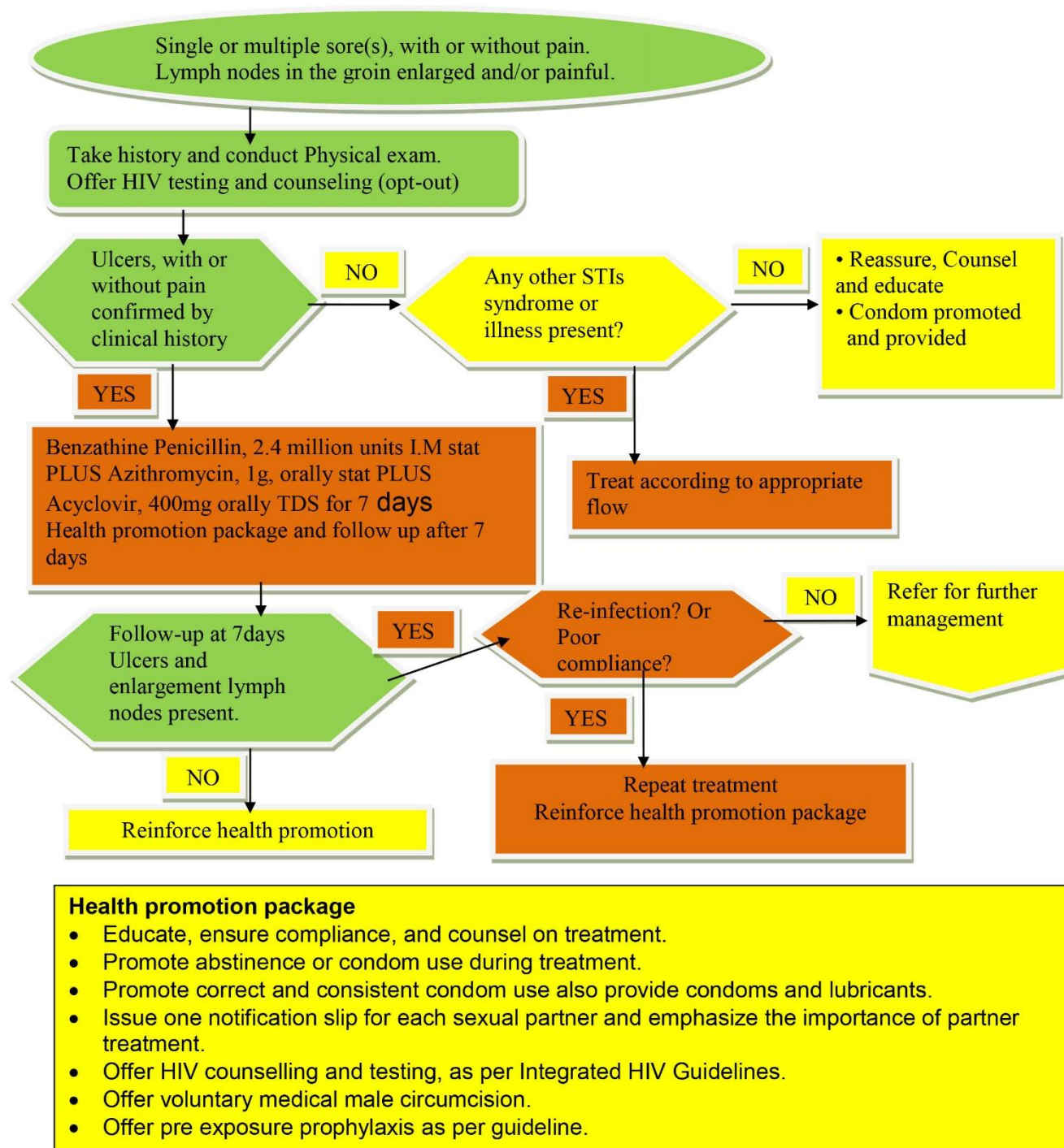


Figure 16: Flowchart for syndromic treatment of genital ulcer syndrome





Module 4: Growths

4.1 Genital Warts



Figure 17: Male and female Genital Warts

4.1.1 Description

Genital warts usually affect sexually active young adults, being spread by direct sexual contact. Genital warts are caused by Human Papilloma Virus (HPV type 6 and HPV type 11) and syphilis (*Treponema pallidum*). Some people are at increased risk for warts due to weakened immune systems. Teenagers and people who have conditions that weaken their immune systems, like HIV, are at increased risk for warts (InformedHealth, November 2019). So are people who take biologic drugs that suppress the immune system. Biologics may be prescribed for inflammatory bowel disease (IBD), rheumatoid arthritis (RA), psoriasis, and other autoimmune conditions. These medications suppress the immune system, so people who take them are at increased risk for viral infections and warts.

4.1.2 Etiology

There are more than 100 types of Human Papilloma Virus (HPV). The various HPV types are classified as low risk (LR) or high risk (HR) based on the prevalence ratio in cervical cancer and its precursors. LR-HPV types such as HPV type 6 and HPV type 11 cause common genital warts with minimal risk of progression to cancer. High risk types such as HPV-16 and HPV-18 are implicated in most cervical and other anogenital cancers.

The incubation period for HPV is 3 months on average but may be shorter or longer. Most infections do not have clinical symptoms. HPV warts may appear as raised or



soft pink cauliflower like growth in moist areas usually painless but may itch. The table below shows the different HPV strain types and their associated conditions.

The different HPV strain types and their associated conditions

Virus Strain Types	Associated Conditions
HPV-1, HPV-2, HPV- 4	Common skin warts
HPV-13, HPV-32	Oral warts
HPV-6, HPV-11	Anogenital warts
HPV-16, HPV-18, HPV- 31, HPV 33, HPV-35 High-risk implicated in most cervical and other ano-genital cancers.	Cancer of the cervix, penis, anus and vulva

Table 4: Different HPV strain types and their associated conditions

Exophytic (outward- growing) warts typically appear 1- 3 months or longer after exposure. There are three varieties of exophytic warts, which are sexually transmitted:

1. **Condylomata Acuminata:** Moist or partially keratinized surfaces (e.g. introitus, anus, under foreskin). Typically, cauliflower appearance.HPV
2. **Keratotic warts:** finger-like projection, often cauliflower-like appearance and typically on dry skin (e.g. penile shaft, scrotum, labia majora).
3. **Papular warts:** Smooth surfaces, less finger-like projections than keratotic warts.

4.2 Syphilitic warts



Figure18: Syphilis

Syphilitic warts may appear as flat, extensive clustered lesions mostly on moist areas and they rarely present as flat or papillary in shape. They are small skin growths, similar to genital warts that may develop on penis, vulva, anus, rectum, lips, or mouth called a chancre. This usually happens during vaginal, anal or oral sex, or by sharing sex toys



with someone who is infected. Anyone who is sexually active is potentially at risk. If it's left untreated for years, syphilis can spread to the brain or other parts of the body and cause serious long-term problems.

There can be lesions on the genitals that look like genital warts, but are **caused by** spirochetes rather than the wart virus. This is the syphilitic first stage the wart-like lesions, as well as the skin rash are very contagious. In the second stage of syphilis, symptoms include flat, wart-shaped growths that do not itch and painless sore. These, are highly contagious. The rash can occur on the palms of the hands, and the infection can be transmitted by casual contact. It may be possible to catch syphilis if you inject yourself with drugs and you share needles with somebody who's infected, or through blood transfusion but this is very rare as all blood donations are tested for syphilis.

NB: Syphilis cannot be spread by using the same toilet, clothing, cutlery or bathroom as an infected person.

4.2.1 Etiology

Syphilis (*Treponema pallidum*) a microscopic organism called a spirochete. This worm-like, spiral-shaped organism infects people by burrowing into the moist mucous membranes of the mouth or genitals.

Transmission is mostly through direct sexual contact. Perinatal transmission can occur in infants born to infected mothers.

4.2.3 Treatment

The primary goal of treating visible genital warts is to remove the warts. Treatment of genital warts does not eliminate HPV infection. Conventional treatments for genital warts, such as podophyllin, should not be used during pregnancy. However, because genital warts can enlarge and become friable during pregnancy, it may be necessary to refer such patients for specialist management. Small warts are likely to resolve spontaneously after delivery. There are several methods of treating genital warts as outlined below.





Methods of treating genital warts

Site of warts	First line treatment options	Effective substitutes	If woman is pregnant and Lactating
External penile, vulval and anal	Podophyllin 25% tincture of benzoin, applied carefully to the warts while protecting the surrounding area with vaseline, once weekly. Wash off after 4 hours in adults and after 2 hours in children. Treatment should be repeated until lesions resolve completely, if there is no improvement after 6 weeks then refer for further management.	Podophyllotoxin (Podofilox) 0.5% solution or gel applied BID for 3 days, followed by 4 days of no treatment, with the cycle repeated up to 4 times. OR Imiquimod 5% cream (it is user friendly but expensive), applied with a finger at bedtime, left overnight, 3 times a week for as long as 16 weeks OR Trichloroacetic acid (TCA) 80-90%, once a week. Wash off after 4 hours	- Podophyllin should not be applied in pregnant and lactating patients. - Use other treatment options such as cauterization, diathermy, cryotherapy, imiquimod 5% cream. guidelines - Provide health education on personal hygiene

NB:

- Not more than 5 ml of Podofilox and Podophyllin should be applied per day.
- Podophyllin application should be done under medical supervision and patient should be warned against self-medication.
- Cervical, meatal and urethral warts should be managed by expert
- Sometimes warts never go away completely,
- Treatment does not protect future infections of the syphilis. Although curable, any damage done by the syphilis bacteria cannot be reversed.

Table 5: Methods of treating genital warts





4.2.4 Neonatal Screening for Congenital Syphilis

An exposed infant is one born from a mother with a positive Syphilis result during pregnancy whether or not adequately treated prior to delivery.

- Test All exposed infant for Syphilis using TPHA at birth
- For all TPHA positive infants; follow up test at 3 months
- All infants testing TPHA negative yet born from TPHA positive mothers inadequately treated should be considered as incubating Syphilis, they should be monitored for signs and symptoms of congenital Syphilis and then retested in 3 months.

4.2.5 Treatment

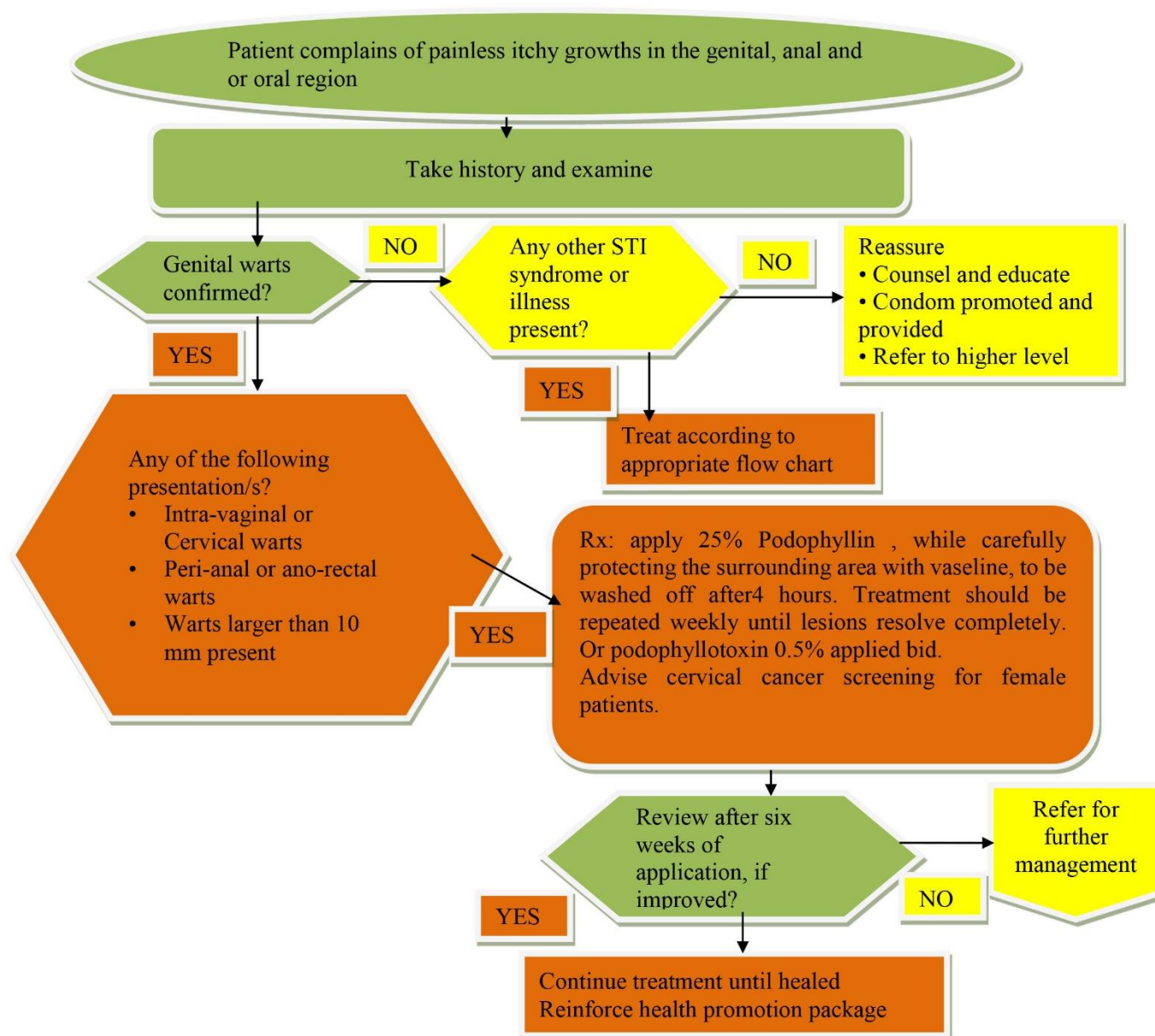
Treat all newborns of mother with positive RDT/RPR

- Benzathine Penicillin 50 000 IU /kg IM stat or Procaine Penicillin G 150 000 IU/kg IM, 12 hourly for 14 days.
- If allergic; give Erythromycin 50mg/kg divided does 6hourly for 30 days





Flowchart for management of Genital warts



Health promotion package

- Educate, ensure compliance, and counsel on treatment.
- Promote abstinence or condom use during treatment.
- Promote correct and consistent condom use also provide condoms and lubricants.
- Issue one notification slip for each sexual partner and emphasize the importance of partner treatment.
- Offer HIV counselling and testing, as per Integrated HIV Guidelines.
- Offer voluntary medical male circumcision.
- Offer pre exposure prophylaxis as per guideline.

Figure 19: Flowchart for management of Genital warts





Module 5: Other Sexually Transmitted Infections

5.1 Scrotal swelling (SSS)

5.1.1 Description

Inflammation of the epididymis usually manifests itself by acute onset of unilateral testicular pain and swelling, often with tenderness of the epididymis and vas deferens, and occasionally may present with erythema and oedema of the overlying skin. It is common in men under 35 years. When epididymitis is accompanied by urethral discharge, it is commonly associated with gonococcal and/or chlamydial infection.

5.1.2 Etiology

responsible micro-organism: *E. coli*, *Klebsiella*, and *P. Aeruginosa*. In pre-pubertal children, mumps epididymo-orchitis is usually noted within a week of parotid enlargement.

5.1.3 Clinical features

- The patient usually complains of unilateral pain and swelling of the scrotum with a urethral discharge which develops over 1-2 days
- Scrotal swelling may be seen following trauma or testicular torsion and this required immediate referral for surgical or urological opinion.
- On inspection, the scrotal sac appears distended and on palpation, both testicles and the epididymis are swollen and tender. Differential Dx: Testicular torsion, testicular trauma, inguinal hernia, hydrocele and haematocoele.

5.1.4 Syndromic treatment of scrotal swelling

- Ceftriaxone, 500mg IM stat.

Plus

- Azithromycin, 1 g orally per week for 2 weeks

Plus

- Combined with bed rest and scrotal support until local inflammation and fever subside.





Monitor treatment response by scheduling a follow-up visit seven days after initial clinic visit.

5.1.5 Treatment options of scrotal swelling

for complicated gonococcal infection:

First-line:

Ceftriaxone, 500mg IM stat. OR Cefixime 400mg PO stat

Second-line:

Spectinomycin, 2 g IM stat, OR Gentamicin, 240 mg IM stat.

For complicated chlamydial infection:

First-line:

Azithromycin, 1 g orally per week for 2 weeks.

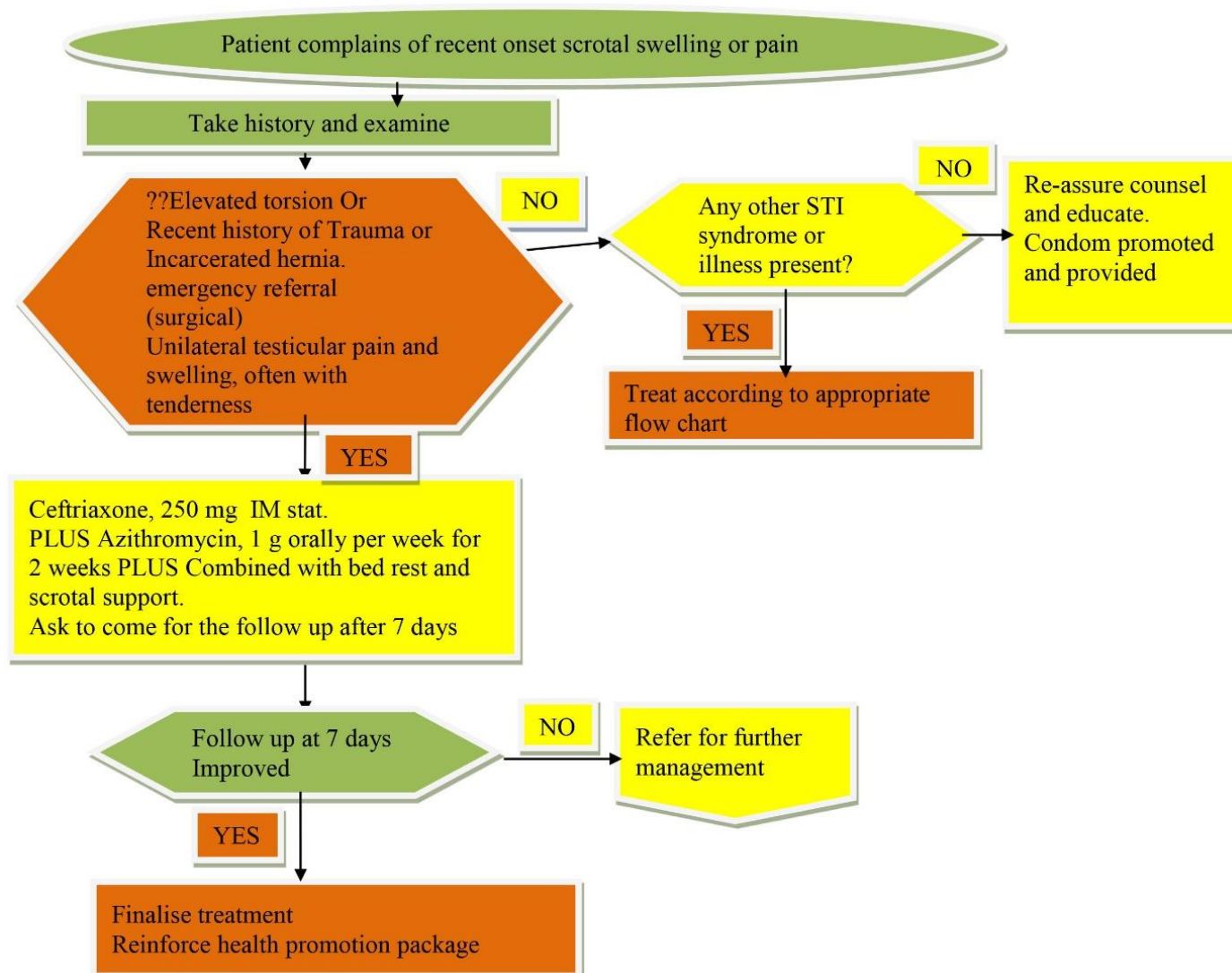
Second-line:

Doxycycline, 100 mg orally BID for 14 days, OR Erythromycin, 500 mg orally QID for 14 days.





Flowchart for syndromic treatment of scrotal swelling



Health promotion package

- Educate, ensure compliance, and counsel on treatment.
- Promote abstinence or condom use during treatment.
- Promote correct and consistent condom use also provide condoms and lubricants.
- Issue one notification slip for each sexual partner and emphasize the importance of partner treatment.
- Offer HIV counselling and testing, as per Integrated HIV Guidelines.
- Offer voluntary medical male circumcision.
- Offer pre exposure prophylaxis as per guideline.

Figure 20: Flowchart for syndromic treatment of scrotal swelling





5.2 Inguinal Bubo



Figure 21: Inguinal Bubo

5.2.1 Description

Inguinal and femoral buboes are localized enlargements of the lymph nodes in the groin area, which are painful and may be fluctuant (soft with a feeling of liquid inside). Inguinal bubo is rarely the sole manifestation of an STI and is usually found together with other genital ulcer disease. Buboes are usually caused by *Haemophilus ducreyi* (chancroid), lymphogranuloma venereum (LGV) and *Chlamydia trachomatis* serovars L1–L3.

Lymphogranuloma venereum (LGV) is a non ulcerative sexually transmitted disease of the genital area caused by *Chlamydia trachomatis*.

It is important to elicit history of recent genital ulcer and examine the external genitalia in all patients presenting with bubos so that effective management can be given.

5.2.2 Etiology

***Chlamydia trachomatis* serovars L1, L2 and L3** is a gram negative coccoid or rod-shaped bacteria that causes genitourinary tract and eye infection.

***Haemophilus ducreyi* (chancroid)** is an ulcerative sexually transmitted disease of the genital area but internal vaginal ulcers in women may be missed and management should follow the flow chart genital ulcer.

5.2.3 Transmission

Inguinal bubos are secondary to sexually transmitted local and systemic infection (e.g. tuberculosis and other infections, particularly affecting the lower limbs). It is usually secondary to other infection, for example LGV is an ulcerative sexually transmission of the genital area caused by *Chlamydia trachomatis*.





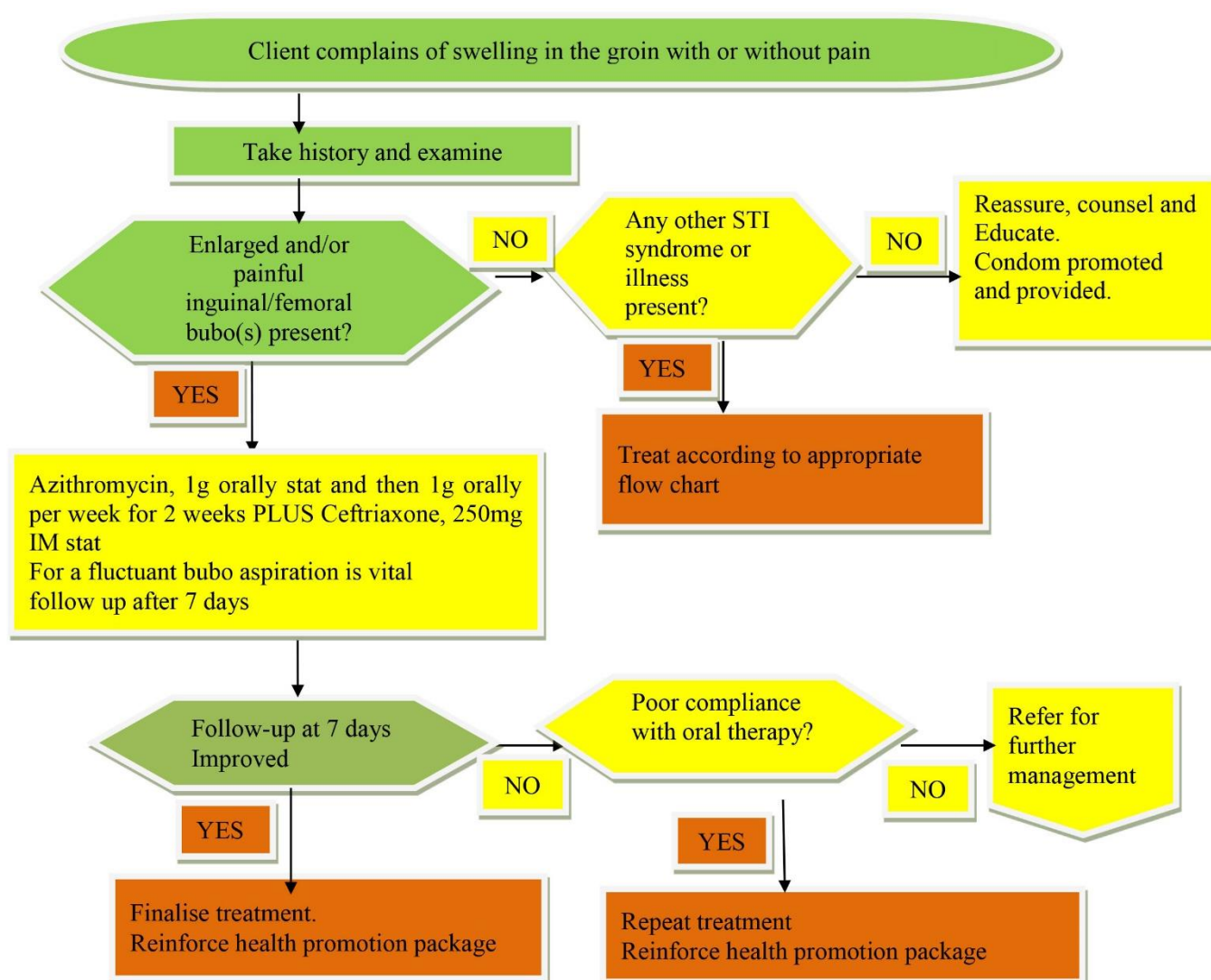
5.2.4 Treatment

- Ceftriaxone 500mg IM stat + Azithromycin 1g PO weekly x 2
- Aspirate fluctuant bubo and review after 7 days.
- Offer syphilis, HIV, HPV test and provide health promotion package.





Flowchart for syndromic treatment of inguinal bubo



Health promotion package

- Educate, ensure compliance, and counsel on treatment.
- Promote abstinence or condom use during treatment.
- Promote correct and consistent condom use also provide condoms and lubricants.
- Issue one notification slip for each sexual partner and emphasize the importance of partner treatment.
- Offer HIV counselling and testing, as per Integrated HIV Guidelines.
- Offer voluntary medical male circumcision.
- Offer pre exposure prophylaxis as per guideline.

Figure 22: Flowchart for syndromic treatment of inguinal bubo





5.3 Balanitis and balanoposthitis

5.3.1 Description

Balanitis refers to the inflammation of the glans penis, whereas balanoposthitis is inflammation of the glans, foreskin and/ or shaft. The main complication of balanitis is phimosis, in which case the foreskin adheres to the inflamed and swollen glans penis and cannot be retracted.

5.3.2 Etiology

Candida albicans or lactobacilli

5.3.3 Clinical features

- The common presentation is that of itch and swelling of the glans and foreskin. Sometimes pain may be reported.
- Patient may have a history of recent high-risk sexual practice, such as unprotected sex.
- A history of vaginal discharge from the partner may also be reported.

The physical examination may reveal signs of inflammation (such as red colour of skin (erythema), oedema, heat and tenderness).

The texture of the skin will also be altered, with white patches or streaks in typical cases of candidal infection. Presence of genital ulcerations and urethral discharge should be sought, and if present should be treated according to the appropriate syndromic algorithms.

Secondary bacterial infection may occur, causing superficial ulcers or erosions. Service providers should be aware that balanitis/balanoposthitis is commonly associated with diabetes mellitus and therefore should be ruled out by doing a urinalysis for glycosuria in chronic or recurrent cases.

5.3.4 Management

Partners should be examined for the presence of vaginal discharge. Routinely offer male circumcision to uncircumcised male patients as part of the health promotion package. If the condition is so severe that the foreskin cannot be retracted (phimosis) such cases should be referred appropriately for surgical intervention.





5.3.5 Recommended treatment regimens

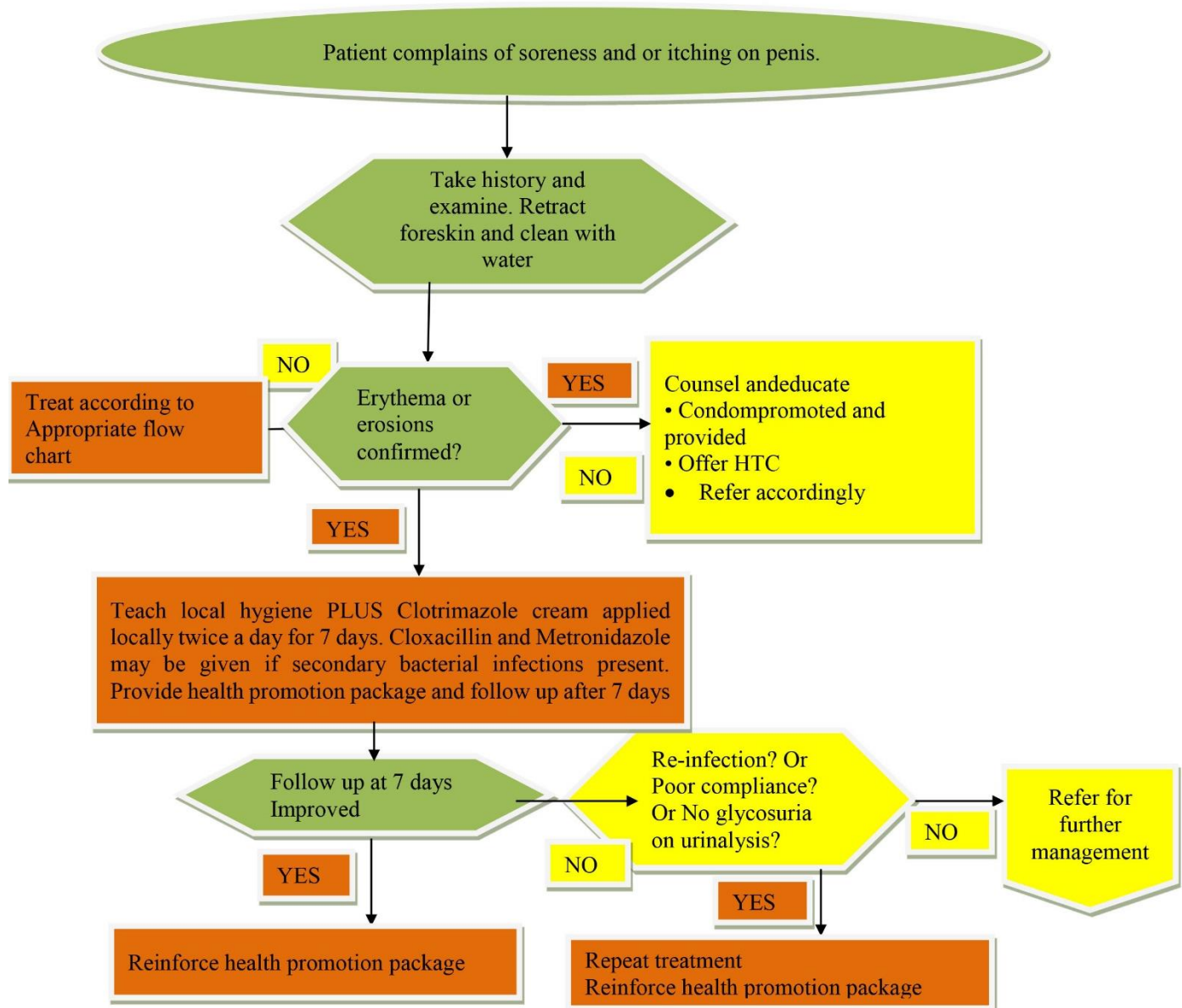
The treatment of balanitis or balanoposthitis consists of:

- Maintaining local hygiene by retracting the foreskin, if possible, when washing.
- Instruct patient to wash the affected area daily with weak saline solution (one teaspoon of salt dissolved in one litre of lukewarm water) and avoid soap while inflammatory. PLUS
- Application of an antifungal cream i.e Clotrimazole cream applied locally twice a day x 7
- Cloxacillin 500mg QID for 7 days and Metronidazole TDS for 7 days may be given if secondary bacterial infections present.

Patients with recurrent or severe balanitis or balanoposthitis should be screened for the presence of diabetes mellitus. If the test is positive, the patient should be referred for further management.



Flowchart for syndromic treatment of Balanitis and balanoposthitis



Health promotion package

- Educate, ensure compliance, and counsel on treatment.
- Promote abstinence or condom use during treatment.
- Promote correct and consistent condom use also provide condoms and lubricants.
- Issue one notification slip for each sexual partner and emphasize the importance of partner treatment.
- Offer HIV counselling and testing, as per Integrated HIV Guidelines.
- Offer voluntary medical male circumcision.
- Offer pre exposure prophylaxis as per guideline.

Figure 23: Flowchart for syndromic treatment of Balanitis and balanoposthitis



5.4 Pediculosis pubis

5.4.1 Description

Pediculosis pubis or pubic lice infestation is caused by the pubic louse. It can be transmitted during sexual contact.

5.4.2 Etiology

Phthirus pubis

5.4.3 Clinical features

The symptoms and clinical signs of the infection include severe itching around the pubic area, often resulting in scratching. The scratch marking on the skin may become secondarily infected with bacterial infections. Although the lice and nits remain mostly confined to pubic and peri-anal areas, they may spread to thighs, axillae, chest, eyelashes, eyebrows and other areas. The diagnosis is established by clinical examination, as the parasite (adult or nits) is visible to the naked eye. The mature lice are brown or bluish grey in colour and approximately the size of pinheads.

5.4.4 Treatment

Benzyl Benzoate 25% emulsion or lotion to be applied and removed after 24 hours then wash thoroughly

Or

Permethrin, 1% lotion to be rubbed thoroughly with fingers into the infested and adjacent hairy areas and wash off after 10 to 20 minutes

5.4.5 Treatment in infants

Gamma Benzene Hex chloride is contra-indicated in pregnant women, lactating mothers, infants and patients of Pediculosis with secondary infections or with eczema, because it increases the risk of absorption leading to systematic toxicity, and resulting in seizures and aplastic anemia. It should not be applied near the eyes.

5.4.6 Treatment

- Permethrin 1% cream to be applied as above.
- Treatment for Pediculosis of eyelashes or eyebrows.
- Apply occlusive ophthalmic ointment or Vaseline to the eyelid margins daily for 10 days to smother lice and nits





5.4.7 Special Precautions

- Re- treatment is indicated after 7 days if lice are found or eggs are observed at the hair-skin junction.
- Advise that the genital area should be shaved.
- Clothing or bed linen that may have been contaminated by the patient within the past two days should be washed and thoroughly dried.
- Sexual and close household contacts must be treated simultaneously, even those who are not complaining of any itching or do not have signs of parasite.

5.4.8 Referral cases

If severe secondary infection, fever or swollen tender lymph nodes occur, refer to higher center.

5.5 Genital scabies

5.5.1 Definition

Genital scabies is caused by the Scabies mite, and is transmitted by close contact with an infected case, either sexual or non-sexual.

5.5.2 Etiology

Sarcoptes scabiei

5.5.3 Clinical features

The main complaint with genital scabies is itching especially at night-time. On physical examination, erythematous papules can be seen mainly on the flexure surfaces of the body, such as the axillae, elbow, and wrist, inter-digital spaces, around the umbilicus, inner thighs and back of the knee. Finding burrows tunneled by the female mites in the inter-digital spaces may be noted.

5.5.4 Management

Benzyl Benzoate 25% emulsion or lotion to be applied and removed after 24 hours then wash thoroughly

Or

Permethrin, 5% lotion to be rubbed thoroughly with figures into the infested and adjacent hairy areas and wash off after 8 to 10 hours





Or

Gamma Benzene Hex chloride (GBH) 1% lotion or cream applied as a very thin film washed thoroughly after 8 to 10 hours

Or

Sulphur 6% in petrolatum applied to the entire body from the back down for 3 nights after bath. Patients may bath before re-applying the drug and should bath 24 hours after final application

Or

Crotamiton 10% cream to be applied to the entire body from the neck down at night for 2-5 nights and washed off thoroughly by taking a bath 24 hours after the last application. Treatment in infants, children younger than 10 years, pregnant or lactating women. Gamma Benzene Hex chloride is contra-indicated in pregnant women, lactating mothers, infants and patients of scabies with secondary infection or with eczematization, as it increases the risk of absorption, leading to systemic toxicity, resulting in seizures and aplastic anemia. It should be applied with caution in the elderly. It should not be applied near the eyes.

The recommended regimen is:

- Crotamiton 10% cream/ sulphur 6% in petrolatum/ Permethrin 5% cream to be applied as above.

5.5.5 Special instructions

- Sexual and close household contacts must be treated simultaneously, even those who are not complaining of any itching or do not have any skin lesions;
- Itching may persist for few weeks after adequate therapy. Oral antihistamine should be given for the relief of itching;
- A second course of local application is needed if there is no clinical improvement.

5.5.6 Cases for referral

If severe secondary infection, fever or swollen tender lymph nodes occur, refer to higher center.





5.6 Neonatal Conjunctivitis



Figure 24: Neonatal Conjunctivitis

5.6.1 Description

Neonatal conjunctivitis also known as Ophthalmia neonatorum is infection of the eyes in a neonate occurring within the first month of life. The infection usually causes redness of the eyelids and may be accompanied by swelling and a purulent discharge from the eyes from 2 to 5 days after birth, but the onset can occur later. N. Gonorrhea affects the cornea causing keratitis and if not treated within 24 hours it may cause permanent damage e.g. blindness.

Neonatal conjunctivitis is preventable and all attempts should be made to prevent its occurrence through early detection and effective treatment of maternal infections and routine application of an appropriate antimicrobial medication into the eyes of the neonate immediately after delivery. For all neonates, topical ocular prophylaxis should be applied for the prevention of gonococcal and chlamydial ophthalmic neonatorum.

Best results are obtained if the antimicrobial agent is applied within 6 hours of birth, but this should still be done even if the gap is longer. The image below shows keratitis.





5.6.2 Etiology

- *N. Gonorrhoeae*
- *C. Trachomatis*

5.6.3 Clinical Features

Red eyes, profuse tearing, photophobia, corneal clouding, intense pain.

5.6.4 Transmission

STI's related infections passed from the mother to the neonate during vaginal delivery.

5.6.5 Treatment

Recommended prophylaxis and treatment options for neonatal conjunctivitis

Infections covered <i>N. gonorrhoeae</i> <i>C. trachomatis</i>	First line management approaches	First line treatment options	Effective treatment substitutes
Prophylaxis	Instil, as a single application, an appropriate antimicrobial eye ointment into the eyes of the neonate immediately after delivery	Clean baby's face and eyes AND Instil 1% tetracycline eye ointment, single application	
Treatment for baby with established infection			
Management	Irrigate eyes with normal saline Note: No topical eye ointment is necessary if systemic therapy is administered.	Ceftriaxone 500 mg/kg (max 125mg) IM, single dose AND Erythromycin syrup, 50mg/kg oral daily QID X 14 days / Azithromycin 20 mg/kg per day, orally for 3 days (WHO 2021 - STI Guidelines).	Spectinomycin 25mg/kg IM single dose (do not exceed the maximum dose of 75 mg).



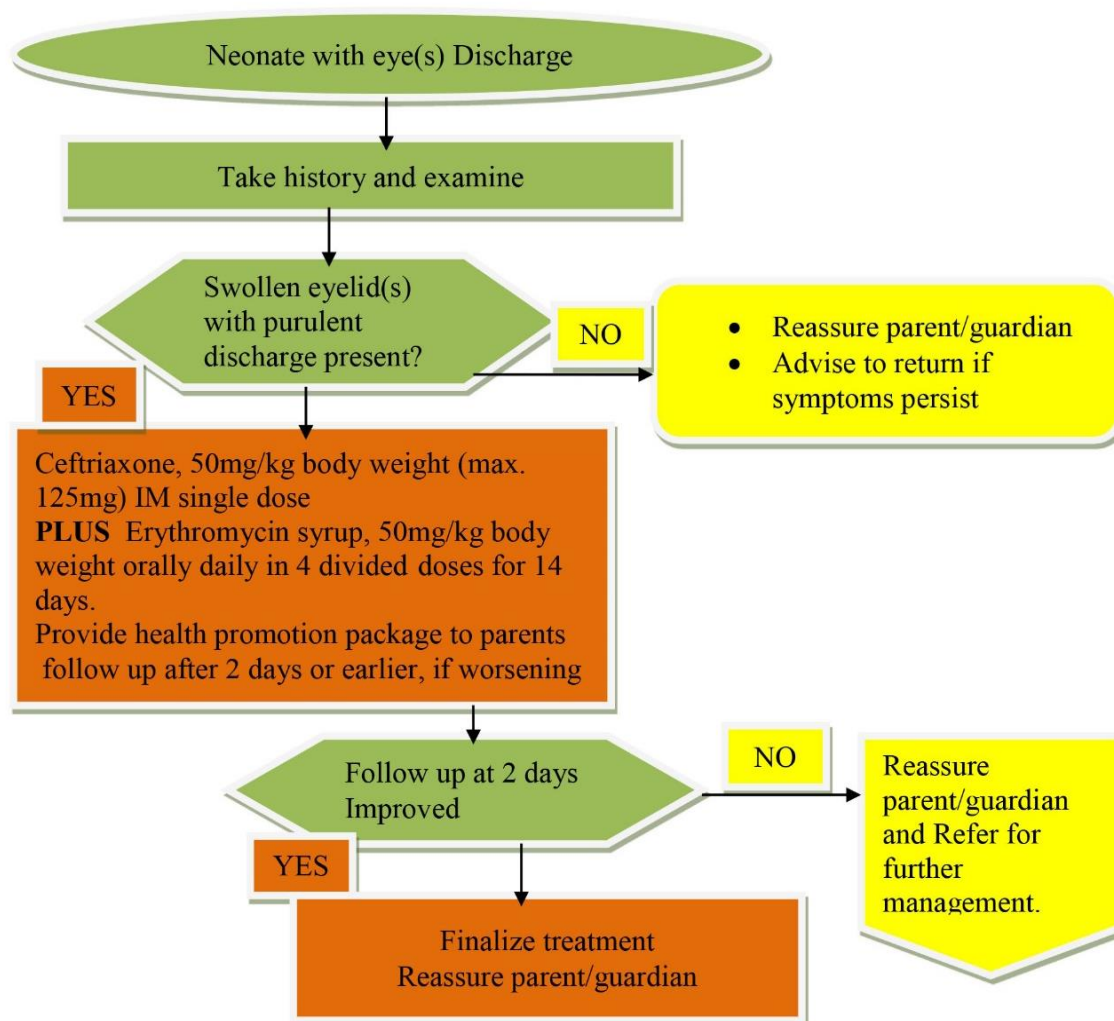


		Provide health promotion package to parent Review after 2 days or earlier if worsening.	
Treatment for breastfeeding mothers			
Management for mother	Educate and counsel Offer HIV counseling and testing Screen for syphilis, if necessary Provide and promote condom use	Ceftriaxone 500 mg IM stats single dose / Cefixime 400mg oral stat PLUS Azithromycin 1 gram orally, single dose / Erythromycin 500mg orally QID for 7 days	
Management for sex partner(s)	Educate and counsel Counsel and offer HIV testing and screen for syphilis Provide and promote condom use	Ceftriaxone 500mg IM, single dose PLUS Azithromycin 1 gram orally, single dose	Doxycycline 100 mg orally, twice daily for 7 days (According to WHO 2021 - STI Guidelines).

Table 6: Recommended prophylaxis and treatment options for neonatal conjunctivitis



Flowchart for syndromic treatment of neonatal conjunctivitis

**Health promotion package**

- Educate, ensure compliance, and counsel on treatment.
- Promote abstinence or condom use during treatment.
- Promote correct and consistent condom use also provide condoms and lubricants.
- Issue one notification slip for each sexual partner and emphasize the importance of partner treatment.
- Offer HIV counselling and testing, as per Integrated HIV Guidelines.
- Offer voluntary medical male circumcision.
- Offer pre exposure prophylaxis as per guideline.

Figure 25: Flowchart for syndromic treatment of neonatal conjunctivitis



5.7 Syphilis in Pregnancy

The clinical symptoms of Syphilis are not altered by pregnancy. Since asymptomatic adult Syphilis infection is common, all pregnant women should be screened for Syphilis. This can reduce the complications of congenital Syphilis. A Rapid Plasma Reagent (RPR) should be routinely done on pregnant mothers according to the stipulated ANC guidelines and the Syphilis and Hepatitis B management in Pregnancy SOP. If reactive, the partners should be treated as well.

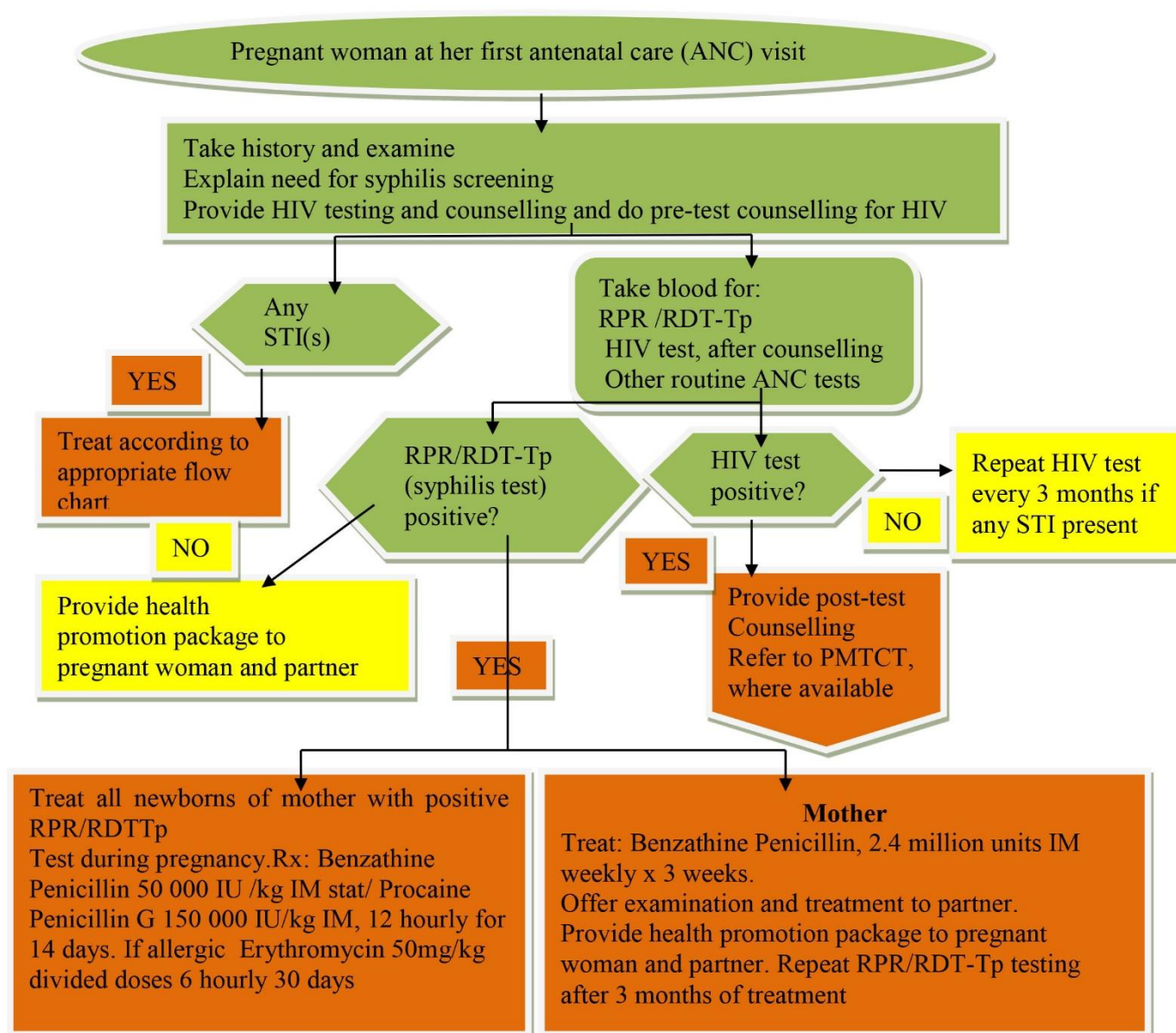
5.7.1 Screening

At first contact, screen the pregnant woman for syphilis using Treponemal Syphilis rapid test (Determine Syphilis RDT)





Flowchart for syphilis screening of pregnant women



Health promotion package

- Educate, ensure compliance, and counsel on treatment.
- Promote abstinence or condom use during treatment.
- Promote correct and consistent condom use also provide condoms and lubricants.
- Issue one notification slip for each sexual partner and emphasize the importance of partner treatment.
- Offer HIV counselling and testing, as per Integrated HIV Guidelines.
- Offer voluntary medical male circumcision.
- Offer pre exposure prophylaxis as per guideline.

Figure 26: Flowchart for syndromic treatment of Balanitis and balanoposthitis





5.8. Molluscum Contagiosum

5.8.1 Description

Molluscum contagiosum is caused by a type of Pox virus. Transmission occurs most commonly through sexual or non-sexual contact, and is enhanced by friction or micro-trauma.

5.8.2 Etiology

Pox virus

5.8.3 Clinical Features

- The typical eruption appears as a pearly white dome-shaped papule with central umbilication from which caseous material can be expressed.
- These lesions mostly appear at the point of contact (such as the genital area).
- Individual lesions usually regress without treatment in 9-12 months.
- Generalized lesions, especially multiple lesions on face, may indicate immuno-suppression due to underlying infection.

5.8.4 Management

- Excision curettage: Each lesion should be thoroughly opened with a fine sterile needle.
- The contents should be expressed and the inner wall touched with either Phenol/ Silver Nitrate.
- Or Trichloroacetic acid 30% solution or Iodine solution.
- Or Apply Podophyllotoxin 0.5% to the individual lesion BID for 3days.
- Or Imiquimod 5% cream.
- Or Cryotherapy with liquid nitrogen.

5.8.5 Cases for Referral

- Patients with generalized lesions should be encouraged to undergo HIV testing and counselling, if their sero-status is unknown.
- These patients should be referred to the dermatology unit for further management.





5.9 Hepatitis B virus infection

5.9.1 Definition

An infectious disease caused by the hepatitis B virus (HBV) which affects the liver. Transmission of hepatitis B virus results from exposure to infectious blood or body fluids. It is 50 to 100 times more infectious than HIV and can cause both acute and chronic infections. Hepatitis B virus infection can be transmitted through sexual intercourse. Other modes of transmission include vertical infection from mother to child during birth, blood transfusion with infected blood or blood products and through piercing of skin by contaminated needles or sharp instruments.

HIV-positive individuals should be routinely tested for hepatitis B infection. HIV-positive individuals who test positive for hepatitis B surface antigen should be prioritized for rapid ART initiation. Clients who are changing from a TDF and/or 3TC based regimen should be tested for hepatitis B virus infection.

5.9.2 Etiology

Hepatitis B virus.

5.9.3 Clinical features

Many people have no symptoms during the initial infection. Some develop a rapid onset of sickness with vomiting, yellowish skin, feeling tired, dark urine and abdominal pain. Often these symptoms last a few weeks and rarely does the initial infection result in death.

Acute infection with hepatitis B virus is associated with acute viral hepatitis – an illness that begins with general ill-health, loss of appetite, nausea, vomiting, body aches, mild fever, and dark urine, and then progresses to development of jaundice. The illness lasts for a few weeks and then gradually improves in most affected people. A few people may have more severe liver disease (fulminant hepatic failure), and may die as a result. The infection may be entirely asymptomatic and may go unrecognized.

Chronic infection with hepatitis B virus following primary hepatitis B infection in adults is usually sub-clinical and self-limiting. However, about 6-10% of infected patients may become chronic carriers, and about 25% of them may develop chronic active hepatitis. In about 15-30% of chronic hepatitis cases, cirrhosis of the liver may develop, which may involve a risk of developing hepatocellular carcinoma.





5.9.4 Preventive measures

- Hepatitis B vaccination for all children should be included as part of the national immunization schedules;
- Testing to verify effective immunization is recommended and further doses of vaccine are given to those who are not sufficiently immunized
- All service providers should be immunized to prevent occupational transmission of Hepatitis B infection;
- Sexual partners of the infected person should be screened with an HBsAg test and should be given Hepatitis B vaccine if they are not immune;
- Vaccination should also be considered for people at high risk of Sexually Transmitted Infections including men who have sex with men, intravenous drug users, sex workers and people who have been newly diagnosed with HIV.

5.9.5 Treatment

Acute hepatitis B infection does not usually require treatment and most adults clear the infection spontaneously. Early antiviral treatment may be required in less than 1% of people, whose infection takes a very aggressive course (fulminant hepatitis) or who are immuno-compromised. On the other hand, treatment of chronic infection may be necessary to reduce the risk of cirrhosis and liver cancer. Those with current cirrhosis are in most need of treatment.

5.9.6 Recommended First-Line ART for Clients Co-infected with Hepatitis B Virus

- TDF and 3TC is preferred in hepatitis B coinfecting clients in order to control a hepatitis B viral load.
- If ARVs need to be changed due to HIV drug resistance, follow these guidelines:
 - Both TDF and 3TC should be continued as part of the new second- or third-line regimen to prevent hepatitis B viral load increase, ALT flares and hepatic decompensation. 2018 Integrated HIV Management Guidelines
 - 75 Use of ARVs to Treat HIV-Negative Clients with Chronic Active Hepatitis B Virus Infection Hepatitis B virus (HBV) infection can occur independently of HIV. In such cases, the following guidance should be used:





- Active ongoing hepatic damage, more than 6 months, should be an indication for initiating HBV treatment. (Hepatic damage includes symptoms of liver disease, persistent elevation of ALT and abnormal ultrasound).
 - APRI (aspartate aminotransferase [AST] to platelet ratio index) is recommended as the preferred non-invasive test to assess presence of liver fibrosis/cirrhosis at baseline and during follow-up.
 - Adults with an APRI score > 2 should be given treatment as a priority
 - See Annex 9.11 of the 2018 Integrated HIV Management Guidelines for WHO recommended algorithm for management of persons with chronic hepatitis B infection
- See treatment and clinical considerations for HBV in Annex 9.12 of the 2018 Integrated HIV Management Guidelines.
- Risk of HIV acquisition should be assessed at every refill visit and clients must be counselled on HIV prevention.
- HIV testing should be done according to the risk assessment (see Chapter 3, Section 2).
- Review the client's need for treatment annually (VL for HBV should be done if available). If hepatitis B viral suppression is achieved for 3 years, HBV treatment can be stopped



Hepatitis B virus treatment algorithm

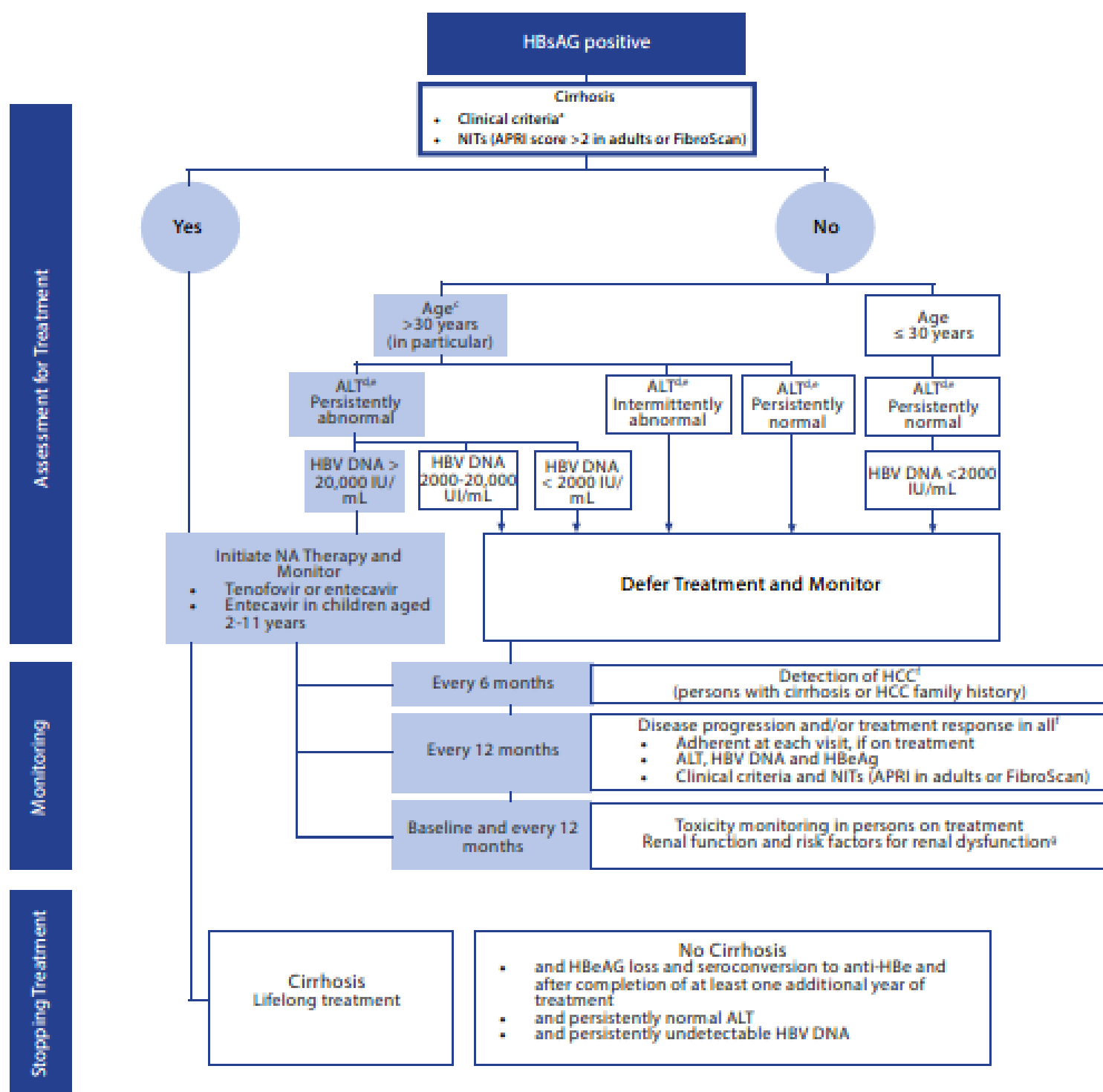


Figure 27: Hepatitis B virus treatment algorithm



Module 6: Laboratory management of Sexually Transmitted Infections

According to WHO guideline (2021), the management of STI's should be diagnostic than syndromic which most African countries are used to. Hence, the importance of laboratory test with all clients seeking STI services. This approach makes the drugs used to be more effective and appropriate for each client coming to our care. Of note is that these laboratory test are expensive and not affordable for some developing countries. However, WHO is working on appropriate method which will be accessible for all developing countries.

The following tests are used in diagnosis: rapid test, molecular, culture and antimicrobial susceptibility, Urinalysis and microscopy.

NB: Currently PCR/Molecular tests are not available in Eswatini.

6.1 Microscopy

- Used for testing genital discharges, Urethritis, Cervicitis, Genital ulcers as in C.trichomatis, N.gonorrhea.
- Specimen: Swabs from lesions or discharge
- Gram staining is used to see if organism is gram positive or negative
- Urinalysis is used to pick up T. vaginalis
- Gram-stained smears from the cervix are considered positive for the presumptive diagnosis of gonorrhoea in women if intracellular gram-negative diplococci are observed.

6.2 Culture

- Culture is done to grow the organisms and do antimicrobial susceptibility testing for the organisms.
- Swabs are taken from the cervix, vagina, external genitalia (lesion) and anorectal area.
- Culture of N. gonorrhoeae is still the standard method for performing antimicrobial susceptibility testing. However, this organism is not that easy to grow in the laboratory. For this reason, culture of N. gonorrhoeae is not routinely performed as part of managing people with gonococcal infection in resource-limited settings.





- Culture for HSV is not available in the country.

6.3 Molecular / PCR Testing

- It is the recommended gold standard technology to diagnose and screen populations for *C. trachomatis*, *T. vaginalis* and *N. gonorrhoeae*, *M. genitalium*.
- Vaginal swabs are the samples of choice, but endocervical samples and urine can be used for some assays.
- Endocervical specimens need a vaginal speculum for collection
- First-catch urine is another option, but the sensitivity and specificity tend to be lower in women
- NAAT also performs well for pharyngeal and anorectal samples for *C. trachomatis* and *N. gonorrhoeae*. For anorectal samples among Men who sleep with men (MSM), chlamydia genovar testing for lymphogranuloma venereum (LGV) should be done to guide the appropriate treatment regimen for lymphogranuloma venereum
- PCR testing for STIs is not available in the country.

6.4 Rapid test

- These are used in testing for *Treponema pallidum*.
- Available tests: RPR, TPHA
- Rapid tests available in country cannot measure titres
- Rapid test for testing *C. trachomatis* and *T. Vaginalis* are not available in Eswatini.





6.5 Laboratory Tests for Sexually Transmitted Infections

Table for laboratory test (WHO 2021)				
Condition	Specimen Type	Gold Standard	Available Tests In Country	Recommendation By WHO
Vaginal Discharge Syndrome T. vaginalis N. gonorrhoeae C. albicans C. trachomatis	Endocervical swab, urine, Vaginal secretions	PCR Microscopy and culture	Microscopy and culture,	PCR
Urethral Anorectal Discharge	Urethral Anorectal swab, 1 st catch urine 1 st catch urine	Molecular detection-PCR	Microscopy (gram stain) and culture	Gram stain and microscopy
CERVICITIS	Endocervical swab, vulva-vaginal, Urethral/ Anorectal swab and 1 st catch urine*2	PCR	Microscopy and culture	Microscopy and PCR
GENITAL ULCER DISEASE SYNDROME	Genital swab- swab lesions, urine,	Molecular PCR- For herpes	Serology - RPR/TPHA* (Treponema pallidum haemagglutination assay)	Molecular tests for HSV (herpes simplex virus) If not available treat syndromically for both Herpes and Syphilis
GENITAL WARTS	Biopsy Pap smear	Molecular PCR		Molecular and serology
PEVILC INFLAMMATORY DISEASE	Urine stream, vaginal swab, lesion swab	PCR	Culture and microscopy	Molecular, microscopy and culture
INGUINAL BUBO	Urine stream, vaginal swab, lesion swab	PCR	Culture, serology, microscopy	Molecular microscopy and culture
BALANITIS	Penile swab Urine	PCR	Microscopy, Culture	

Table 7: Laboratory Tests for Sexually Transmitted Infections





Module 7: Case Studies

7.1 Case study 1

A 40-year-old married man complains of burning pain when passing urine. This has been going on for 2 days now. Yesterday morning, he noticed a yellowish discharge from the penis. He took some capsules right away. It seemed to help a little but this morning it worsens. Now it is much hurting and that he passes urine with difficulty.

Questions

- a) What is the diagnoses for this client?
- b) What is the appropriate management?

Responses

a) **Diagnoses:** Male Urethral discharge syndrome

b) **Management**

- History taking - sexual contact, no of sexual partners, sexual orientation, condom use, dysuria, HIV status.
- Physical Examination – examine genitalia, note the colour and smell of the discharge (after milking if necessary).
- Screen for other STI symptoms
- Take urine for culture
- Explain diagnoses to patient

Treatment

- Ceftriaxone 500mg IM stat,
- Azithromycin 1g PO stat.
- Metronidazole 2g stat
- Partner/s notification and treatment
- Consider Health promotion package.





7.2 Case study 2

In June 5th, a 40-year-old man with HIV visited his health care provider (HCP) because of blisters and ulcer in the peri-anal area. His provider believes it was folliculitis. Then 3 weeks later, he returns to the facility with unresolved lesions peri-anally.

Questions

- a) Discuss the diagnosis of this client and justify your answer?
- b) Discuss the management of this client.

Responses:

- a) **Diagnosis:** Genital ulcer Syndrome

It presents with blisters and ulcer, which after 3 weeks is worsening. Folliculitis was a misdiagnosis that why client did not respond to treatment.

- b) **Management:**

- **History taking (sexual history, medical history)**
- **Physical examination**

Lab test

- **RPR**
- **TPHA**

Drug therapy

- Benzathine penicillin 2.4 MU IM stat PLUS
- Azithromycin 1g po stat OR ceftriaxone 500mg stat
- Acyclovir 400Mg, orally TDS for 7/7s

Health education

- a) Condom usage and offer
- b) Partner tracing
- c) follow up after 7 days
- d) advice on ART initiation if not on ART
- e) Adherence on treatment





7.3 Case Study 3

Fatima, a 23 years old woman visits a nearby clinic for oral ulcers and also gives history of ulceration in the genital area with discharge. On enquiry she reveals that she is a sex worker.

Questions

a) Discuss the diagnosis of this client and justify your answer?

b) Discuss the management of this client?

Responses

a) Diagnosis:

- Genital Ulcer Syndrome (GUS) – presented with ulcers in both genitals and oral.
- Vaginal Discharge Syndrome (VDS) – she complains of vaginal discharge

b) History taking

- Painful urination
- Pain during sexual intercourse
- Inspect for increased secretion/discharge
- Number of sexual partner
- HIV status
- Contraceptive use
- LNMP
- Duration of the chief complaints

Physical examination

- Inspection of ulcers (both oral and genital)
- Observe colour, consistency and odour of the discharge
- Observe and palpate for lymph nodes enlargement
- Palpate for rebound tenderness





Laboratory tests

- Vaginal swab for culture
- RDT (TPHA) for syphilis
- HTS for HIV
- PT to ascertain Pregnancy

Drug therapy

- Benzathine Penicilin 2.4mu IM stat
- Ceftriaxone 500mg IM stat
- Azithromycin 1g PO stat
- Metronidazole 2g PO stat
- Acyclovir 400mg TDS X 7/7
- PEP for 28 days then PrEP
- Offer Condoms
- Offer Contraceptives of choice

NB: If allergic to benzathine penicillin give erythromycin 500mg QID PO for 14/7

Patient education

- Give partner invitation slip for treatment
- Advise on correct and consistent condom usage
- Advise on importance of adhering to treatment (Acyclovir, PEP, PrEP, and contraceptives)
- Advised on personal hygiene and practice sitz baths
- Follow – up in 7/7
- Review after 28 days (21 October 2021) and initiate PrEP is accepted.





7.4 Case Study 4

Sifiso, a 33 years old man visited a designated clinic STI for a flatulent, painless anal swelling with purulent discharge. He gives history of indulging in anal sex.

a) Diagnosis: Anorectal discharge

b) Management

- History taking
- Physical examination
- **Lab test:** Anal swab for culture of the discharge
- Offer HTS
- Offer PREP if eligible
- Educate condom use and offer
- Offer lubricants
- Partner notification and treatment
- Drug therapy – Ceftriazone 500mg IM stat, Metronidazole 2g PO stat, Azithromycin 1g PO stat.
- Link with organizations working with key populations.

7.5 Case Study 5

Lomusa, a 28 years old married woman brings her 5 years old child to a clinic for papula and pustula rash over the hands and legs with severe itching. On enquiry, she gives history of itching in the genital.

a) Diagnosis: Scabies

b) Management

1. History taking
2. Geographical setting to R/O outbreak
3. Check history of immunization
4. Family status to r/o poor nutrition and sanitization





Treatment:

1. Promethazine 5mls nocte
2. BB application from neck down and wash off after 12 hours
3. Cloxacillin 250mg QID x 7/7
4. All family members with similar rash be brought to health facility
5. Wasting of all clothes in hot water





Module 8: Sexually Transmitted Infections Data Capturing

8.1 STI Reporting Systems

Accurate and timely reporting of STIs is integral to public health efforts in assessing morbidity trends, allocating limited resources, and assisting local health authorities with partner notification and treatment. All health facilities (private and public) should record and report STI cases treated at their facilities using the approved National tools provided Health Management and Information System (HMIS).

8.2 Demonstrations by the HMIS Unit

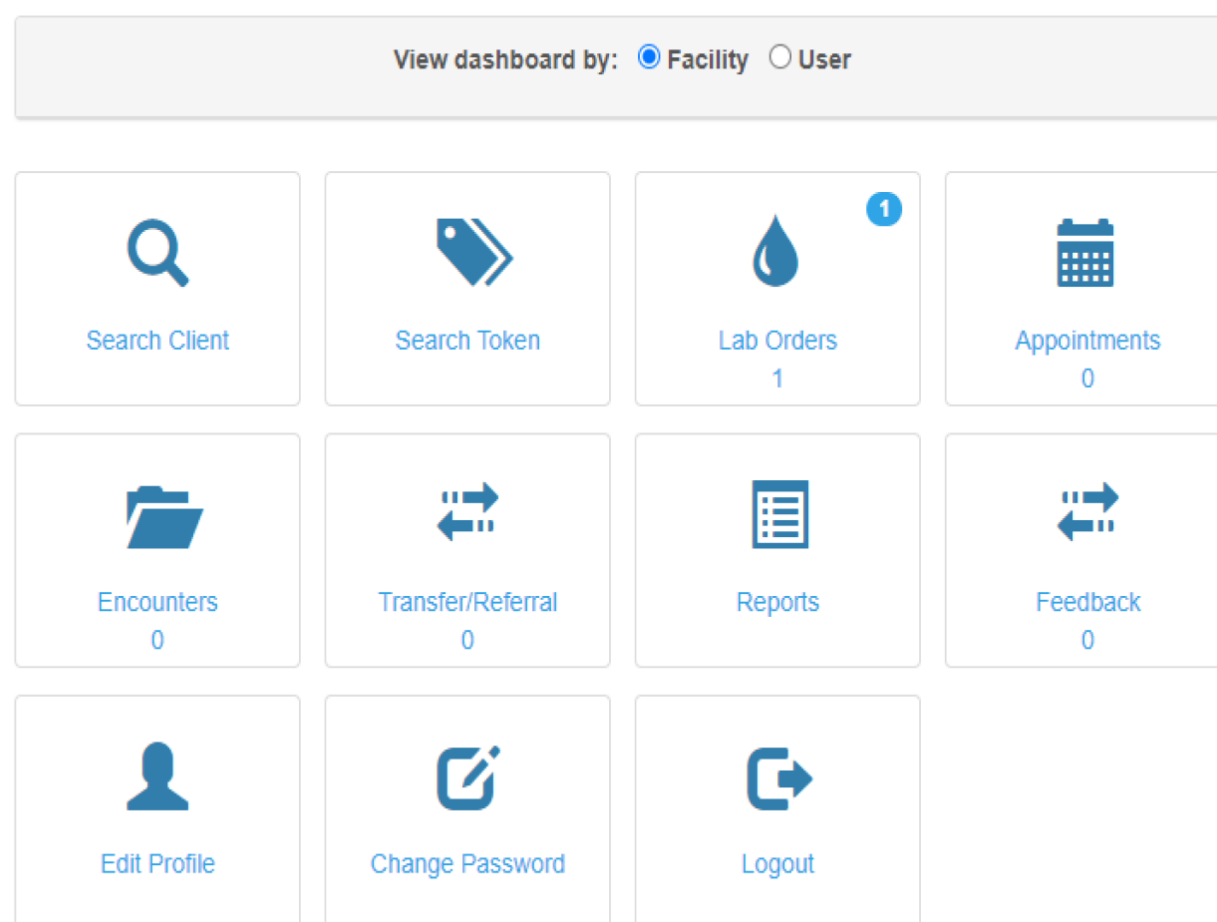


Figure 28: the CMIS dashboard





Appendices

Pre and Post test (20 mins)

1) What is an STI?

.....
 (1)

2) How can it be transmitted

.....

 (2)

3) Which places in the body can an STI be seen? (Tick Correct answers) (4)

- Head ☐
- Toes ☐
- anus ☐
- breast ☐
- Vagina ☐
- Penis ☐
- Mouth ☐

4) Name four predisposing factors to STI? (4)

1.
2.
3.
4.

5) How can you recognize an STI? (5)

.....





6) Which STI management approach do we commonly use in Eswatini? (1)

7) Which of the following STI's are not curable? Tick correct answer (3)

- Gonorrhoea ☐
- Chlamydia ☐
- HIV ☐
- Herpes simplex ☐
- HPV/Genital warts ☐
- Trichomonas vaginalis ☐
- HSV ☐
- Syphilis ☐

8. Can you have an STI and have no signs and symptoms? (Yes/No) (1)

9. Does your sexual partner/s need treatment when you have an STI? (Yes/No) please explain you answer. (2)





10. Label the following Male and female genitalia diagrams below: (18)

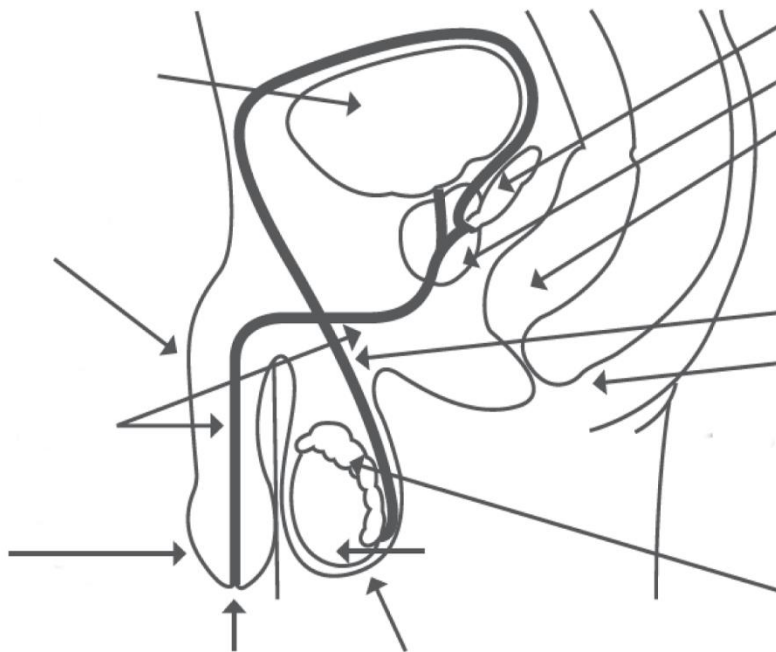


Figure 1: Male Reproductive Diagram

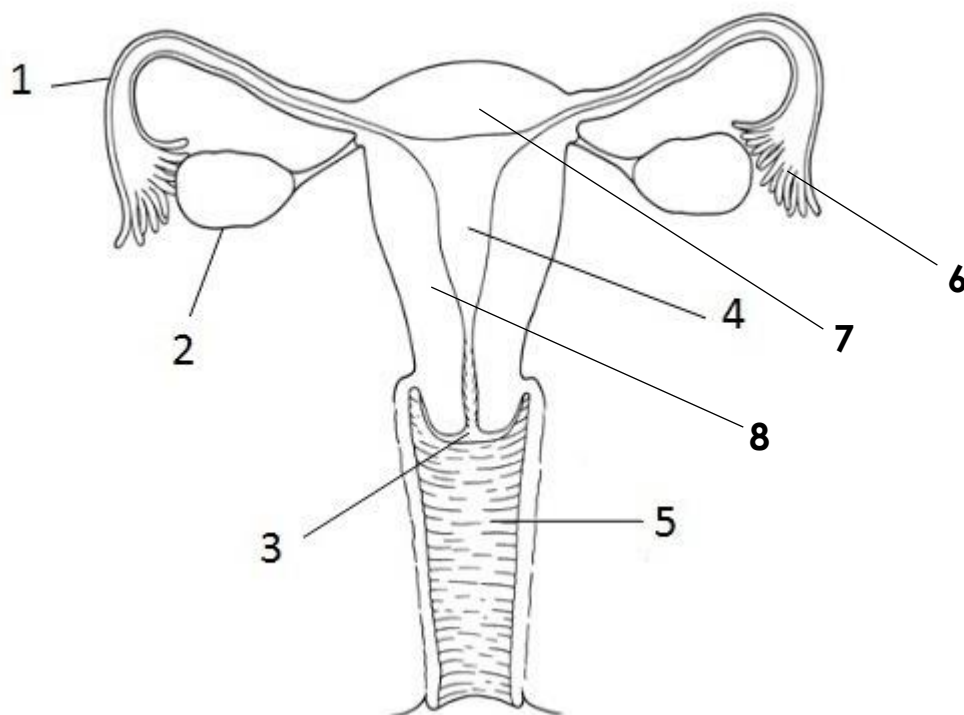


Figure 2: Female Reproductive Diagram





11. A 40-year-old married man complains of burning pain when passing urine. This has been ongoing for 2 days now.

Yesterday morning, he noticed a yellowish discharge from the penis. He took some capsules right away. It seemed to help a little but this morning it worsens. Now it is much hurting that he passed urine with difficulty.

State the Following:

- **Diagnosis (2)**

.....

.....

- **Possible management (8)**

.....

.....

.....

.....

.....

.....

.....

.....





Pre and Post Answer Sheet

1) What is an STI? (1)

Sexually Transmitted Infections (STI) are infections that are passed from one person to another through sexual contact.

2) How can it be transmitted? (2)

- Sexual intercourse and/or sexual contact
- Vertical transmission
- Sharing of needle (drug users).

3) Which places in the body can an STI be seen? (Tick Correct answers) (4)

- Anus
- Vagina
- Penis
- Mouth.

4) Name four predisposing factors to STI? (4)

- A sexual encounter without protection
- Multiple concurrent sexual encounter partners
- Inter-generational sex
- Alcohol and drug abuse
- Inconsistent of condom and lubricants use
- Violence
- SW
- Anal sex
- Poverty
- Lack of education.

5) What are the signs and Symptoms for STI's (5)





- Burning on micturition
- Discharges/Dripping
- Ulcers or sore
- Swelling of lymph node
- Growths
- Pain during sexual intercourse
- Pain, Itchiness
- Lesions on the Soles, palms trunk or generalized.

6) Which STI management approach do we commonly use in Eswatini? (1)

- Syndromic Approach

7) Which of the following STI's are not curable? Tick correct answer (3)

- Gonorrhoea
- Chlamydia
- Trichomonas vaginalis
- Candida
- Syphilis.

8). Can you have an STI and have no signs and symptoms? (Yes/No) (1)

- Yes

9). Does your sexual partner/s need treatment when you have an STI? (Yes/No) please explain you answer. (2)

- Yes, because they are contact of an infected person so the probability of being infected is high.



10). Label the following Male and female genitalia diagrams below: (18)

Male side view

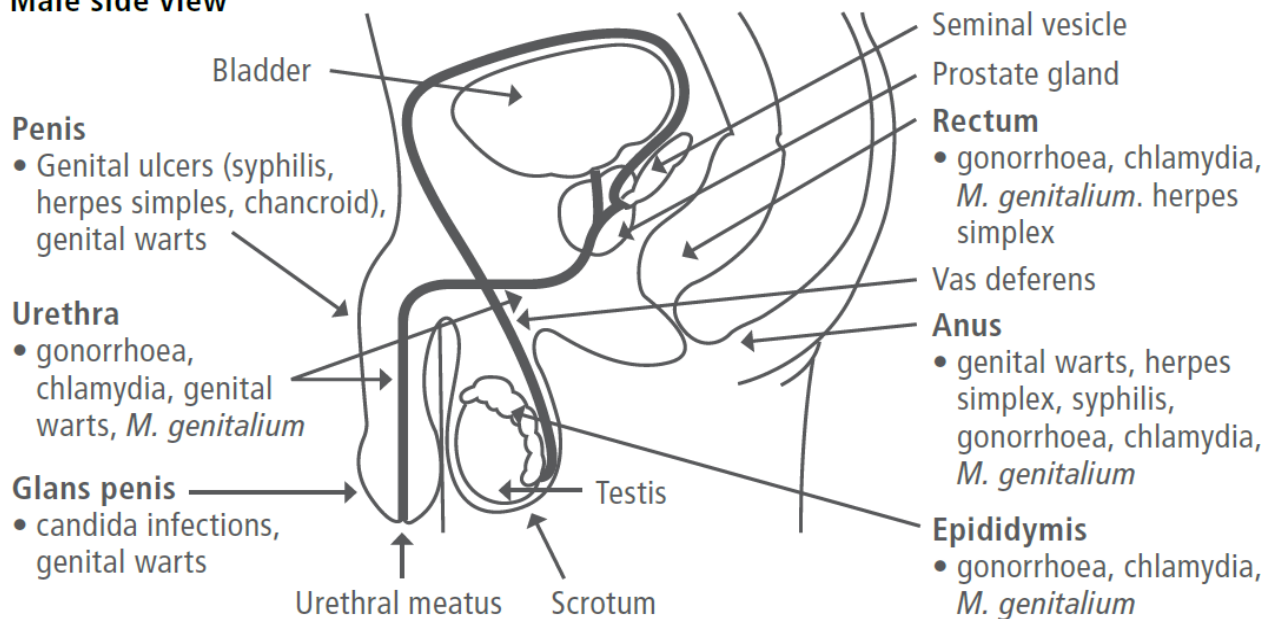


Figure 1: Male Reproductive Diagram

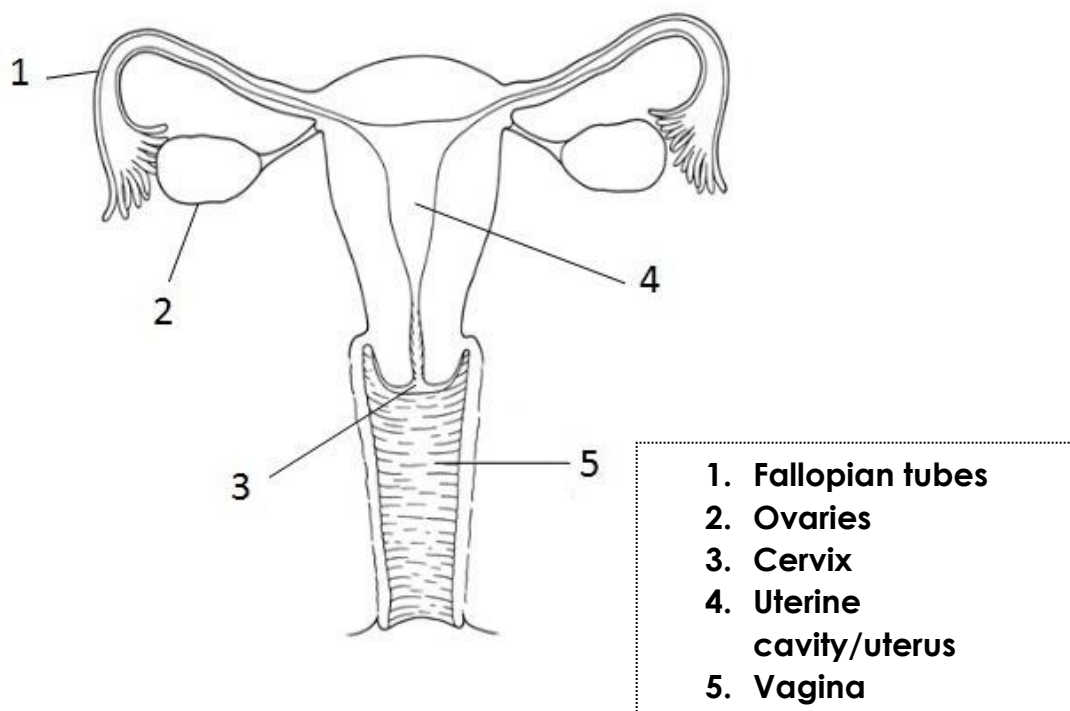


Figure 2 Female Reproductive Diagram



11). A 40-year-old married man complains of burning pain when passing urine. This has been going on for 2 days now.

Yesterday morning, he noticed a yellowish discharge from the penis. He took some capsules right away. It seemed to help a little but this morning it worsens. Now it is much hurting and that he passes urine with difficulty.

State the Following: (2)

- **Diagnosis**
 - Urethral discharge syndrome
- **Possible management (8)**
 - **Refer to urethral discharge syndrome flow chart.**
 - ✓ History taking - sexual contact, no of sexual partners, sexual orientation, condom use, dysuria, HIV status.
 - ✓ Physical Examination – examine genitalia, note the colour and smell of the discharge (after milking if necessary).
 - ✓ Screen for other STI symptoms
 - ✓ Take urine for culture
 - ✓ Explain diagnoses to patient.
 - **Treatment**
 - ✓ Ceftriaxone, 500mg I.M stat
 - Plus**
 - ✓ Azithromycin, 1g orally stat
 - Plus**
 - ✓ Metronidazole 2g orally stat
 - ✓ Partner notification and treatment
 - ✓ NB consider what is applicable in the health promotion package.





Mixed STI Syndromes

Mixed Sexually Transmitted Infections	Treatment (new episode)
UDS + SSS	Ceftriaxone, 500mg IM stat + Azithromycin, 1 g orally per week for 2 weeks + Metronidazole, 2g orally stat + Supportive therapy: to reduce pain advice bed rest, scrotal elevation with a scrotal support (T-bandage) and analgesics.
UDS + Balanitis	Ceftriaxone, 250 mg IM stat /Cefixime, 400mg orally stat + Azithromycin 1 g orally stat / Doxycycline, 100mg orally BID for 7 days + Metronidazole, 2g orally stat + Clotrimazole cream, local application BID for 7 days.
UDS + GUS	Ceftriaxone, 500mg IM stat /Cefixime, 400mg orally stat + Acyclovir, 400mg orally TDS for 7days + Benzathine Penicillin 2.4mu IM stat+ Azithromycin, 1g orally stat /Doxycycline, 100mg orally BID for 7 days + Metronidazole, 2 g orally stat.
VDS + LAP	Ceftriaxone, 250mg IM stat + Azithromycin, 1g orally per week for 2 weeks + Metronidazole, 400mg orally BID for 7-14 days. Clotrimazole pessary to be added, if vulval oedema, itching, excoriations or curd-like discharge present.
VDS + GUS (non-pregnant)	Ceftriaxone, 500mg IM stat/ Cefixime, 400mg stat + Metronidazole, 2g orally stat + Benzathine Penicillin, 2.4mu IM stat Azithromycin, 1g orally stat /Doxycycline, 100mg orally BID for 7 days + Acyclovir, 400mg orally TDS for 7 days. Clotrimazole pessary to be added, if vulval oedema, itching, excoriations or curd-like discharge present.
VDS + GUS (pregnant, breastfeed-ing)	Ceftriaxone, 500mg IM stat /Cefixime, 400mg stat / + Metronidazole, 2g orally stat + Benzathine Penicillin, 2.4mu IM stat + Azithromycin 1g orally stat / Erythromycin, 500mg orally QID for 7 days + Acyclovir, 400mg orally TDS for 7 days. Clotrimazole pessary to be added, if vulval oedema, itching, excoriations or curd-like discharge present.
LAP + GUS	Ceftriaxone, 500mg IM stat + Metronidazole, 400 mg orally BID for 7-14 days + Benzathine Penicillin, 2.4mu IM stat + Azithromycin, 1g orally per week for 2 weeks /Doxycycline, 100mg orally BID for 7-14 days + Acyclovir, 400 mg orally TDS for 7 days.
SSS + GUS	Ceftriaxone, 500 mg IM stat + Benzathine Penicillin, 2.4mu IM stat + Azithromycin, 1g orally per week for 2 weeks/Doxycycline, 100mg orally BID for 7-14 days +Acyclovir, 400mg orally TDS for 7 days *In Penicillin-allergic patients: Give Doxycycline (non-pregnant women) or Erythromycin (pregnant women) for 14 days





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