



# **Management of Sexually Transmitted/ Reproductive Tract Infections**

**National Orientation Package for HIV Service Providers**



Ministry of Medical Services  
&  
Ministry of Public Health & Sanitation

Nairobi, Kenya

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# Acknowledgements

The development of this *Management of Sexually Transmitted/ Reproductive Tract Infections, National Orientation Package for HIV Service Providers* was spearheaded by the National RH/HIV Integration Technical Committee, which is co-chaired by NASCOP and DRH with membership from USAID, CDC, WHO, JHPIEGO, FHI, FHOK, MSH, Population Council, and Health Policy Initiative.

The package was, in part, adapted from *National Guidelines for Reproductive Tract Infection Services. 1<sup>st</sup> edition. Ministry of Health, Kenya , June 2006; Management of Sexually Transmitted Infections for People Living with HIV/AIDS, Draft Participants manual. CDC, May 2008 ; Increasing Access to Contraception for Clients with HIV: A Toolkit (FHI 2008); Estimates for Cancer of the Cervix. WHO, 2005; Effective management of Medicines and Medical supplies: Curriculum and Implementation Guide. MSH, 1<sup>st</sup> Edition, April 2008.* We acknowledge the organizations that allowed the National RH/HIV Integration Technical committee access and use of these materials.

We sincerely thank bilateral partners, NGOs, technical organizations, and individuals who participated in a series of meetings and workshops to share useful ideas towards development of this document.

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Finally we would like to thank the editorial and technical team (see list of contributors) who worked tirelessly to compile, edit, and proofread the final version of this orientation package, which we are convinced is yet another very useful tool for equipping service providers in this crucial sector.

# Foreword

HIV/AIDS is one of the major challenges facing developing countries in sub-Saharan Africa. In 1999, Kenya declared HIV a national disaster and developed a conducive policy environment through the development of the Kenya National AIDS Strategic Plan (KNASP) and National Health Sector Strategic Plan II (NHSSP II; 2005-2010).

These two policies have emphasized the need for integrated service delivery. To operationalise this, NASCOP and DRH have been spearheading the integration of HIV and Reproductive Health services through the development of the RH HIV strategy and revision of relevant guidelines and training material.

This orientation package aims to orientate HIV service providers on management of Sexually Transmitted /Reproductive Tract Infections messages and services to clients accessing their services.

The aim of this document is to provide standardized material for all service providers to ensure quality HIV service delivery.

The Ministry appreciates the contribution and efforts of all parties involved in the development of this document. We appreciate the various partners who worked tirelessly to ensure that updated material is incorporated in the final package.

We hope that all patients will benefit from the services that will be holistically offered after the orientation of health care providers

Dr I.M. Mohammed  
NASCOP

Dr J. Wasiche  
DRH

# Technical and Editorial Team

Names in alphabetical order	Organization
Ambrose Wanyonyi Juma	NASCOP
Dr Boaz Otieno-Nyunya	CDC
Christine Awuor	NASCOP
Diane Ngombo	ICAP
Francis Kathambana	JHPIEGO
Dr James Odek	CDC
Jane Alaii	FHI
John W H Mwangi	DRH
Margaret Gitau	NASCOP
Dr Marsden Solomon	FHI
Mary Gathitu	DRH
Mary Ndirangu	NASCOP
Dr Mburu Mwangi	M S H
Dr Peter Arimi	JHPIEGO
Dr Shobha N Vakil	NASCOP
Tom Marwa	JHPIEGO

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# Time Table

## Day One

8.00 – 9.00 am	Section I: Reproductive Organs
9.00 – 10.30 am	Section II: Association Between HIV/AIDS and STI/RTI
10.30 – 11.00 am	Tea Break
11.00 – 1.00 pm	Section III: Syndromic Approach to STI/RTI Management
1.00 – 2.00 pm	Lunch Break
2.00 – 4.30 pm	Section III: Syndromic Approach to STI/RTI Management
4.30 – 5.00 pm	Introduction to work plans

# Time Table

## Day Two

8.00 – 8.30 am	Previous day recap
8.30 – 9.30 am	Section IV: Partner Management
9.30 – 10.30 am	Section V : Prevention and Control of STI/RTI
10.30 – 11.00 am	Tea Break
11.00 – 11.45 am	Section VI: Community Education on STI/RTI
11.45 – 1.15 pm	Section VII: Cervical Cancer
1.15 – 2.15 pm	Lunch Break
2.15 – 4.30 pm	Post-test, work plans, evaluation, and closure



# Overall Learning Objectives

**By the end of this orientation, participants will be able to:**

- Understand the rationale for provision of STI in HIV care settings
- Discuss basic information and burden of STI/RTI in adults and adolescents in relation to HIV
- Provide STI/RTI case and partner management within the comprehensive care centre.
- Provide STI/RTI services to pregnant women and newborns
- Provide basic information to the community on STI/RTI and HIV

# Overview

- Management of STI is an important component of HIV prevention
- STI may be more severely manifested in HIV-positive patients
- HIV-positive patients with STI are more likely to transmit HIV to their partners
- To prevent STI re-infection, treat the sexual partners of index cases
- Routine screening for STI at every clinic is important for patients' health and helps to prevent the spread of HIV in communities
- HCWs are uniquely suited to provide STI services, as they have regular contact with patients
- HCWs may lack specific knowledge on how best to address STI-related issues with their HIV patients as they may not be routinely managing STIs

# **Section I: Anatomy and Physiology of Reproductive Organs**

# Learning Objectives

**By the end of this module, participants should be able to:**

- Identify female and male reproductive organs and their functions
- Describe the anatomy and physiology of the female and male reproductive tracts

# Reproductive Organs

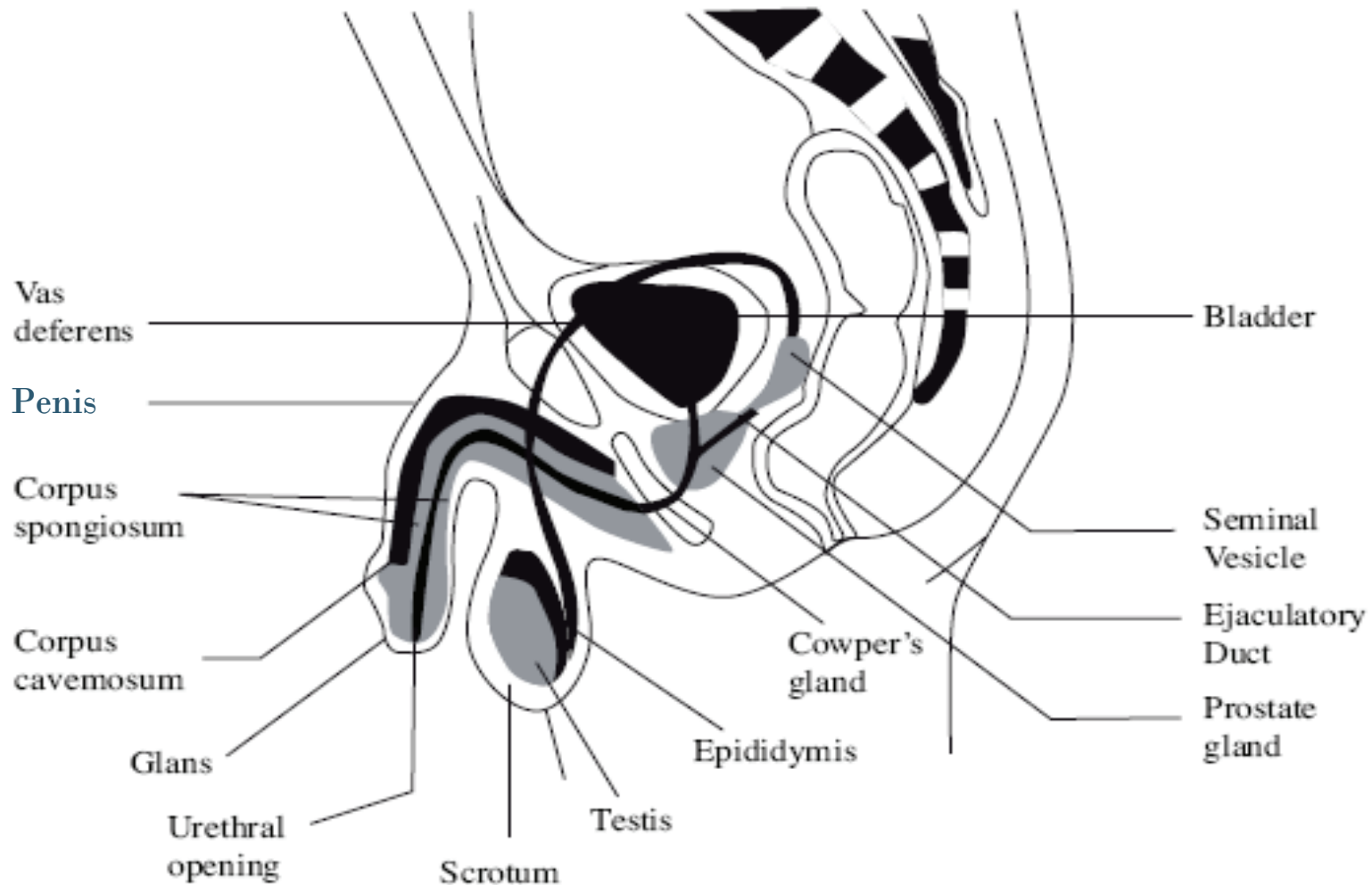
**What are they?**  
**How do they work?**



# Normal Functions of Reproductive Organs

The reproductive organs function to propagate the human species, a function that requires sexual union of the male and female organs.

# The Male Reproductive Organs



# The Male Reproductive Organs: External Anatomy (1)

- **Penis:** a cylindrical-shaped male organ made of specialised erectile spongy tissue that erects upon sexual arousal.
  - Its reproductive purpose is as a conduit for semen (and sperm).
  - The head of the penis or *glans* contains many nerve endings and is covered by a loosely fitting skin called the foreskin.
  - There is no relationship between the size of the penis and sexual functioning.
- **Scrotum:** a sac-like pouch located behind the penis in which the main sex glands (testes) reside. The scrotum helps protect and regulate the temperature of the testes.



# The Male Reproductive Organs: External Anatomy (2)

## ■ Testicles or Testes:

- The testicles are the male sex gland that lie in the scrotum and produce and store sperm.
- They are the body's main source of male hormones – testosterone.
- The testicles are outside the body because the male sperm, manufactured in the testes, need cooler than body temperature for normal growth and development.
- Loss of one does not impair the function of the other.

# The Male Reproductive Organs: Internal Anatomy (1)

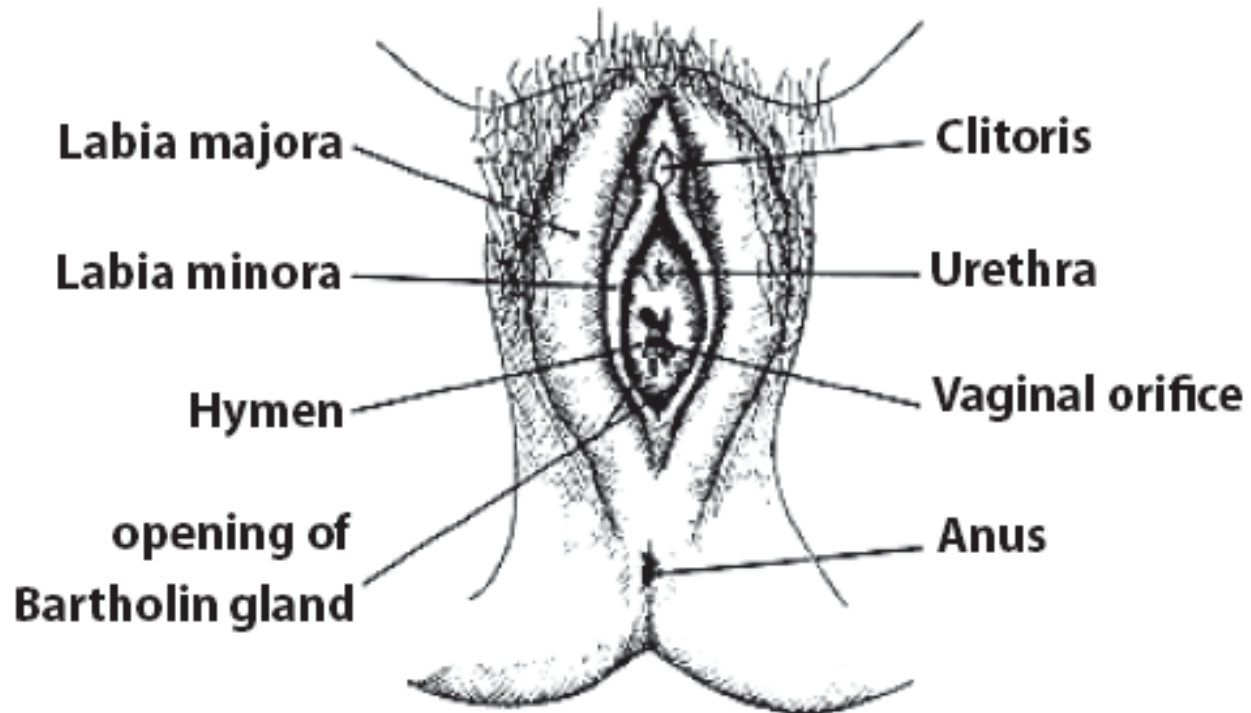
- **Sperm:** the male reproductive microscopic cell, produced by the testicles, that can fertilize the female's ovum.
- **Epididymis:** a tubular, coiled structure within the scrotum attached to the backside of each testis. It serves to store, mature, and transport sperm between the testes and the vas deferens.
- **Vas Deferens:** two long, thin tubes that lead from the epididymis to the seminal vesicles and prostate gland. The contraction of the vas deferens during ejaculation pushes the sperm out.
- **Seminal Vesicles:** two vascular glands lying behind the bladder with ducts joining the vas deferens. They secrete a sticky fluid (constituting 70% of the semen) that nourishes and enables the sperm to move.

# The Male Reproductive Organs: Internal Anatomy (2)

- **Prostate Gland:** lies below the seminal vesicles and surrounds the urethra at the base of the bladder. It stores and secretes an alkaline fluid that neutralizes acid found in the male urethra and the female reproductive tract. Without the secretions of the prostate gland, many sperm would die and fertilization of an ovum would be impossible.
- **Cowper's Gland:** two small, pea-sized glands located beneath the prostate gland on both sides of the base of the penis. They secrete a clear, sticky fluid (pre-ejaculation) that keeps the urethra moist. It is alkaline to help neutralize the acidity of the urethra.
- **Urethra:** a pathway dual-purpose tube running the length of the penis from the bladder to the outside that transports both semen and urine.

# The Female Reproductive Organs: External Anatomy

## External Female Genitalia



# The Female Reproductive Organs: External Anatomy (1)

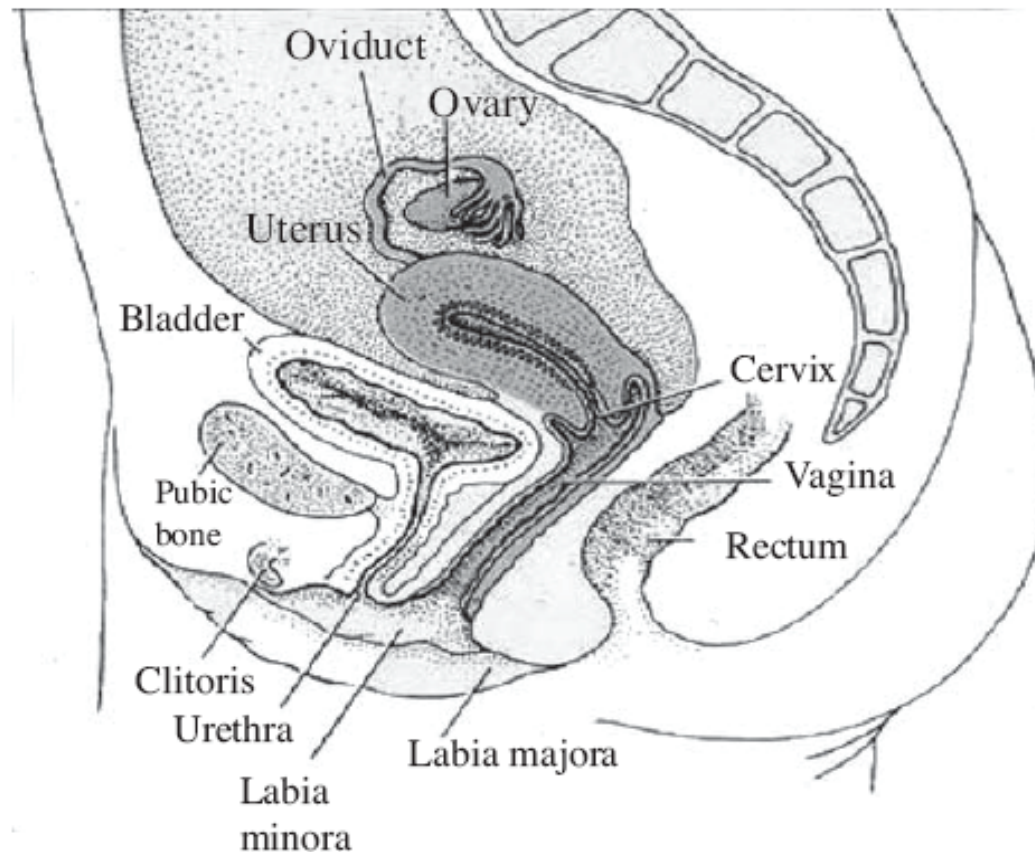
- **Vulva:** the general term to describe all external female sex organs.
- **Pudendum or Pubes:** the area in the body where the sex organs are located.
- **Mons Pubis:** a mound of fatty tissue which covers the pubic bone. At puberty this area is covered with coarse pubic hair. The mons contains many touch-sensitive receptors.
- **Labia Majora (large lips):**
  - Two folds of skin running from the mons pubis to below the vaginal opening.
  - They meet and fold together, forming protection for the genitals.
  - They are covered with pubic hair and contain many touch-sensitive receptors.

# The Female Reproductive Organs: External Anatomy (2)

- **Labia Minora:**
  - Two smaller folds of tissue which lie just within the labia majora.
  - The labia minora are without hair and are rich in touch receptors and blood vessels.
- **Clitoris:**
  - The center of sexual sensation and stimulation in females.
  - A small knob composed of erectile tissues and many sensitive nerve endings.
  - Found above the opening of the vagina where the folds of the labia minora meet at the front.
- **Bartholini's gland:** located near the vaginal introitus, it produces lubricating fluids
- **Urethra:** below the clitoris, the opening to the bladder.

# The Female Reproductive Organs: Internal Anatomy

## Internal Female Reproductive Anatomy



# The Female Reproductive Organs: Internal Anatomy (1)

- **Vagina:** the lower part of the female reproductive tract extending from the labia to the cervix. It is a moist elastic-like passage. It has three main functions:
  - channel for the menstrual flow
  - receptacle for the penis during intercourse
  - birth canal
- **Cervix:** the neck or opening of the uterus. It is normally plugged by mucus. It stays tightly closed during pregnancy, but thins and opens for the delivery of the baby.
- **Uterus:** a hollow, muscular organ shaped like an upside-down pear. It protects and nourishes the foetus during pregnancy and also contracts to expel the baby during delivery.



# The Female Reproductive Organs: Internal Anatomy (2)

- **Oviducts (fallopian tubes):** two funnel-shaped tubes on either side of the uterus, near the ovaries.
  - They are the passageway through which the ova travel from the ovaries to the uterus and sperm toward the egg cell.
  - They are the location for fertilization.
- **Ovaries:** two solid egg-shaped structures attached to the uterus by ligaments.
  - They are the primary sex gland of a woman.
  - They have two main functions:
    - Production of ova during the reproductive phase.
    - Production of female sex hormones OESTROGEN and PROGESTERONE.

## OESTROGEN and PROGESTERONE

- Oestrogen is responsible for the secondary sex characteristics and the sex drive in females. It spurs the onset of puberty and is responsible for OVULATION.
- Progesterone builds up the lining of the uterus, called the endometrium, in preparation for the fertilized ovum.

# Section II

## Association Between HIV/AIDS and STI/RTI



## Section II Goal

The goal of the section is to enable participants to acquire a better understanding of the association between HIV/AIDS and STI/RTI.

# Association Between HIV/AIDS and STI/RTI

## Learning Objectives

**By the end of the unit, participants will be able to:**

- Discuss the relationship between HIV infection and other STI/RTI.
- Discuss the major considerations in STI/RTI care and support of people with HIV/AIDS.

# Basic Facts about HIV / AIDS

- Human Immunodeficiency Virus (HIV) is a retrovirus associated with Acquired Immunodeficiency Syndrome (AIDS).
- The three main modes of HIV transmission are:
  - Sexual intercourse - i.e., from an infected person to his or her sexual partners
  - Exposure to infected blood, blood products, or transplanted organs or tissues
  - From an infected mother to her foetus during pregnancy, delivery, or through breastfeeding

# Basic Facts about HIV/AIDS

**After a person acquires HIV infection, the infection goes through the following distinct stages:**

- Window period, lasting an average of 6 weeks. The infected individual is antibody negative on serological tests for HIV.
- Asymptomatic phase (HIV positive), lasting from several months to several years (median 7 years).
- Symptomatic phase, lasting from several months to a few years.

# Basic Facts about HIV/AIDS

- HIV is found in all body fluids in different concentrations:
  - Blood
  - Semen
  - Vaginal and cervical secretions
  - Breast milk
  - Sweat
  - Tears, saliva
- HIV transmission is mainly through blood, semen, vaginal and cervical secretions, and breast milk.
- The role of sweat, tears, and saliva in transmission is negligible.

# Basic Facts about HIV/AIDS

## The rate of infectivity of HIV:

- Blood transfusion, 90%
- Perinatal transmission, 20-40%
- Sexual contact, 0.1-1%
- Needle stick injury, < 0.5%



# Association Between HIV/AIDS and STI (1)

## Epidemiological synergy between STI/RTI and HIV

- STI/RTI primarily disrupt the integrity of the skin/mucosal barrier, enabling HIV easy access to the body.
- The presence of genital ulcers is known to increase the risk of HIV transmission by 10 to 100 times.
- STI/RTI that primarily cause inflammation, such as gonorrhea, trichomoniasis, and chlamydia, weaken the skin barrier to HIV.
- Increased viral shedding has been reported in genital fluids of patients with STI/RTI.
- STI/RTI treatment has been demonstrated to significantly reduce HIV viral shedding.

# Association Between HIV/AIDS and STI/RTI (2)

## HIV infection affects STI/RTI through:

- HIV alters the response of STI/RTI pathogens to antibiotics. This has been reported for chancroid and syphilis.
- HIV alters the clinical appearance and natural history of STI/RTI as in genital herpes and syphilis.
- HIV-infected individuals have increased susceptibility to STI/RTI.

## Association Between HIV/AIDS and STI/RTI (3)

- STI/RTI serve as a marker of increased number of sexual partners and high risk partner selection, and are associated with increased heterosexual HIV transmission.
- Due to this epidemiological synergy, STI/RTI control is considered a key strategy in the primary prevention of HIV transmission.

# Other Cofactors for HIV Transmission (1)

- Sex with insufficient lubrication leads to micro-ulcers which facilitate HIV transmission.
- Cervical ectopy: results in weaker mucosal lining within the end cervical canal and extends outside the cervical opening towards the vaginal walls.
  - Risky sexual behaviour predisposes persons with cervical ectopy to STI infections, mainly gonorrhoea and chlamydia, which put one at a higher risk of HIV.
- Cervical ectopy can happen in females around puberty and in those taking combined contraceptive pills.

## Other Co-factors for HIV Transmission (2)

- Uncircumcised males have an independent increased risk of HIV acquisition.
- Sex during menstruation or shortly after delivery may expose raw bleeding areas to the risk of HIV transmission.

# Section III

## Syndromic Approach to STI/RTI Management

Components of Syndromic STI/RTI Case Management

STI/RTI Syndromes

Normal Vs. Abnormal

Pregnancy and STIs



# Goals and Objectives

## Section Goal

Participants will be able to appreciate the justification for the syndromic approach to STI/RTI management, and identify the most common STI/RTI syndromes, their aetiologies, and their management.

# Learning Objectives

**By the end of the section, participants should be able to:**

- Explain the rationale for the syndromic approach to STI/RTI management.
- Explain the advantages and limitations of the syndromic approach to STI/RTI management.
- Describe the components of STI/RTI case management.
- Describe the STI/RTI syndromes.
- Describe treatment approaches for the STI/RTI syndromes using the national algorithms.



# Rationale for Syndromic Approach (1)

- STI/RTI syndromes refer to a group of consistent symptoms and/or easily recognizable signs caused by two or more STI/RTI agents.
- Diagnosis is based on identification of a group of consistent symptoms and easily recognized signs (syndromes).
- The provision of treatment deals with the majority or most serious organisms responsible for producing the syndrome, rather than for specific STI/RTI.
- Syndromic case management is ideal in settings where facilities for laboratory diagnosis to support aetiological diagnosis are lacking.

# Rationale for Syndromic Approach (2)

Traditionally, health care providers rely on two approaches to diagnose STI/RTI:

## Aetiological Diagnosis

Identifying the organism causing the symptoms through laboratory tests. This is not only expensive and manpower intensive, but also time consuming.

## Clinical Diagnosis

Identifying the STI/RTI based on clinical experience. However, even experienced STI/RTI service providers often make wrong diagnoses.

# Challenges with Aetiological Approach in Management of STIs

- In most health care settings in Kenya, health care providers lack time and/or equipment to diagnose STI/RTI through laboratory tests.
- The reliability of test results in most settings is affected by the sensitivity and specificity of the available STI/RTI tests and competence of the laboratory staff.
- Use of laboratories is time consuming for patients and clinicians. It is common for many patients not to return for test results, so the opportunity to treat them is lost.

# Challenges with Clinical Approach in Management of STIs

- Many health workers often diagnose STI/RTI based on clinical judgment alone, which in most cases turns out to be wrong.
- Mixed infections with STI/RTI agents that produce similar signs and symptoms are common and may be missed with clinical approach.

# Advantages of the Syndromic Approach

- Improved management of STIs
- Easy for primary health care workers to learn and apply
- Enables treatment of symptomatic patients in one visit without being referred for laboratory tests, which may not be available the same day, necessitating a return visit
- Enables treatment for STI/RTI to be provided even in peripheral health units
- Referrals are limited to complicated cases
- Economical, timely
- Allows for bulk drug purchasing

# Limitations of Syndromic Management Approach

- Does not adequately address needs of patients with symptomatic STI/RTI, especially women.
- This may lead to wastage of drugs when treating STI/RTI that patients do not actually have.
- Requires regular update and microbial surveillance.
- Some drugs in the syndromic approach may no longer be effective.

# Syndromic Treatment Algorithms (1)

- Syndromic treatment algorithms are flow charts for diagnosis and treatment formalising the syndromic approach for STI/RTI.
- They provide health workers with step-by-step instructions to diagnose and treat STI/RTI with recommended drugs.

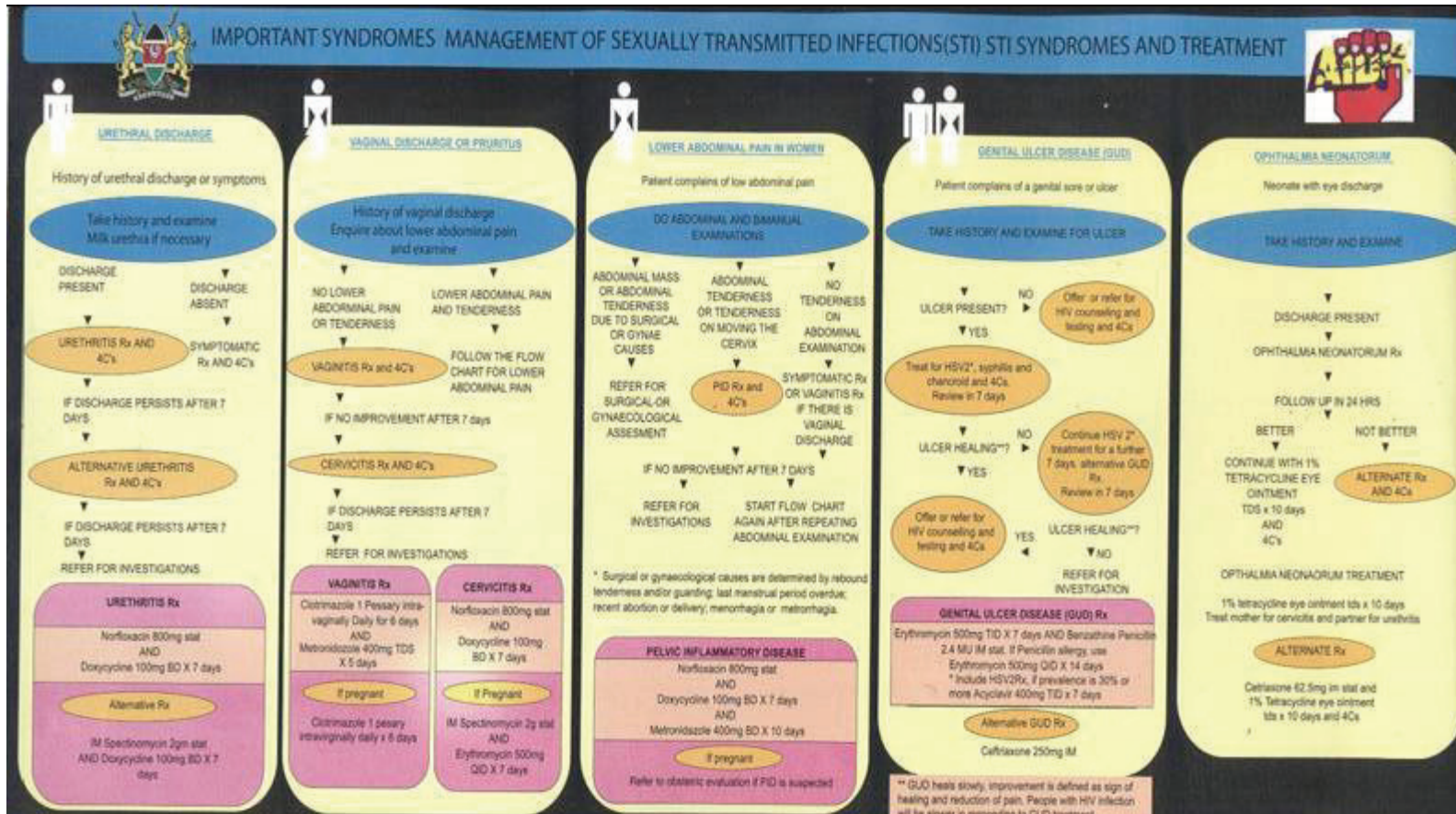
# Syndromic Treatment Algorithms (2)

## The advantages of STI/RTI treatment algorithms are:

- They are problem oriented and improve clinical diagnosis
- Can be used as a training tool for primary care providers
- Enable standardization of treatment
- Enable disease surveillance
- Enable evaluation of training
- Enable treatment in one visit



# STI Algorithms



## FIGHT AIDS! REMEMBER THE 4C'S OF GOOD STI MANAGEMENT

### Counseling

- \* Empathise with your patient (put yourself in your patient's place)
- \* Dialogue with your patient
- \* Discuss the other 3C's
- \* Offer CT Services

### Compliance

- Your patient should
- \* Avoid self-medication
- \* Take the full course of medication and not share or keep it
- \* Follow your other instructions

### Condoms

- Your patient should
- \* Proper condom use is the only other alternative to abstinence
- \* Give condoms to your patient
- \* Explain and demonstrate the proper use of the condoms

### Contact treatment

- Your Patient should
- \* Tell all his/her sexual partners to seek medication

# **Components of Syndromic STI/RTI Case Management**

# Goals of STI/RTI Case Management

- To make a correct diagnosis based on appropriate clinical assessment
- To provide proper antimicrobial therapy in order to obtain cure, decrease infectivity, and avoid complications
- To reduce and prevent future risk-taking behaviour
- To treat sexual partners in order to break the transmission chain
- Follow up

# Case Management of STI/RTI Patients

- Case management of STI/RTI refers to the care of a person with an STI/RTI syndrome.
- The objective of effective STI/RTI case management is to cure the patient, break the chain of transmission, prevent re-infection, and avoid complications.
- STI/RTI case management includes
  - proper clinical assessment
  - correct diagnosis
  - prescription of appropriate medication
  - education about risk reduction
  - treatment compliance
  - condom use
  - partner management

# Components of STI/RTI Case Management

- Clinical assessment based on appropriate history taking
- Physical examination
- Syndromic classification\*\*
- Specific syndromic treatment\*\*
- Education/counselling

\*\*These are addressed in detail separately.

# History Taking (1)

## *a) Questioning technique*

- Begin by asking open-ended questions which allow the patient to express his/her problems.
- Close-ended questions should be used at the end to clarify issues as necessary.

# History Taking (2)

## *b) Format for history taking*

The following order is recommended:

- Name, age, address, sex, marital status, occupation, date of consultation
- Presenting complaint, nature of symptoms and their duration
- History of previous medication for the complaint and duration of treatment
- Previous history of STI/RTI
- Past medical history and treatment for allergies

# History Taking (3)

## *b) Format for history taking (cont.)*

- Recent sexual partners:
  - Last sexual intercourse, with who, when, and condom use
  - Previous sexual intercourse with another person before the one above, with who, when, and condom use
  - Number of sexual partners in the last one and three months
  - Whether any of the partners have an STI/RTI complaint



# History Taking (4)

## **In addition, for females:**

- Last normal menstruation period and pregnancies
- Regularity of flow and the amount of blood
- Number of children with their ages from the youngest to oldest
- Number of abortions with ages of gestation in order of occurrence

# Physical Examination (1)

- Before commencing the physical examination, the patient should be informed and permission sought.
- The following should be included in the clinical examination.

## ***General Physical Examination***

- Look for important findings in: hair and skin, the palms and soles, preauricular and epitrochlear lymph nodes, eyes, mouth, abdomen, and inguinal lymph nodes.

# Physical Examination (2)

## Genital Examination: Males

Pubic hair, scrotum, inguinal lymph nodes, testes, epididymis, shaft of penis, prepuce (circumcised/uncircumcised), glans/coronal sulcus, urethral meatus, genital discharge after milking the penis, and lastly, perineum

# Physical Examination (3)

## Genital Examination: Females

Pubic hair, inguinal lymph nodes, labia, vulva, urethral opening, bimanual palpation, cervical excitation, tenderness, masses, discharge on examining finger (colour, smell, consistency), and perineum

Speculum examination: Check for vaginal polyps, discharge, cervical polyps, tumours, IUCD threads, cervicitis, etc.

# Education/Counselling

**End each treatment session with education and counselling on:**

- Treatment compliance
- Nature of infection
- Mode of transmission of infection
- Risk reduction
- Proper use of condoms and other safer sex methods
- Early STI/RTI care seeking behaviour
- Partner notification and treatment
- **Four Cs**

# What are the 4 Cs ?

- **C**ounselling: Empathise with your patient.
- **C**ompliance: Your patient should avoid self-medication, take full course of medication and not share or keep it, and follow instructions as advised.
- **C**ontact tracing: Encourage disclosure and tell all his/her sexual partners to seek medication.
- **C**ondoms

# STI/RTI Syndromes



# Common STI/RTI Syndromes

- Urethral discharge
- Genital ulcer disease (GUD)
- Lower abdominal pain
- Abnormal vaginal discharge
- Ophthalmia neonatorum



# Categories of STIs

- **Bacterial:** Syphilis, Gonorrhea
- **Fungal:** Candidiasis
- **Protozoa:** Chlamydia, Trichomoniasis
- **Viral:** Hepatitis, Genital Herpes Simplex, HIV, Genital Warts

# Interactive session



**Urethral Discharge**

# Urethral Discharge Syndrome

## Aetiology

- This syndrome is commonly caused by *Neisseria gonorrhoeae* and *Chlamydia trachomatis* in over 98% of cases.
- Other infectious agents include *Trichomonas vaginalis*, *Ureaplasma urealyticum*, and *Mycoplasma spp.*
- Mixed infections, especially of *Neisseria gonorrhoeae* and *Chlamydia trachomatis*, occur.

# Urethral Discharge Syndrome

- Urethral discharge is one of the most common STI/RTI syndromes among men, and is associated with serious complications.
- It is characterized by purulent urethral discharge with or without dysuria.
- The amount of discharge varies depending on the causative pathogens as well as prior antibiotic treatment.

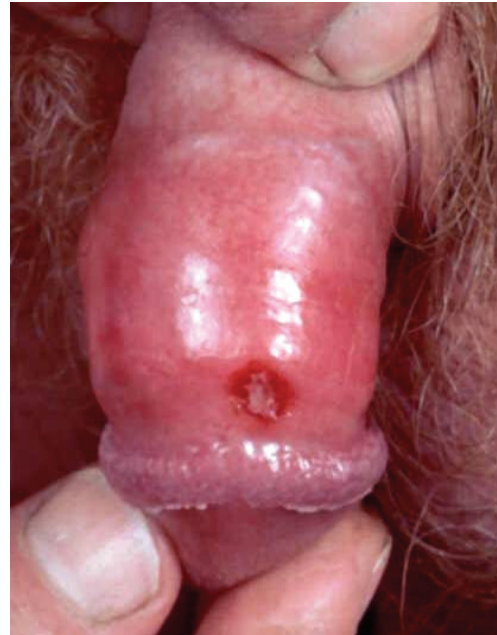
# Urethral Discharge Syndrome

- If the discharge is not readily apparent, it may be necessary to milk the penis and massage it forwards before the discharge becomes apparent.
- In uncircumcised patients, examination with the foreskin retracted will ascertain whether the discharge is from the urethra or from beneath the prepuce.

# Management of Urethral Discharge

- Patients should be managed according to the National STI/RTI syndromic chart – Urethral Discharge.
- Go through the algorithm for the antimicrobials.
- Watch out for new updates.
- Emphasize 4Cs as per the chart.
- Offer or refer for HIV testing services.

# Interactive session



## Genital Ulcer Disease

# Genital Ulcer Disease

- Genital ulcer disease is one of the most common syndromes that affect men and women.
- The aetiology of the syndrome varies in different geographical areas and can change over time.
- Genital ulcers have an epidemiologically synergistic relationship with HIV.
- HIV alters the natural history of syphilis and chancroid, where more aggressive lesions may manifest.
- HIV transmission, on the other hand, is enhanced in presence of ulcerative STI/RTI.



# Genital Ulcer Disease

- Uncircumcised male patients with a genital discharge should have the prepuce retracted and examined for ulcer lesions.
- Female patients should have the labia separated and inspected. Speculum examination may be necessary.

# Genital Ulcer Disease

- In men, genital ulcer disease occurring under the prepuce may present as a discharge.
- Similarly, GUD in women may also present as a discharge, underlying the importance of clinical examination.
- Genital herpes manifest with more persistent lesions.
- Single or multiple ulcers can present.

# Chancroid (1)

- Chancroid is caused by a bacterium known as *Haemophilus Ducreyi*.
- Both males and females with chancroid develop painful, dirty-grey, genital ulcers.
- In males, ulcers are commonly found on the edge of the glans penis, but can appear anywhere on the external genitalia.
- In females, ulcers may be found anywhere on the external genitalia including around the vulva, clitoris, and anus, or inside the vagina and on the cervix.
- A chancroid ulcer is painful while a syphilitic ulcer is not.

## Chancroid (2)

- Clients often develop enlarged, red, hot lymph nodes in the groin, called *buboes*. They should be aspirated with a wide-bore needle every two days if necessary.
- When a bubo is ready for aspiration, the skin overlying it is shiny and the area underneath it is soft.
- Take a sterile 5 ml. syringe and a wide-bore needle. Clean the skin over the bubo. Pierce the shiny skin entering 2 mm. and suck as much pus as possible into the syringe.
- Do NOT incise as that will convert it into a draining abscess.

# Syphilis

- The disease is caused by a bacterium known as ***Treponema Pallidum***.
- It can affect all organs of the body. It occurs in two forms: early (primary) and late syphilis.
- In early syphilis a client is infectious to his/her sexual partners. During late syphilis, the client is not infectious to sexual partners.
- Between early and late syphilis, the disease enters a latent phase which may continue for many years, when there are no symptoms or signs.

# Primary Syphilis

- Three weeks after contact with an infected partner, the ulcer develops at the site of infection. This is the *primary chancre*.
- It may be found anywhere on the penis in males. In females it is found on the external genitalia, the vaginal opening, inside the vagina, or on the cervix.
- In both men and women, it is a painless, single, firm ulcer with a punched-out appearance.
- It may heal without treatment but the client can still infect others and may develop serious cardiac and CNS symptoms later. The client needs to be treated.

# Secondary Syphilis

- Between two and four months following initial infection, clients may develop secondary syphilis.
- The first sign is a non-itchy rash all over the body which may become papular (round, solid raised lesion), pustular (infected pimples), or may develop into flat warts (condylomata lata).
- There may be whitish lines on the tongue and mucous membrane of the mouth called snail track ulcers. They may be generalised lymph node enlargement.

# Latent & Late Syphilis

## Latent syphilis

- During this stage, there are no signs or symptoms but a blood test is positive and the client should be treated.

## Late syphilis

- Untreated syphilis may progress. After two to 15 years, the heart and brain may be affected. At this time the disease cannot be passed to other people.



# Genital Herpes (1)

- Infection is caused by the herpes simplex virus.
- In males, the client develops itchiness at the site of infection. This may be on the foreskin, the shaft of the penis, or the glans penis. A small area of redness appears which develops into small blisters. This may break down to reveal painful, shallow ulcers.
- In the first attack, lesions are more extensive and cause severe pain. The attacks heal after about two to three weeks.

# Genital Herpes (2)

- In females, the lesions are on the cervix, the labia, the vagina, or around the anus. During the first attack, there may be quite extensive inflammation of the cervix, the vulva, and the vagina.
- Recurrence of lesions occurs in about 50% of clients; lesions are usually less extensive and heal within five to seven days.
- Recurrences in both males and females may follow sexual contact and stress. In females they may also follow the menstrual period.

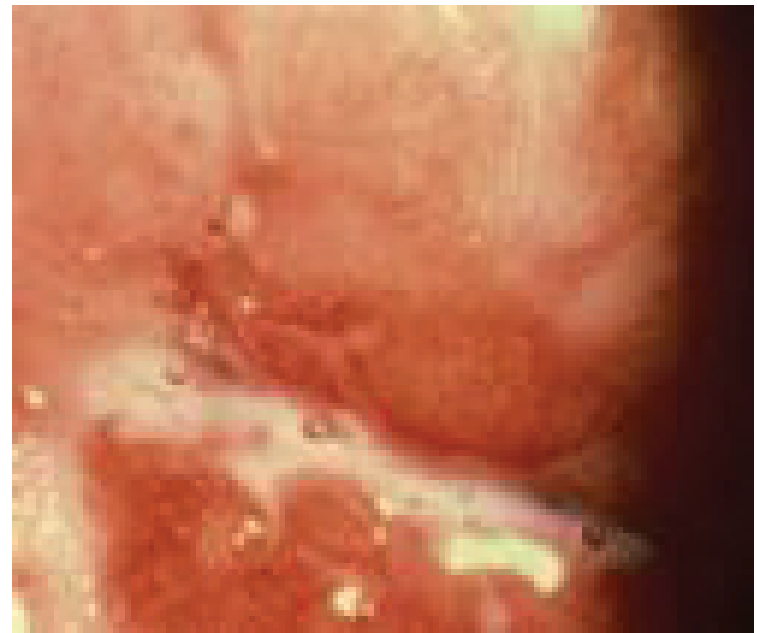
# Genital Herpes (3)

- There is no effective cure. Clients should be reassured, but warned that a recurrence of ulceration is possible and that they should not have sexual intercourse while lesions are present.
- Herpes simplex virus can be passed on when there are ulcers.
- Tell the client to keep the lesions clean and dry and wash with soap and water.

# Management of Genital Ulcer Disease

- Treatment should be given as soon as possible owing to the increased risk of HIV transmission.
- The treatment for this syndrome is similar for both males and females (see syndromic chart).
- Emphasize 4Cs as per the syndromic chart.
- Offer or refer for HIV testing services.

# Interactive session



**Abnormal Vaginal Discharge**

# Abnormal Vaginal Discharge

**Normal Vs. Abnormal**



# Normal Vaginal Discharge

## Physiological discharge:

- Clear or white
- Viscous in consistency
- Located in the posterior fornix of the vagina

## Microscopy of normal vaginal secretions reveals:

- Superficial epithelial cells
- Lactobacilli with long rods
- Few white blood cells

**Physiologic vaginal discharge requires no treatment.**

# Abnormal Vaginal Discharge

- Abnormal vaginal discharge is one of the most common STI/RTI syndromes among women, but also one of the most complicated to manage.
- All women have a physiological vaginal discharge which may increase during certain situations.
- Normally, women will only complain if they perceive the discharge to be abnormal.



# Aetiology

- The symptom of abnormal vaginal discharge is highly indicative of vaginitis and poorly predictive of cervicitis (which is in most cases asymptomatic).
- Bacterial vaginosis, vulvovaginal candidiasis, and trichomoniasis are the most common causes of vaginitis.
- Gonococcal and chlamydial infections cause cervicitis. Distinction between the two on clinical grounds is usually difficult.

# Characteristics of Vaginal Discharge by Causative Agent

- **Neisseria Gonorrhoea** – Greenish-yellow discharge
- **Chlamydia trachomatis** – Scanty muco-purulent or purulent discharge
- **Trichomonas vaginalis** – Frothy, profuse, greenish-yellow foul-smelling discharge
- **Candida albicans** – White, curd-like discharge
- **Gardnerella vaginalis** – Profuse foul-smelling and homogenous greyish-white discharge

# Management of Vaginal Discharge (1)

- Speculum examination and referral for specialist management may be necessary.
- Persistent abnormal vaginal discharge should be evaluated to exclude cervical cancer.

# Management of Vaginal Discharge (2)

- Women with abnormal vaginal discharge should be managed according to the vaginal discharge flow chart (see the syndromic chart).
- Patients should be informed about the endogenous and recurrent nature of vaginitis to avoid partner discord.
- Emphasize 4Cs as per the syndromic chart.
- Offer or refer for HIV testing services.

# Lower Abdominal Pain Syndrome

**Pain in the Lower Abdomen?  
Back or Front?**



# Lower Abdominal Pain Syndrome

- This is one of the most common and most serious STI/RTI syndromes among women, with very serious reproductive health and socioeconomic consequences.
- It can present acutely or chronically and is often very difficult to diagnose given the many differential diagnoses.

# Aetiology

- This syndrome is suggestive of pelvic inflammatory disease (PID), i.e. salpingitis and/or endometritis.
- It may be caused by gonococcal, chlamydial, or anaerobic infection.

# Lower Abdominal Pain Syndrome (1)

- Patients will often complain of abdominal pain, abnormal vaginal bleeding, dyspareunia, fever, and sometimes vomiting.
- Patients should be carefully evaluated for abdominal tenderness, cervical motion and adnexial tenderness, enlargement of uterine tubes, and tender pelvic masses.
- The temperature may be elevated.



# Lower Abdominal Pain Syndrome (2)

- A thorough history and examination to exclude other surgical and/or gynaecological emergencies must be done.
- Female patients with other STI/RTI should be carefully evaluated to exclude this condition (PID) since some may not complain of abdominal pain.
- Clinician should perform bimanual vaginal examination.
- If necessary, referral should be done for specialist attention.

# Complications

- Can involve ovaries, fallopian tubes
- Tubal occlusion with infertility
- Ectopic pregnancies – can be life threatening
- Chronic infection
- Chronic pain
- Repeated attacks of PID

# Management of Lower Abdominal Pain (1)

- Patients with other surgical/gynaecological emergencies should be referred immediately for inpatient admission and management.
- If PID is suspected in pregnancy, refer for obstetric evaluation.

# Management of Lower Abdominal Pain (2)

- Patient should be managed according to the syndromic flow chart.
- Outpatient treatment should be prolonged due to the chronicity of the condition.
- Patient with PID and having an Intrauterine Contraceptive Device (IUCD) in situ should be initiated on treatment; if infection resolves then continue with the IUCD contraception method.
- Emphasize 4Cs as per the syndromic chart.
- Offer or refer for HIV testing services.

# Other STI Syndromes

- Inguinal Buboes
- Painful scrotal swelling
- Balanitis
- Bartholin's abscess
- Genital warts
- Congenital syndromes

# Interactive session



**Inguinal Bubo**

# 1.Inguinal Buboes (1)

- Infection of the lower limb or gluteal region can also cause swellings in the inguinal region and should be excluded.
- Fluctuant swellings should be aspirated daily with a large-bore needle passing through normal skin, but they should never be incised as this can result in sinus.

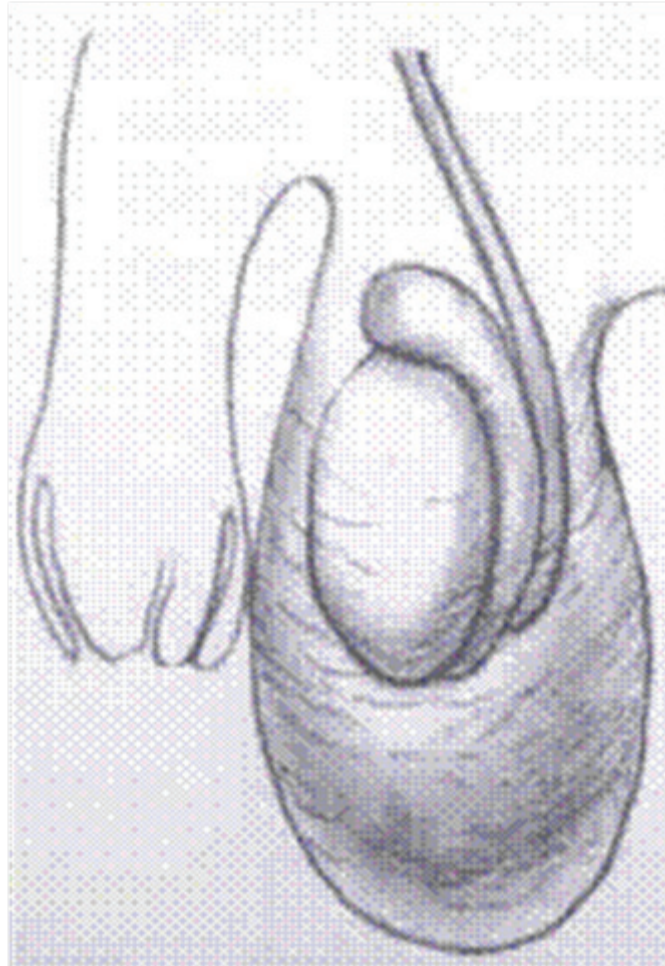
## Inguinal Buboes (2)

- These are localized swellings or enlarged lymph glands in the groin and femoral area, hence the local term “*grenade*” used to describe this syndrome.
- They may be painful and flaccuant. They are usually associated with Lymphogranuloma venereum (LGV) and chancroid. In the case of chancroid, an associated ulcer may be visible.



# Interactive session

**Scrotal swelling**



## 2.Painful Scrotal Swelling (1)

- Sexually transmitted epididymitis or epididymo-orchitis is inflammation of the epididymis and/or testes, usually unilaterally.
- It is of acute onset and painful and may be accompanied by urethral discharge.
- This condition, if not treated early, can cause secondary male infertility.

## Painful Scrotal Swelling (2)

- It is important to exclude other causes of scrotal swelling such as trauma, testicular torsion, and tumours, which should be referred for surgical attention.
- Other causes of epididymo-orchitis, especially in older men, include *E.coli*, *Klebsiella spp*, *Pseudomonas aeruginosa*, *Brucella spp*, and Mycobacteria tuberculosis.
- In children, mumps epididymo-orchitis may accompany parotid enlargement.

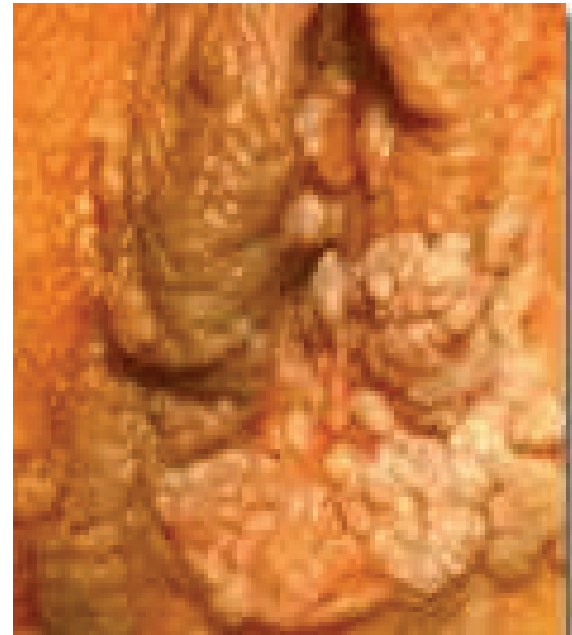
## 3. Balanitis

- Balanitis refers to inflammation of the glans penis and the prepuce.
- There may be discharge, erythema, and erosion of the glans, however, the prepuce is retractable.
- This syndrome is often caused by infection with candidiasis and rarely by trichomoniasis.

## 4. Bartholin's Abscess

- This complication of gonococcal or chlamydial infection of the Bartholin's gland in women presents as an extremely painful swelling at the vaginal introitus.
- It should be managed as a surgical emergency.
- Initiate treatment as for cervicitis and refer the patient immediately for incision and drainage in hospital.

# Interactive session (1)



**Genital warts**

# Interactive session (2)



**Genital warts**

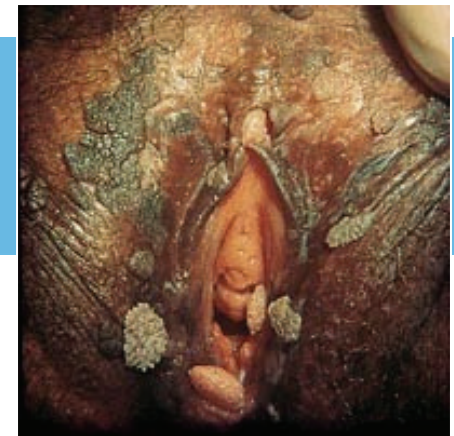


## Lesions may be:

- pink
- tan
- hyperpigmented
- flesh coloured

## The surface of the lesion may be:

- cauliflower-like
- smooth
- keratotic (or warty)
- flat

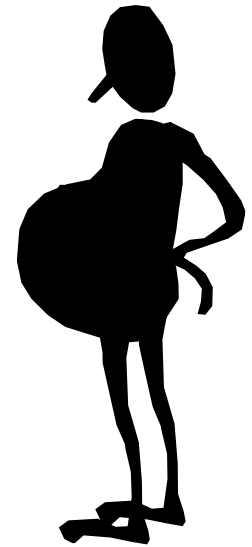




# Genital Warts

- Genital warts are caused by a virus – human papilloma virus. They usually have the appearance of flesh-coloured cauliflower-like growths on the genitals.
- The penis and foreskin (for men) and the labia or vagina (for women) are the most common sites of the warts. The warts can be variable in number and size, either few or multiple, small to very large.
- Warts are treated with local application of podophyllin (10-25% solution) once a week. After treatment of warts, the medication must be washed off within 2-4 hours to avoid developing sores at the site of treatment.

# Pregnancy and STIs



# Pregnancy and STIs

## **STIs can cause complications to the pregnant woman and her unborn child at different stages:**

- Before conception: process of implantation, ectopic pregnancy, and infertility
- During pregnancy: spontaneous abortion, chorioamnionitis, prematurity, and congenital infection
- Perinatal infection: postpartum infections in mother and newborn

# STI Treatment Guidelines for Pregnant Women

STI symptoms	STI	Recommended treatment for pregnant women	Notes
Genital Ulcer Disease (GUD)	Genital Herpes	It is recommended that the mother be treated with oral Acyclovir 400mg TDS for 7 days during the first clinical episode of genital herpes.	Available data do not indicate an increased risk for major birth defects compared with the general population in women treated with Acyclovir during the first trimester of pregnancy.
	Syphilis	Pregnant patients at all stages of pregnancy <b>who are not allergic</b> to penicillin should be treated with Benzathine penicillin 2.4 IU IM	Pregnant patients at all stages of pregnancy <b>who are allergic</b> to penicillin should be treated with erythromycin 500mg QID for 14 days.
Vaginal Discharge Syndrome	Candidiasis	Only topical azole therapies (e.g., Miconazole 100mg), applied for 7 days, are recommended for pregnant women.	
	Trichomoniasis, Bacterial Vaginosis (BV), Gonorrhea, Chlamydia	Metronidazole is generally <b>NOT</b> recommended for use in the first trimester of pregnancy. The minimum effective dose (2g orally, in a single dose) should be used during the later stages of pregnancy.	If treatment cannot be postponed to second or third trimester of the pregnancy, lowering the doses of Metronidazole and giving three times daily are recommended to reduce the risks of effects.
		Treat with Ceftriaxone 125mg IM	Norfloxacin and ciprofloxacin is contraindicated in pregnancy and <b>SHOULD NOT</b> be used.
		Erythromycin 500mg QID or Amoxicillin 500mg TDS for 7 days is recommended.	Doxycycline (and other Tetracyclines) is contraindicated in pregnant women and <b>SHOULD NOT</b> be used.

# Congenital STI/RTI Syndromes

**What are they?**



# Congenital STI/RTI Syndromes

- Infection of babies in utero or during delivery is one of the leading complications of untreated STI/RTI among mothers.
- Among the most serious congenital infections are syphilis, HIV, gonococcal, chlamydia, and herpes simplex.
- Ophthalmia neonatorum may be caused by a number of organisms but the most common are *N.gonorrhoea* and *C. trachomatis*.

# Congenital Syphilis

- Is a serious debilitating and disfiguring condition that can be fatal.
- About one third of syphilis-infected mothers have adverse pregnancy outcome.

# Main Clinical Presentation

- Some cases of congenital syphilis can be asymptomatic, while others may present with early or late congenital syphilis.
- Early syphilis begins after 6-8 weeks of delivery and manifests with nonspecific signs and symptoms of snuffles, palmar and plantar bullae, hepatosplenomegaly, pallor, joint swelling with or without paralysis and cutaneous lesions.
- Late signs include microcephaly, depressed nasal bridge, arched palate, and perforated nasal septum, failure to thrive, mental subnormality, and musculoskeletal abnormalities.



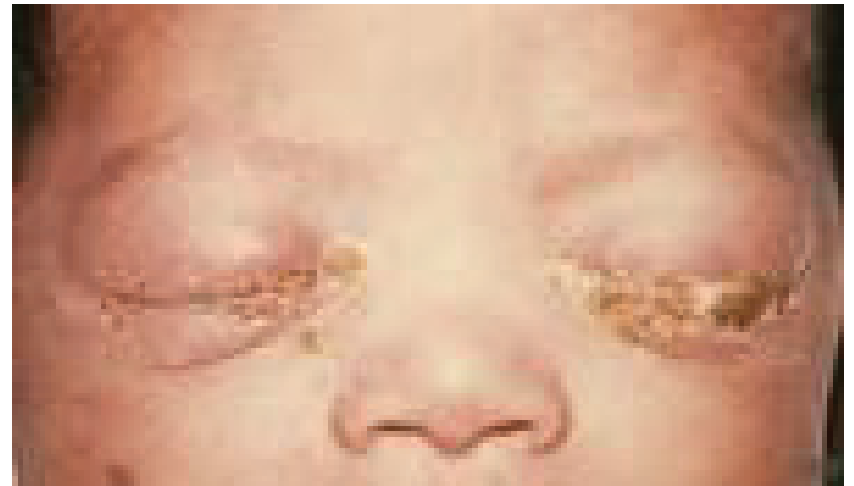
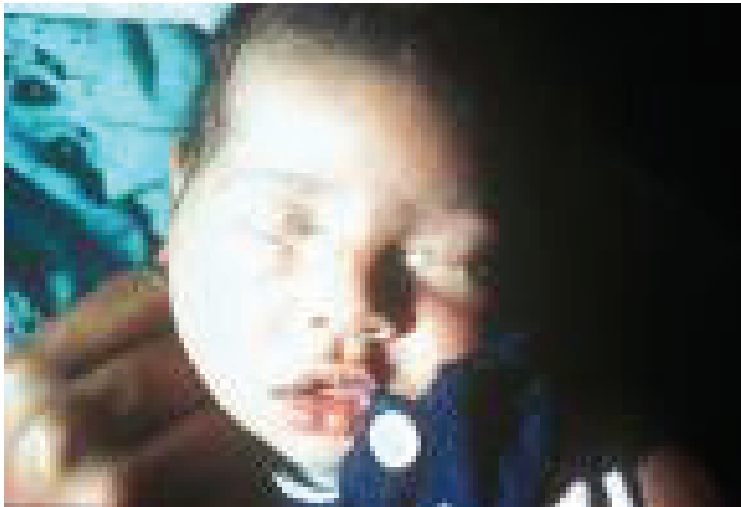
# Management of Congenital Syphilis (1)

- Procaine penicillin is the drug of choice; 50,000 IU per kg body weight daily for 10 days is recommended.
- Symptomatic patients should be admitted. Treatment for all babies less than 2 years should assume cerebrospinal involvement.
- Aqueous benzyl penicillin should be administered, 50,000 IU/kg body weight every 12 hours for a total of 10 days.

# Management of Congenital Syphilis (2)

- Alternative treatment is procaine benzyl penicillin, 50,000 IU/kg body weight once daily for 10 days.
- Both parents should be treated for syphilis with benzathine penicillin.
- The adverse effects of syphilis on pregnancy can be prevented by routine screening and treatment of infected mothers during the antenatal period.

# Interactive session



**Ophthalmia Neonatorum**

# Ophthalmia Neonatorum (1)

- This refers to conjunctival infection of neonates.
- Neonates acquire this infection during passage through an infected birth canal during delivery.
- This disease is often characterized by bilateral purulent eye discharge.
- The conjunctiva is inflamed and eyelids swollen.
- It is a very serious condition and if untreated may lead to corneal ulceration, perforation, and blindness.

# Ophthalmia Neonatorum (2)

- Occurs between 4–7 days of life, but can occur anytime in the first 28 days.
- Caused by *Neisseria gonorrhoea* (GC) or *Chlamydia trachomatis* (Chlamydia).
- In early stages, the discharge may be “sticky,” causing the eyelids to be stuck together in the morning, rather than the thick, greenish pus seen later.
- Corneal scarring may occur if treatment is delayed.
- Blindness in children is associated with high infant morbidity and mortality.

# Ophthalmia Neonatorum - Treatment

- **Treatment:** See the syndromic chart.
- Offer 4Cs to the mother.

# SECTION IV

## Partner Management

# Partner Management Objectives

**At the end of this section, trainees will be able to:**

- Recall principles of partner notification.
- Recall and respond to key issues of patient reluctance to notify their sex partners.
- Know which sex partners need to be notified and for each STI syndrome, depending on the time since last sex and the suspected syndrome.
- Know how to treat and advise the sex partners of patients with STIs.
- Describe key counselling points when the notified patients come to the clinic.



# Introduction

- Partner Management is an effective way for detecting untreated STIs and undiagnosed HIV infections (discordant couples
- Association of HIV and STIs has been documented (GUD, HSV2, vaginitis, and urethritis).
- STIs can only be controlled if the persons attending the clinic and their contacts are treated. A patient with STI needs to talk to his or her sexual partner about STIs and ask him or her to come to the clinic for STI evaluation and treatment.
- While screening and treating for STIs, ask and encourage the partners to get an HIV test if unknown status.

# Partner Notification

- **Partner notification** is an important factor in STI management.
- Partners must be treated to prevent the spread of the STI and the re-infection of the client.

## Kinds of Partner Notification

- Notification and referral by patient (most feasible, e.g., partner slips, cards)
- Notification and referral by provider (clinic contacts partners)
- Notification and referral via combination of the two methods above, especially in cases of reluctance by the partners to disclose

# Importance of Partner Notification

- Prevents re-infection of the client
- Prevents the spread of STI
- Prevents complications of untreated STIs
- Locates and treats people with asymptomatic infections
- Gets a partner to abstain or use condoms during treatment

# Key issues in Partner Notification

## ***EMBARRASMENT***

- Stigma of having an STI
- Doesn't know what to say

## ***FEAR***

- Women are most afraid
- Afraid partner will abuse or leave them
- Afraid to be accused of unfaithfulness
- Afraid partner will refuse treatment
- Client may be victim of rape or incest

# Key Issues in Partner Notification

## **ANGER**

- Angry at partners who infected them
- Want partners to suffer
- Don't want to talk to partners again

## **NO SYMPTOMS**

- Partner is symptom-free
- Both partners symptom-free (e.g., +RPR)
- Partner may not believe client

# Key Issues in Partner Notification

## ***INCONVENIENCE:***

- Clinic hours inconvenient for partners

## ***UNKNOWN OR UNAVAILABLE PARTNERS:***

- Clients may not know partner
- Partner lives far away
- Numerous partners
- Victim of rape

# Principles of Partner Notification (1)

- **HIV disclosure:** If your patient has not told his/her partner about his/her HIV status, you will need to deal with this issue, as well as the current STI.
- **Professional and nonjudgmental approach:** Remember to display a nonjudgmental attitude in discussing notification of sex partners with your patient, particularly if he/she has had more than one recent partner.
- **Voluntary participation:** Disclosing the names or identities of partners should always be voluntary, but the patient should be encouraged to act responsibly by bringing or sending his/her partner(s) in for HIV testing and STI evaluation and treatment.

# Principles of Partner Notification (2)

- **Confidentiality:** As with HIV, all records about STIs must be kept strictly confidential. Staff should demonstrate sensitivity to issues of patient and partner confidentiality.
- **Accessibility:** Referred partners should have access to HIV and STI care and preventive services, preferably in the HIV care and treatment clinic. Providers should recommend that HIV-infected patients with STIS bring their partners to the clinic for HIV and STI evaluations.
- **Quality assurance:** Activities should be routinely evaluated to ensure the quality of the services.
- **Do no harm:** Providers should consider the possible social consequences of partner notification for each patient.



# General Counselling Guidelines

- Contact all partners, especially latest contact
- Offer HIV CT
- Asymptomatic patients and treatment
- Health education and counselling on possible complications even if asymptomatic
- Couple counselling preferred
- Transmission possible even without symptoms
- Risk of perinatal transmission, e.g., gonorrhoea, syphilis
- Partner notification and partner treatment to prevent re-infection

# General Counselling Guidelines for Each Partner (1)

## For each partner:

- Treat STIs
- Advise to abstain from sex during treatment and also when lesions or early symptoms of STIs are present
- Offer HIV testing if unknown status
- Information on the nature of the STIs and methods of prevention in future
- Patient-centred risk reduction discussion and planning

# General Counselling Guidelines for Each Partner (2)

- Remind, demonstrate how to use the condoms correctly and consistently and provide the condoms
- Provide information on how partner can be treated and how to notify
- Give next appointment in one week
- Treat all female partners whether a/symptomatic (PID as a complication)
- Male and female treatment is the same except in pregnancy

# Section V

## Prevention and Control of STI/RTI

# Section V: Goals and Objectives

**Goal:** To equip trainees with knowledge and skills to deliver appropriate STI/RTI prevention and control measures

## Learning Objectives

**By the end of this unit, trainees should be able to:**

- Describe preventive measures for STI/RTI.
- Describe safer sex practices.
- Demonstrate correct condom use.

# Introduction

- Although most STI/RTI can be treated and cured, it is more cost effective to prevent them.
- Community education on the risk factors and promotion of behaviour change in prevention and control of STI/RTI are important.

# Introduction

- STI/RTI prevention measures revolve around intervention on sexual behaviour of individuals.
- Various intervention measures are needed to accommodate different desired outcomes of sex for different people.
- In facilitating behaviour change, it is therefore necessary to provide options to individuals.

# Primary Preventive Measures (1)

Some of the measures one can employ to avoid STI/RTI include:

- Abstinence
- Mutual monogamy
- Correct and consistent use of condoms
- Safer sex practices



# Primary Preventive Measures (2)

## Abstinence

This might be total abstinence from sex or, for groups such as students and youth not yet married, one should encourage “postponed sex” till one is ready for marriage.

# Primary Preventive Measures (3)

## Mutual monogamy

Mutually faithful sexual relationship or what is usually termed as “Zero grazing” if both partners are not already infected.

# Primary Preventive Measures (4)

## Correct and consistent use of condoms

This intervention is recommended for those who cannot abstain and yet cannot have a mutually faithful relationship.

# Primary Preventive Measures (5)

## Safer sex practices

Safer sex practices are many and varied but all revolve around the principle of avoiding exchange of sexual or body fluids, yet enabling the individual(s) to obtain what they desire out of sex.

### **Some of the safer sexual practices include:**

- Sex with other parts of the body that don't produce body fluids (non-penetrative sex)
- Correct and consistent use of condoms
- Masturbation of self or with objects

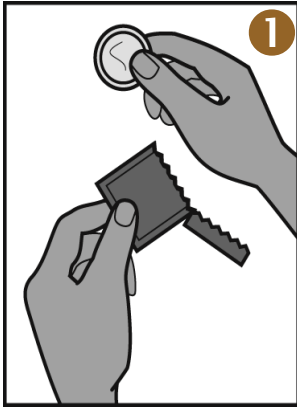
# Secondary Prevention

- Early diagnosis and prompt and correct treatment of STI/RTI
- Promotion of STI/RTI care-seeking behaviour, including reduction of barriers to care
- Notification of partners and treatment
- Screening for asymptomatic cases

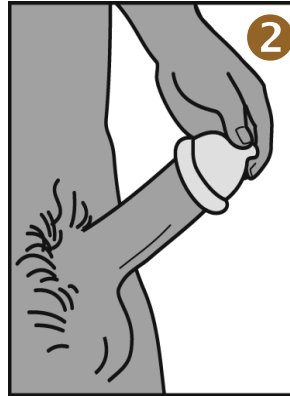
# Condom Use

- Male condoms are penis-shaped thin walled sheaths moulded from natural rubber. Like a surgeons gloves, they are designed to provide a barrier against microorganisms without significantly reducing the sense of feel.
- If used correctly and consistently, they provide good protection against STI/RTI, HIV and unwanted pregnancies.

# How to Use a Male Condom

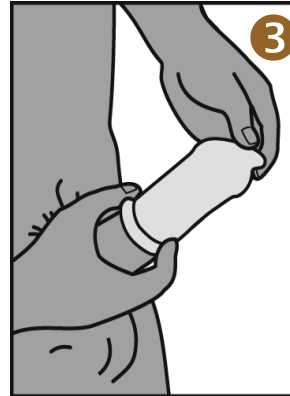


Use a new condom for each sex act.



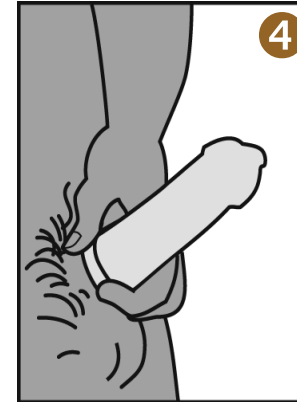
Before any contact, pinch tip of condom and place it on the erect penis with the rolled side out.

If not circumcised, pull foreskin back.



Unroll the condom all the way to the base of the penis.

Continue pinching tip while unrolling condom to base of penis.



After ejaculation, hold the rim of the condom in place and withdraw the penis while it is still erect.



Throw the used condom away safely.

# Female Condom

Thin sheath of polyurethane plastic with polyurethane rings at either end. They are inserted into the vagina before intercourse.



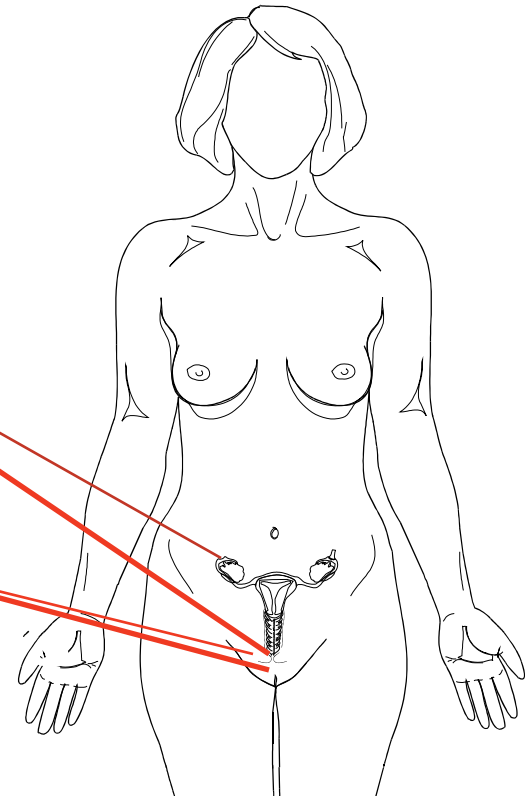
Female condom



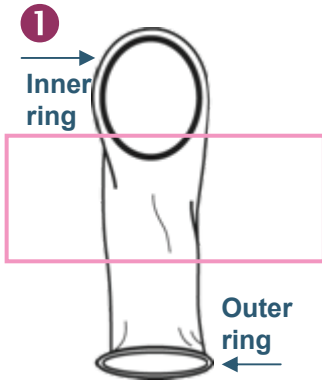
# Female Condom: Mechanism of Action

Prevent sperm from gaining access to female reproductive tract

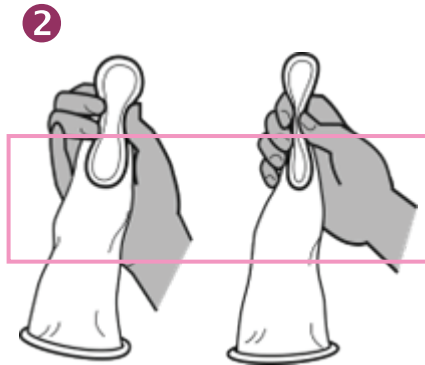
Prevent HIV and STIs from passing from one partner to another



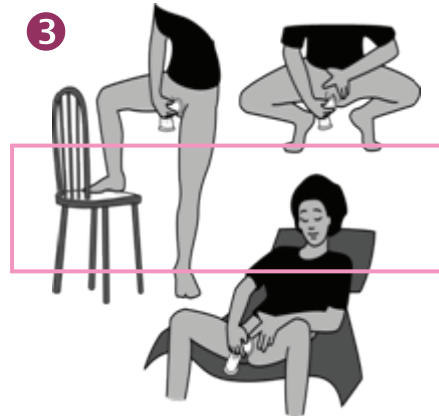
# How to Use a Female Condom



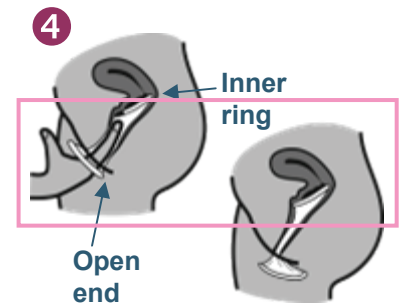
- Make sure the condom is well-lubricated inside.



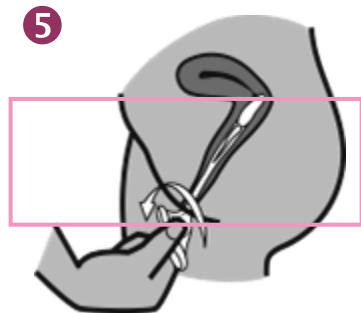
- Squeeze the inner ring at the closed end of condom.



- Choose a comfortable position – squat, raise one leg, sit, or lie down.
- With the other hand, separate the outer lips of the vagina.



- Gently insert the inner ring into the vagina.
- Place the index finger inside the condom and push the inner ring up as far as it will go.
- Make sure the outer ring is outside the vagina and the condom is not twisted.
- Be sure that the penis enters the condom and stays inside it during intercourse.



- To remove, twist outer ring and pull gently.
- Reuse is not recommended.
- Throw used condom away safely.

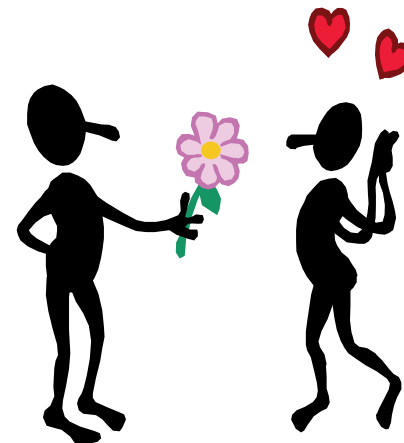
# Female Condoms: Client Instructions

- Be sure the penis enters the sheath and stays within the sheath during intercourse.
- Do not use the female condom with a male condom.
- After withdrawal, twist the outer ring and gently pull out the condom. Remove the condom before you stand up.
- Dispose of used condoms by placing in a waste container, in latrine, or burying. Do not flush the condom down the toilet.

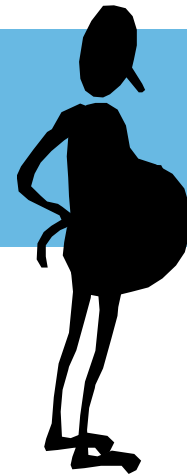
# Ways to Improve Condom Use

- Condoms **should be effortlessly available everywhere**, especially at all health facilities.
- Improve condom negotiation skills.
- Condoms should be **promoted as desirable, fashionable, and 'erotic'**.
- Condom promotion activities should **involve peer groups**.

**PROVIDERS:** USE EVERY OPPORTUNITY TO TALK ABOUT CONDOMS!



# Use of Condoms by HIV-Infected Person



- He/she is still sexually active
- Helps stop transmission of HIV in discordant couples
- Protects against re-infection with other HIV strains
- Protects against STIs
- Protects from unwanted pregnancy
- Prevents acquiring additional “viral load” – more HIV viruses can make HIV/AIDS symptoms and progression worse

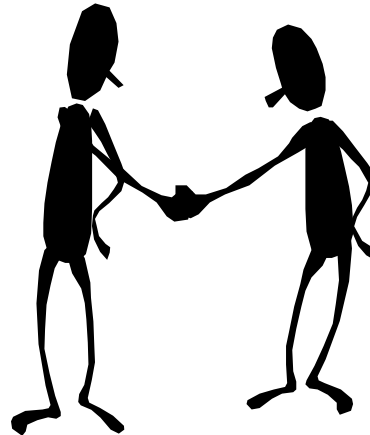
# Resolution



I am going to devote myself to promoting safer sex and condom use!

# Section VI

## Community Education about STI/RTI



# Community Education about STI/RTI

**Goal:** To equip the trainees with knowledge and skills to involve the community in prevention and management of STIs

## Learning Objectives

**By the end of this section, trainees will be able to:**

- Give key STI/RTI messages to the community
- Influence the community on health-seeking behaviour



# Community Education about STI/RTI

- Health workers will have the greatest impact on preventing STI/RTI if their educational efforts go beyond the health facilities.
- Most people do not know how to recognize the signs and symptoms of STIs or what to do should they experience those symptoms.
- There are several ways you can reach the people who don't visit your health facilities.

# Community Education about STI/RTI

- You can give brochures or pamphlets about STI/RTI to your clients and ask them to share them with others.
- You can put up posters for the community.
- You can organize and conduct community education events like film shows, group talks, drama presentations, and messages on radio, TV, and in newspapers.

# Community Education about STI/RTI (1)

## Key messages on STI/RTI that may be used for the community

- You can avoid STI/RTI by being mutually faithful to your partner who is not infected, by abstaining from sex, or by using condoms correctly every time.
- STI/RTI can be treated by taking all your medication as instructed, even when you feel better.
- After treatment, return to the health worker to be sure you are cured.
- Ensure that all your sexual partners receive treatment and use condoms correctly every time.

# Community Education about STI/RTI (2)

## Messages on STI/RTI that may be used for the community

- STI/RTI are a real danger to your health. They make it easier to get HIV infection and can cause other problems like infertility for both men and women.
- If you have a swelling, wound (sore), abnormal discharge, or any discomfort around the genitals, you could have an STI/RTI and need to see a health worker.
- Most STI/RTI are curable if treated correctly.

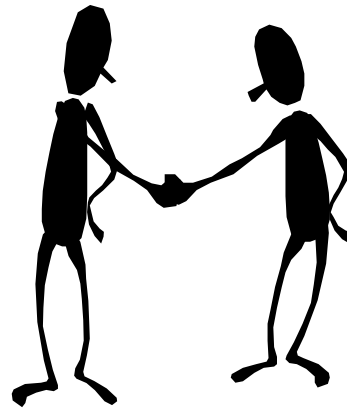
# Resolution

I am going to give key STI/RTI messages to the community.



# Section VII

## Cervical Cancer



# Section VII: Cervical Cancer

**Goal:** To enable trainees to acquire basic knowledge on cancer of the cervix and skills on diagnosis

## Learning Objectives

**At the end of the session, trainees should be able to:**

- Know the magnitude of cancer of the cervix worldwide
- Explain risk factors and relation of HPV and cancer of the cervix
- Explain prevention aspects of cancer of the cervix
- State various screening methods for diagnosis and management of cancer of the cervix

# Magnitude of the Problem

- Cancer of the Cervix is one of the leading causes of deaths among women of reproductive age, particularly in developing countries
- It affects 1.4 million women worldwide
- Each year more than 500,000 new cases occur
- Each year 250,000 women die of the disease
- About 95% of new cases are in developing countries
- 500 new cases of cervical cancer referred for treatment to KNH every year
- Cervical cancer accounts for 59% of all documented genital tract cancers nationwide



# Aetiology of Cancer of the Cervix

- The cause of cancer of the cervix is generally not known, but there is strong evidence to link it with human papilloma virus (HPV), which is sexually transmitted.
- 99.7% of cervical cancers are directly linked to previous infection with HPV.
- HPV was recognized many years ago as the cause of warts.
- There are nearly 100 identified types of HPV.
- Tests for the presence of HPV DNA exist, but are not usually available in developing countries.

# Human Papilloma Virus (HPV)

- Unlike with other STIs, condoms and other safe sex practices are not very effective in preventing HPV infection.
- HPV lives in skin cells covering the pubic area as well as in interior cells of the vagina, cervix, urethra, and anus.

# Progression of HPV-Induced Dysplasia and Cancer of the Cervix

**For every 1 million women affected, 10% will develop precancerous changes in cervical tissue:**

- These changes are usually in women ages 30–40.
- About 8% of these women will develop precancerous lesions limited to the outer layers of the cervix (carcinoma in situ) (CIS).
- About 1.6% will develop invasive cancer unless CIS is detected and treated.
- Progression to cervical cancer from high-grade squamous intraepithelial lesions (HGSILs) usually occurs over 10–20 years.
- Although rare, some precancerous lesions become cancerous within a year or two.

# Human Papilloma Virus (HPV)

- Currently no treatment for HPV infection
- Once infected, a person is infected for life
- Infection usually becomes dormant over time
- But it is not possible to predict when the virus will become active again
- Cervical cancer is one of the best known examples of how a virus can lead to cancer
- HPV serves only as the initiating event
- Over time, cells develop permanent changes in their DNA and turn into cancer cells

# Risk Factors for HPV and Cervical Cancer

- Sexual activity before age 20
- Multiple sexual partners
- Exposure to sexually transmitted infections (STIs)
- Mother or sister with cervical cancer
- Previous abnormal Pap smear
- Smoking
- Immunosuppression
  - HIV/AIDS
  - Chronic corticosteroid use

# Preventing HPV

## Primary Prevention:

- Vaccination: A vaccine would be the most effective way to prevent cervical cancer. It would, however, protect against only some types of HPV.
- Prevention must therefore focus on changing sexual practices and other behaviours that increase risk of infection.
- Risk reduction counselling should be incorporated at all levels of health care system.

# Secondary Prevention

- Women already infected should be screened to determine whether they have early, easily treatable precancerous lesions.
- Pap smear is most well-established screening method.
- Pap smear, with its many steps, is problematic in lower level care settings
- Other screening methods:
  - Visual screening: Visual Inspection with Acetic acid (VIA), Visual Inspection with Lugol's Iodine (VILI)
  - HPV DNA tests
  - Automated cytology screening

# Screening for Cancer of the Cervix

- All females of the reproductive age group need to be screened for cancer of the cervix.
- ALL HIV-positive females need to be screened for cancer of the cervix at the time of enrolment and then periodically.
- Abnormal results need to be managed according to the guidelines.



# Screening for Cancer of the Cervix

- Visual Inspection with Acetic Acid (VIA) or Visual Inspection with Lugol's Iodine (VILI)
- VIA/VILI is at least as effective as Pap smear in detecting disease
- VIA/VILI has fewer logistic and technical constraints
- Studies in South Africa, India, and Zimbabwe in the 1990s showed VIA as a good alternative to Pap smear.
- Later studies confirmed that VIA/VILI is a viable option for screening in low-resource settings.

# Value of VIA/VILI in Low-Resource Settings

- Can effectively identify most precancerous lesions
- Is non-invasive, easy to perform, and inexpensive
- Can be performed by all levels of health care workers in almost any setting
- Provides immediate results that can be used to inform decisions and actions regarding treatment
- Requires supplies and equipment that are readily available locally

# Treatment

- Testing should be linked to appropriate treatment for any precancerous lesions detected
- High-grade (CIN II–III) lesions should be treated because they are more likely than low-grade (CIN I) lesions to progress to cancer
- Most CIN I lesions regress spontaneously and do not progress to cancer
- When close follow-up or confirmation is not possible, treatment of aceto-white lesions may be advisable

# HIV/AIDS, HPV Infection, and Cervical Cancer

## **In HIV-infected women:**

- HPV detected more frequently; regresses more slowly
- HPV-associated diseases more difficult to treat
- Progression of pre-cancer accelerated

# HIV/AIDS, HPV Infection, and Cervical Cancer

- Cervical cancer screening is important in HIV endemic population where 15–20% HIV-positive women have pre-cancer lesions
- Cervical squamous cell cancer is now classified as an “AIDS-defining illness”
- Antiretroviral drugs improve quality of life, but their effect on pre-cancer progression is not known

# References

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- *Effective management of Medicines and Medical supplies: Curriculum and Implementation Guide. 1st Edition, MSH, April 2008.*

# List of Acronyms

4Cs	Counselling, Compliance, Condoms, & Contact Tracing
AFASS	Acceptable, Feasible, Affordable, Sustainable, Safe
AIDS	Acquired Immunodeficiency Syndrome
HIB	Haemophilias influenza type B vaccine
HIV	Human Immunodeficiency Virus
HBV	Hepatitis vaccine
HIV+	HIV infected
FC	Female Condom
KDHS	Kenya Demographic and Health Survey
MOH	Ministry of Health
PID	Pelvic Inflammatory Disease
STI	Sexually Transmitted Infections



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