

Training of **Medical Officers to deliver STI/RTI Services**



Participant's Handout

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सत्यमेव जयते

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MESSAGE

The prevention, control and management of STI/RTI is a well recognized cost effective strategy for controlling the spread of HIV/AIDS in the country as well as to reduce reproductive morbidity among sexually active population. Individuals with STI/RTI have a significantly higher chance of acquiring and transmitting HIV. Moreover STI/RTI are also known to cause infertility and reproductive morbidity. Controlling STI/RTI helps decrease HIV infection rates and provides a window of opportunity for counselling about HIV prevention and reproductive health.

An operational framework for convergence between National AIDS Control Programme Phase III and Reproductive and Child health Programme Phase II under National Rural Health Mission has been developed. This will bring about uniformity in implementation of STI/RTI prevention and control through the public health care delivery system. Through this, the availability and reach of standardized STI/RTI care at all levels of health facilities will be ensured.

The NACP III Strategy and Implementation Plan (2007-2012) makes a strong reference to expanding access to a package of STI management services both in the general population as well as for high risk behavior groups.

For nation-wide training of health functionaries on STI/RTI management standardized training modules and training aids/job-aids for various functionaries involved in provision of STI/RTI care have been developed to train doctors ANMs/Nurses, and to technicians on Syndromic Case Management of STI/RTI.

I am sure that these comprehensive operational guidelines will help towards ensuring the provision of quality STI/RTI services across the country.

(Sayan Chatterjee)

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अपनी एचआईवी अवस्था जानें, निकटतम सरकारी अस्पताल में मुफ्त सलाह व जाँच पाएँ
Know Your HIV status, go to the nearest Government Hospital for free Voluntary Counselling and Testing



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PREFACE

Sexually transmitted infections and reproductive tract infections (STIs/RTIs) are important public health problems in India. Studies suggest that 6% of the adult population in India is infected with one or more STIs/RTIs. Individuals with STIs/RTIs have a significantly higher chance of acquiring and transmitting HIV. Moreover, STIs/RTIs are also known to cause infertility and reproductive morbidity. Controlling STI/RTIs helps decrease HIV infection rates and provides a window of opportunity for counseling about HIV prevention and reproductive health.

The implementation framework of National Rural Health Mission (NRHM) provided the directions for synergizing the strategies for prevention, control and management for STI/RTI services under Phase II of Reproductive and Child Health Programme (RCH II) and Phase III of National AIDS Control Programme (NACP III). While the RCH programme advocates a strong reference "to include STI/RTI and HIV/AIDS preventions, screening and management in maternal and child health services", the NACP includes services for management of STIs as a major programme strategy for prevention of HIV.

These modules are intended as a resource document for the programme managers and service providers in RCH II and NACP III and would enable the RCH service providers and NACO service provider in organizing effective case management services for STI/RTI through the public health care system.

(P.K. Pradhan)



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FOREWORD

Community based surveys have shown that about 6% of adult Indian population suffers from sexually transmitted infections and reproductive tract infections. The prevalence of these infections is considerably higher among high risk groups ranging from 20-30%. Considering that the HIV epidemic in India is still largely concentrated in the core groups, prevention and control of sexually transmitted infections can be an effective intervention to reverse the HIV epidemic progress.

Syndromic Case Management (SCM) is the cornerstone of STI/RTI management, being a comprehensive approach for STI/RTI control endorsed by the World Health Organization (WHO). This approach classifies STI/RTI into syndromes, which are easily identifiable group of symptoms and signs and provides treatment for the most common organisms causing the syndrome. Treatment has been standardized through the use of pre-packaged colour coded STI/RTI drug kits. SCM achieves high cure rates because it provides immediate treatment on the first visit at little or no laboratory cost. However, it goes hand in hand with other important components like counseling, partner treatment, condom promotion and referral for HIV testing.

As per the convergence framework of NACO-NRHM for STI/RTI service delivery, uniform service delivery protocols, operational guidelines, training packages & resources, jointly developed by NRHM & NACO are to be followed for provision of STI/RTI services at all public health facilities including CHC and PHC. As per joint implementation plan, NACO/SACS would provide training, quality supervision and monitoring of STI/RTI services at all health facilities, thus overseeing the implementation. For tracking access, quality, progress and bottlenecks in STI/RTI program implementation, common information and monitoring system jointly developed by NACO and NRHM would be followed.

As a step to take convergence forward, it is envisaged that a resource pool of trainers is created at state and district level so as to enable roll out trainings for service providers in the public health care delivery system using the jointly developed training material and through the cascade models of trainings. The ultimate aim is to ensure high quality STI/RTI service delivery at all facilities with best utilization of resources available with both NACP III and RCH II/NRHM.

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Know Your HIV status, go to the nearest Government Hospital for free Voluntary Counselling and Testing



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Reproductive tract infections (RTIs) including sexually transmitted infections (STIs) present a huge burden of disease and adversely impacts the reproductive health of people. The emergence of HIV and identification of STIs as a co-factor have further lent a sense of urgency for formulating a programmatic response to address this important public health problem.

The comprehensive training modules on the Prevention and Management of STI/RTI have come through with the coordinated and concerted efforts of various organizations, individuals and professional bodies, who have put in months of devoted inputs towards it.

The vision and constant encouragement of Ms K Sujatha Rao, IAS, Secretary Health and Family welfare, Shri K Chandramouli, IAS, Secretary and Director General NACO, Ms Aradhana Johri, IAS, Additional Secretary NACO and Shri Amit Mohan Prasad, IAS, Joint Secretary RCH, Ministry of Health and Family Welfare is sincerely acknowledged, under whose able leadership these modules have been developed.

The technical content has been jointly developed by STI division, Department of AIDS Control (National AIDS Control Organization) and Maternal Health Division of MoHFW. The National Institute for Research in Reproductive Health (NIRRH), Mumbai under ICMR initiated and lead the process of reviewing the existing training material and developing updated training modules through the organization of a number of meetings and workshops. The preparation and design of material also involved the technical assistance, funding support and other related support provided by WHO, UNFPA, FHI and many other experts in the field.

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(Dr. Sunil D. Khaparde)

List of Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
ANC	Ante Natal Care
ART	Anti Retroviral Therapy
ANMs	Auxiliary Nurse Midwives
BV	Bacterial Vaginosis
CA	Candidiasis, yeast infection
CHCs	Community Health Centres
CMV	Cyto Megalo Virus
CDC	Centre for Disease Control
DNA	Deoxy Ribonucleic Acid
EC	Emergency Contraception
ESR	Erythrocyte Sedimentation Rate
EIA	Enzyme Immuno Assay
ELISA	Enzyme Linked Immuno Sorbent Assay
Endo	Endogenous
FP	Family Planning
FHI	Family Health International
FTA-Abs	Fluorescent Treponema Antibody Absorption Test
GUD	Genital Ulcer Disease
HBV	Hepatitis B Virus
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
HSV	Herpes Simplex Virus
Iatro	Iatrogenic
IPHS	Indian Public Health Standards
ICTC	Integrated Counselling and Testing Centre
IDUs	Intravenous Drug Users
IM	Intramuscular
IU	International Units
IUD	Intra Uterine Device
IV	Intravenous
KOH	Potassium Hydroxide
LCR	Ligase Chain Reaction
LGV	Lympho Granuloma Venereum
LHV	Lady Health Visitor

List of Abbreviations

MOHFW	Ministry of Health and Family Welfare
MSMs	Men having Sex with Men
MCH	Maternal and Child Health
MHA-TP	Micro Haemagglutination Assay for antibodies to Treponema Pallidum
MTCT	Mother-To-Child Transmission
MVA	Manual Vacuum Aspiration
NACP	National AIDS Control Program
NRHM	National Rural Health Mission
NPCP-III	National AIDS Control Program-Phase III
NIRRH	National Institute for Research in Reproductive Health
NACO	National AIDS Control Organization
NGO	Non Governmental Organization
NGU	Non Gonococcal Urethritis
PHC	Primary Health Centre
PLHAs	Persons Living with HIV/AIDS
PAP Test	Papanicolaou Test
PPTCT	Prevention of Parent-To-Child Transmission of HIV
PSI	Population Services International
PCR	Polymerase Chain Reaction
PEP	Post Exposure Prophylaxis
PID	Pelvic Inflammatory Disease
ROM	Rupture of Membrane
RPR	Rapid Plasma Reagin
RTI	Reproductive Tract Infection(s)
RCH	Reproductive and Child Health Program
RCH-II	Reproductive and Child Health Program-Phase II
STI	Sexually Transmitted Infection
STD	Sexually Transmitted Disease
SACS	State AIDS Control Society
TPHA	Treponema Pallidum Haemagglutination Test
TI	Targetted Intervention
TV	Trichomonas Vaginalis
UTI	Urinary Tract Infection
UNFPA	United Nations Population Funds
VCT	Voluntary Counseling and Testing
VDRL	Venereal Disease Research Laboratory
WBC	White Blood Cells
WHO	World Health Organization

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MODULE NO. 1

INTRODUCTORY MODULE

PROGRAMME OBJECTIVES AND SCHEDULE

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1. Objectives of the training programme

By the end of this programme, MOs will be able to:

- Understand about the magnitude of STI/RTI problem in the community and country;
- Understand about the seriousness of complications of common STI/RTI, if left untreated and its long term implications on health, including reproductive health;
- Perform history taking and clinical examination of clients for STI/RTI;
- Diagnose and treat common STI/RTI by using given flowcharts based on the infrastructure, facilities and availability of drugs at PHC;
- Educate and counsel STI/RTI clients about prevention and complete treatment of STI/RTI;
- Treat partners of clients diagnosed with STI/RTI;
- Provide treatment and counseling for STI/RTI among special populations (sex workers, MSM, etc) in a non-judgmental way.

2. Schedule of the 2 day workshop for Medical Officers

Days/ Timings	Module: Topic and Duration	Contents
Day 1 (Morning)		
9 00 hrs	Module 1: Introductory module (1 hr.)	- Getting to know each other - Training objectives and outline of training programme - Pre-test questionnaire
10 00 hrs	Module 2: Public health importance of STI/RTI (1 hr.)	- Importance of STI/RTI as a public health problem - Epidemiology of STI/RTI - Challenges in prevention and management
11 00 hrs	TEA BREAK	
11 15 hrs	Module 3: Common STI/RTI and their complications (45 mins)	- Sites of occurrence of STI/RTI - Signs and symptoms of common STI/RTI - Causative organisms and modes of presentation - Classifications and complications of STI/RTI
12 00 hrs	Module 4: History taking and risk assessment in STI/RTI (30 mins)	- Tips and steps - Role play - Checklist
12 30 hrs	Module 5: Clinical examination for STI/RTI (1 hr.)	- Anatomy of reproductive tract (Review) - Syndrome specific examination tips - Video display of clinical examination.
13 30 hrs	LUNCH BREAK	
Day 1 (Afternoon)		
14 30 hrs	Module 6 & 7: Approaches for management of STI/RTI, syndromic case management for STI/RTI. (2 hr.)	- Approaches for management of STI/RTI - Syndromic Case Management based on flowcharts.
16 30 hrs	TEA BREAK	

Days/ Timings	Module: Topic and Duration	Contents
16 45 hrs	Module 8: Partner management (30 mins)	• Critical issues • Approaches for Partner management
Day 2 (Morning)		
09 00 hrs	Recap of Day 1	
09 30 hrs	Module 9: Laboratory tests for STI/RTI (1 hr.)	• Definition of common terms • Lab. tests and their usefulness for management of STI/RTI.
10 30 hrs	Module 10 & 11: Client education and counseling & Condom (1 hr.)	• Communication • Client education • Counseling • Video on counseling • Condom demonstration
11 30 hrs	TEA BREAK	
11 45 hrs	Module 12: Management of sexual violence (30 mins)	• Health services and sexual violence management
12 15 hrs	Module 13: Preventing STI/RTI among High Risk Groups (45 mins)	• Treatment strategies and services • Counseling on safer sex
13 00 hrs	LUNCH BREAK	
Day 2 (Afternoon)		
14 00 hrs	Module 14 & 15 : Preventing STI/RTI in adolescents & Male participation in prevention and control of STI/RTI (1 hr.)	• Adolescent and youth at risk • Youth-friendly activities on STI/RTI in the community. • Strategies for involving men in STI/RTI prevention • Challenges
15 00 hrs	Module 16: Recording and reporting (1 hr 30 mins)	• Individual patient record and monthly reporting format • Management of STI/RTI clinical data • Case studies
16 30 hrs	TEA BREAK	
16 45 hrs	Post Test Assessment & Wrap Up (30 mins)	• Administer Post test questionnaire

MODULE NO. 2

PUBLIC HEALTH IMPORTANCE OF STI/RTI

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1. Definition of STI/RTI

It is critical to understand or get familiarized with the key terms generally used while providing reproductive and child health services, and communicating with clients having STI/RTI. So before beginning the discussion on diagnosis and treatment of STI/RTI, we will first ensure to understand some of the key terms and basic concepts in this area.

What are RTI?

Reproductive tract infection is a broad term that includes sexually transmitted infections as well as other infections of the reproductive tract that are not transmitted through sexual intercourse. In women, RTI includes infections of the outer genitals, vagina, cervix, uterus, tubes, or ovaries. In men, RTI involves the penis, testes, scrotum, or prostate. RTI are caused by bacteria, viruses, or protozoa that person gets either through sexual contact or by non-sexual route.

What are STD?

STD means sexually transmitted diseases caused by microbes that are passed from one person to another through sexual contact. The terminology is used to describe the diseases that are acquired through sexual contact. Sexually transmitted organisms may also be sometimes transmitted by nonsexual modes of transmission.

What are STI?

The term “Sexually Transmitted Infections” (STI) is a newer term used to indicate that infections caused by microbes may not manifest as symptoms and do not always result in a disease.

STI versus STD

Historically, the terminology used to describe infections and diseases acquired through sexual contact has demonstrated the social stigma attached to these infections. As these terms became laden with moral judgments and as medical and public health professionals began to see the need for a more accurate, technical description, the term **STI** was approved by WHO and hence became the standardized term.

What is HIV and AIDS?

HIV stands for Human Immunodeficiency Virus, a retrovirus transmitted from an infected person through unprotected sexual intercourse, or by exchange of body fluids such as blood, or from an infected mother to her infant. AIDS stands for Acquired Immunodeficiency Syndrome. AIDS is the stage of HIV infection that develops some years after a person is infected with HIV. HIV is a STI and is transmitted through the same behavior that transmits other STI. About 86% of the HIV infection is transmitted through the sexual route, whenever there is risk of STI, there is risk of HIV infection as well.

What is Prevalence?

Prevalence measures at a point of time how common a disease is in a population (usually expressed as a percent). It includes total number of new as well as old cases of disease present in the population (usually in one year). E.g. Total number of chlamydial infection detected (new as well as old cases) among pregnant women in a year at one Primary Health Center are 12 and total number of pregnant women examined in a year at Primary Health Center are 120. Then “10% of pregnant women have chlamydial infection” = “10% prevalence of chlamydial infection among pregnant women”.

What is Incidence?

Incidence means the number of new cases of disease occurring (usually each year) e.g. WHO estimates that about 340 million curable STI/RTI occur globally each year.

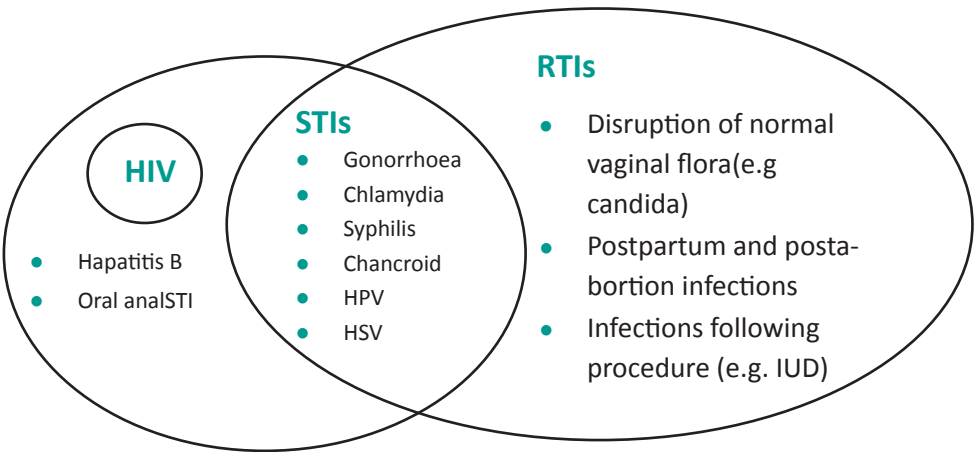


Figure 1: Reproductive tract Infections (RTI); Sexually Transmitted Infections (STI); and HIV infection

2. Epidemiology of STI/RTI

According to WHO, STI and their complications rank in the top five disease categories for which adults in developing countries seek health care. The incidence and prevalence of STI in the developing world are rising rapidly. Premature deaths and disabilities not only devastate families, but also threaten the cultural and economic stability of communities, countries, and whole continents.

Situation in world

In recent years, there is a growing concern regarding the prevalence and extent of STI/RTI among women and men in developing countries. Further, the threat of AIDS has focused greater attention on the importance of RTI including STI.

- The World Health Organization (WHO) estimates (2006) that approximately 340 million new cases of the four main curable STI (gonorrhoea, chlamydial infection, syphilis, and trichomoniasis) occur every year, 75–85% of them in developing countries. This means about 10% of adults are newly infected with curable sexually transmitted disease (STI) each year.
- WHO also estimates that out of these 340 million curable STI that occur globally each year there are about 12 million new cases of syphilis, 62 million new cases of gonorrhoea, 90 million new cases of chlamydial infection, 176 million new cases of trichomoniasis.

Thus STI/RTI impose an enormous burden of morbidity and mortality in developing countries, both directly through their impact on reproductive and child health, and indirectly through their role in facilitating the sexual transmission of HIV infection.

Situation in India

Many studies have been conducted to estimate the prevalence of STI/RTI in men and women in India, which reveal that there is a huge burden of STI/RTI and they adversely impact reproductive health of people.

According to National Family Health Survey (NFHS) –2 data, it is estimated that the prevalence of symptoms suggestive of STI/RTI in women was in the range of 23% to 43%, while in men it is in the range of 4% to 9%. The STI clinic based data indicates syphilis as the major prevalent STI among men (12.6-57%) followed by chlamydia (20%-30%), chancroid (9.9%-34.7%), and gonorrhoea (8.5%-25.9%). The hospital based studies reports a varied prevalence for HSV (3.0- 14.9%) and HPV (4.9-14.3%) among men. The NACO data indicates that awareness about STI/RTI in men is 53% while in women is only 44%. It is estimated that about 6% of the adult population (15-49 years) have STI/RTI episode in a year which amounts to about 30 million episodes per year (ICMR Study, 2002).

3. Factors contributing to the spread of STI/RTI

Though the STI are infectious diseases, however, more than with other infectious diseases, STI transmission also depends mainly on sexual behavior. A person with many sexual partners is much more likely to acquire a STI than a person with one partner. A person with many partners also has more opportunity to infect others.

Factors contributing to high STI/RTI prevalence

There are many reasons for high prevalence of STI/RTI, which include lack of access to health care and medicines, lack of awareness of STI, and in-out migration.

- STI such as syphilis, gonorrhea and chancroid spread more rapidly in places where communities are disrupted, migrant labour is common and commercial sex networks are active.
- Iatrogenic infections are more commonly seen where the RTI in high prevalence, and where health care providers do not have the training or supplies to perform procedures safely. Postpartum and post abortion infections are more common where medical services and follow-up care are not provided safely.
- Endogenous infections, such as yeast infection and bacterial vaginosis, are common worldwide and are influenced by environmental, hygienic, hormonal and other factors like co existent diabetes and immune compromised states like AIDS.

Factors that increase the risk of transmission

It is not necessary that every act of unprotected sex will result in STI transmission. The possibility of getting infected depends on biological and behavioral factors.

Biological factors: Certain biological factors influence the transmission of STI/RTI which includes age, sex, immune status of the host and virulence of the organism:

- **Age:** The vaginal mucosa and cervical tissue of young women is immature and makes them vulnerable to STI than older women. Cervical ectopy describes the situation where cells that more readily allow infections to occur are found on the outer intra-vaginal surface of the cervix. This is normal for younger women and makes them more vulnerable to STI than older women. Taking the contraceptive pill can increase the size of the ectopy.
- **Sex:** Infection enters more easily through a mucosal surface such as vaginal mucosa. Thus the woman has much larger mucosal surface than the man and is more prone to being infected if she has sexual intercourse with a partner who has an STI. In case of men, uncircumcised men are more likely to get an STI than circumcised men. It is more difficult for uncircumcised men to protect the inside surface of their foreskin from contact with body fluids.

- **Immune status:** The immune status of the host and the virulence of the infection affect transmission of STI. Certain STI increase the risk of HIV transmission. HIV, in turn facilitates the transmission of many STI and worsens the complications of STI by weakening the immune system.

Behavioral factors

Many behavioural factors affect the possibility of contracting STI. Such behaviors, known as risky behaviors are as follows:

- Personal sexual behaviors
 - ♦ not using condoms during penetrative vaginal or anal intercourse
 - ♦ frequent sexual partner exchange
 - ♦ having more than one sexual partner
 - ♦ having sex with casual partners, sex workers or their clients
 - ♦ previous history of STI
 - ♦ exchanging sex for money, goods or favors
 - ♦ exchanging sex for drugs or drugs for sex
- Other personal behaviors (non-sexual) that are risky include:
 - ♦ skin piercing
 - ♦ alcohol or other drugs during or before sex
 - ♦ blood transfusion
- Even if an individual has no risky behaviors, they may be at risk if their partner/s:
 - ♦ has sex with others
 - ♦ has STI
 - ♦ is HIV positive
 - ♦ injects drugs
 - ♦ has sex with other men (male)

Social factors

- Number of social factors link sex and behavioral issues and may affect a person's risk of contracting STI:
- In most cultures women have very little power over sexual practices and choices; such as use of condoms

- Women tend to be economically dependent on their male partners and are therefore likely to tolerate men's risky behavior of multiple sexual partners, thus putting themselves at the risk of contracting STI
- Sexual violence tends to be directed more towards women by men, making it difficult for women to discuss STI with their male partners
- In some societies, girl-child tends to be married off to an adult male at a young age, thus exposing girls to the infections
- In some societies, a permissive attitude is taken to allowing the men to have multiple sexual partners.

Most STI transmission occurs within a small part of the population that has multiple sex partners. This does not mean that the rest of the community is not at risk for STI infection. A woman who has sex with only her husband can still get a STI if her husband has other partners.

Clinical services can contribute to STI control, but they are not enough. Often, those at highest risk of STI infection are least likely to use services. For these reasons, control of STI in any community requires effective strategies that reach those with the greatest number of sex partners.

Risk group

In most communities there are certain people who may be more vulnerable to STI. These may vary in different communities, but they usually include:

- Adolescent girls and boys who are sexually active and indulging in unsafe sex
- Women who have several partners for earning money.
- Female and male sex workers and their Clients
- Men and women whose jobs force them to be away from their families or regular sexual partners are away for long periods of time.
- Men having sex with men (MSM) including transgenders.
- Street children, prison inmates, etc.

Special concerns for STI/RTI in women

Although STI affect both women and men, research shows that women are more susceptible to infection and are less likely to seek treatment than men. Though the rate of infection varies tremendously among and within countries, World Bank reports indicate that STI are the second most important cause of health life years lost in women of childbearing age (after pregnancy-related problems). The potential complications of untreated RTI are more serious in women and infections can be transmitted to the offspring of pregnant women as well.

Why STI/RTI in women are different from that of men?

The women are more vulnerable to infection with STI and management may be more difficult in them than it is for men. This can be explained in two ways:

Biological differences

Biological differences make male-to-female transmission easier than female-to-male transmission.

- The lining of the vagina is a mucous membrane, which is more permeable to infection than the skin on the outside of the penis.
- Women's genitals have more surface area through which infection can enter.
- Women are the receptive partners during intercourse.
- Lack of lubrication during intercourse or changes in the cervix during the menstrual cycle can facilitate more efficient transmission of infection to women.
- Semen (thus bacteria or viruses which may be present in semen) stays in contact with the vagina for a longer time than vaginal fluids stay in contact with male genitals.
- Younger women may be more susceptible biologically due to an immature genital tract. Because of this, their cervical tissues may be more readily penetrated by organisms (e.g., chlamydia and gonococcus).
- Older women are more likely to get small abrasions in the vagina during sexual activity because of the thinning of the tissues and dryness that occur with age.
- Symptoms are less reliable indicators of disease in women.
- Women with STI are less likely to have symptoms (asymptomatic) than men with STI.
- When women do have symptoms such as vaginal discharge, they are not necessarily due to STI.
- Women who already have an infection (particularly one that causes genital lesions) are more likely to get or transmit HIV, since women are often asymptomatic when infected with an STI, they are often not aware of this increased risk.
- Complications in women are more frequent, numerous and severe because infection may ascend to uterus, tubes, and ovaries (Pelvic Inflammatory Diseases).
- Consequences include PID, infertility, ectopic pregnancy, spontaneous abortion, and cervical cancer.

Sociocultural differences

Sociocultural norms for men

Accepted male behavior that is the norm in many countries puts women at risk of infection.

- Older men often seek younger women as sex partners. Older men are more likely to have been exposed to STI because over time, they have more partners and therefore more opportunities to transmit infections such as HIV, HSV and HPV, which remain for life. While women more often settle into more stable relationships by their mid-20s.
- Younger men who are single, are more likely to have new or multiple partners, and are less likely to know about or use condoms. Younger men may have more partners over a shorter time period and thus are at increased risk of STI.

Sociocultural norms for women

Certain factors reduce women's options for protection against STI.

- Women can't always insist on condom use.
- Women lack power in family and community to influence male sexual behavior.
- Women cannot always refuse unwanted sex.
- Women may be forced into exchanging sex for money or favors out of financial need.
- For women, stigma attached to genital tract infections can prevent health care seeking behavior.
- Social stigma resulting from STI and their consequences can prevent marriage, cause divorce, and lead to domestic abuse.
- Other risks for women include the use of vaginal douches (which increase the risk of PID) and the influence of hormonal contraceptives on acquiring or transmitting STI, although this relationship is not yet fully understood.

4. Impact of STI/RTI and the need for their prevention and management

Why reproductive health services should focus on STI/RTI?

The STI/RTI are not only becoming a rapidly growing problem throughout the world but in the country too. As the transmission and prevalence of STI/RTI are influenced mainly by social and economic factors as well as by biological and behavior pattern, therefore the burden of STI/RTI varies greatly from region to region, and from community to community. Where STI/RTI are common, their complications are also common and the impact of STI is serious.

Seriousness of complications

RTI often go undiagnosed and untreated, and they lead to serious complications. If left untreated or if not diagnosed and treated in time, even curable STI can cause serious complications. Some of these infections can cause pelvic inflammatory disease, premature labor and delivery, spontaneous abortion, ectopic pregnancy, infertility, inflammation of the testes, cardiovascular or neurological complications, cervical cancer or even death. Some infections can also lead to pneumonia, respiratory infections, and eye infections in infants. Pelvic inflammatory disease arising from STI poses a major public health problem and adversely affects the reproductive health of poor and untreated women. In women of childbearing age, STI are second only to maternal factors as causes of disease and death. By far, the greatest burden of STI is borne by women and adolescents.

Links to HIV/AIDS

Studies have shown that the spread of HIV and other STI are closely related, STI are identified as a co-factor for the causation of HIV infection and promiscuous behavior puts people at risk for any sexually transmitted infections as well as HIV infection (86%). A person with an STI has a much higher risk of acquiring HIV from an infected partner. A person infected with both HIV and another STI has a much higher risk of transmitting HIV to an uninfected Partner.

For example, a person who has chancroid, chlamydia, gonorrhoea, syphilis, or trichomonas infection can have as much as four to ten times the risk of getting HIV from a sexual partner as a person who is not infected with one of these STI. An ulcerative STI (such as genital herpes, syphilis, or chancroid) increases the risk of HIV transmission per exposure significantly more than a non-ulcerative STI (such as gonorrhoea or chlamydia) since HIV can pass more easily through genital ulcers. But STI that do not cause ulcers also increase risk because they increase the number of white blood cells (which have receptor sites for HIV) in the genital tract, and because genital inflammation may result in damage that can allow HIV to enter the body more easily.

In addition, HIV infection may complicate diagnosis and treatment of other STI because HIV may change the patterns of disease or clinical manifestations of certain infections and may affect laboratory tests. In people with HIV infection, STI symptoms may be more severe, the period of infectivity may be increased, and normal treatments may not give good results.

Fortunately, prevention of STI involves much the same behavior as prevention of HIV, and prevention works. In addition, since HIV spreads more easily when other STI are present, HIV transmission can be reduced by improving the recognition and management of curable STI at the primary health care level. Therefore in prevention campaigns to educate people about the link between behavior and infection with STI and HIV are needed. Prevention of STI infection provides windows of opportunity for preventing new HIV infection. Effective STI prevention is considered as the most cost effective strategy in preventing HIV infection. So, STI treatment and prevention can be an important tool in limiting the spread of HIV infection.

Future implications

STI are a major public health problem not only because they are among the most common causes of illness in the world, but also because of the potentially serious complications of untreated STI and because of the relationship between STI and increased HIV transmission. In women of childbearing age, STI are second only to maternal factors as causes of disease and death. By far, the greatest burden of STI is borne by women and adolescents.

In 2006-07, HIV surpassed tuberculosis as the world's leading infectious cause of death among adults. The social impact of HIV has been particularly pronounced in Sub-Saharan Africa, where an estimated 70% of the 40 million people in the world are living with HIV/AIDS and where 14 million children have been orphaned by AIDS. In some countries, more than 20% of the adult population is infected. The effects of losing an entire generation have created economic and social dislocation families have lost means of support; industry has lost workers; the health care system has been overwhelmed.

To sum up

- STI/RTI are increasing and constitute one of the major causes of ill health in our country.
- STI/RTI infection increases the risk of HIV transmission.
- STI/RTI cause serious complications in men and women, including infertility.
- STI/RTI are responsible for reproductive loss: spontaneous abortion, ectopic pregnancy, still birth, prematurity, neonatal infections.
- If left unscreened and untreated one of the serious consequences is cervical cancer in women in India.

- STI/RTI affect the larger community at national level:
 - ♦ Social impact of infertility
 - ♦ Mother-to-child transmission causing perinatal mortality, infant and child mortality and morbidity such as disabilities and orphans
 - ♦ Maternal mortality.
 - ♦ Socio economic impact of AIDS
 - ♦ Increased cost to health systems
 - ♦ Cost to national productivity
 - ♦ Decreased life expectancy

Need for action

When diagnosed early, most STI/RTI can be treated easily and effectively. In addition, the earlier a person seeks treatment for STI, the less likely it is that the infection will cause serious and irreparable damage, be spread to others, or be passed to a baby. And now due to emergence of HIV/AIDS problem and identification of STI as a co-factor for its causation, have further lent a sense of urgency for formulating a programmatic response to address this important public health problem.

5. Challenges in prevention and management of STI/RTI

People are often too embarrassed or frightened to ask for help and information. Social stigma, misinformation, fear, shame, cultural barriers, gender inequities and other factors can keep individuals away from practicing safer sex behaviors, notifying partners, or receiving adequate treatment.

In many countries, women find it particularly difficult to talk about STI and seek services for a variety of reasons. Because of cultural and social factors, a woman may be more likely to blame herself for her infection, fear abuse by her partner, and deny the presence of symptoms, or feel too embarrassed to ask for care. Young people may also have particular difficulty in accessing health care facilities because they may lack independent financial resources or fear that they will be denied services or judged by health care workers and others. In some countries, men who have sex with men— particularly those who do not consider themselves bisexual or homosexual— may fail to seek treatment out of embarrassment, fear, or stigmatization.

Other common barriers to STI treatment for Clients include:

- Lack of knowledge about STI, risks, symptoms, and complications
- Misconceptions about causation of STI/RTI
- Dependence on home remedies, quacks, faith healer especially in rural areas.
- Absence of signs or symptoms of STI (especially in women)
- Lack of knowledge about or access to treatment
- Reluctance to discuss sexual matters
- Fear that others will find out
- Fear of a judgmental approach by the health care provider
- Reluctance to undergo a genital examination (particularly by a provider of the opposite sex)
- Laws and restrictions (such as laws restricting health care for minors)

It is important for health care providers to remember that STI affect men and women of all ages, backgrounds, and socioeconomic levels. Providers of STI services and counseling must avoid judgmental and moralistic attitudes that can deter clients from seeking treatment – especially in the case of clients (who might be particularly susceptible to social stigma and bias, such as adolescents, sex workers, unmarried women, and homosexuals).

The Piot and Fransen model of STI/RTI management graphically sums up the problems in the treatment of RTI (Figure-1). The model illustrates some obstacles to STI/RTI control. The bottom bar represents all women with STI/RTI in a community. The bars above shows how many people are identified at each step, and the differences between the bars illustrate lost opportunities for stopping STI/RTI transmission. Comparison of the small top bar with the bottom one shows the proportion of all people with STI/RTI in the community who are identified and correctly managed at health facilities. In the typical clinical approach to the control of STI/RTI, the contribution of clinical services is small.

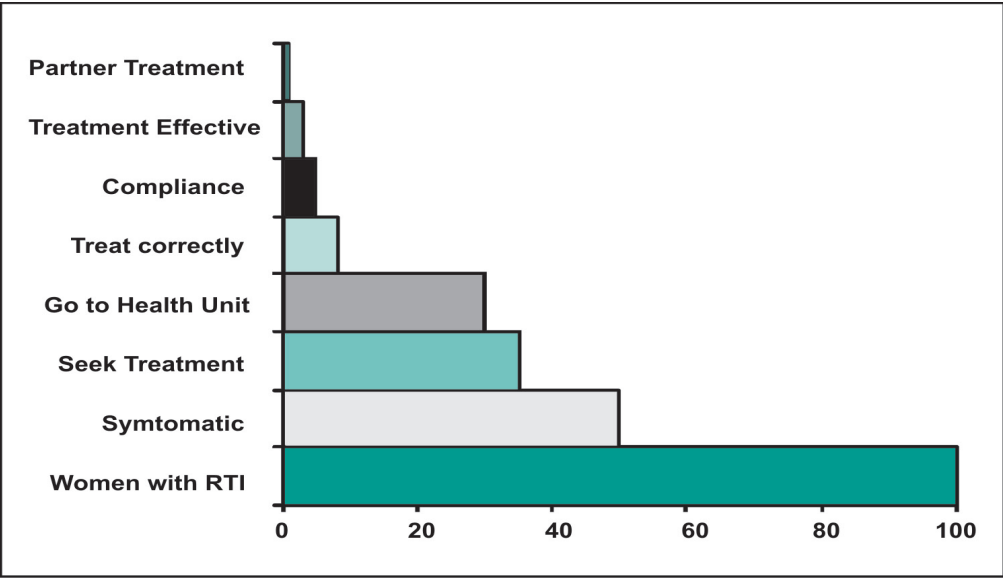


Figure 1: Problems in management of RTI (Piot – Fransen model)

For example, suppose that 10 percent of the women in your community have STI/RTI. Of these women, less than half are likely to have symptoms. Even among symptomatic women, however, perhaps only half will seek or have access to care from a clinic. In this example, already less than one-quarter of the women with STI/RTI are seeking care from a qualified health worker.

There are other obstacles. How many of the symptomatic women who come to your clinic are accurately diagnosed? Even when diagnosed correctly, do the women leave with effective medications and take all of them? Finally, do women treated for STI/RTI have their partners treated successfully at the same time to ensure that they are not reinfected? These can be difficult steps to achieve and are some of the things to consider when deciding whether your STI/RTI services will make a difference in your community.

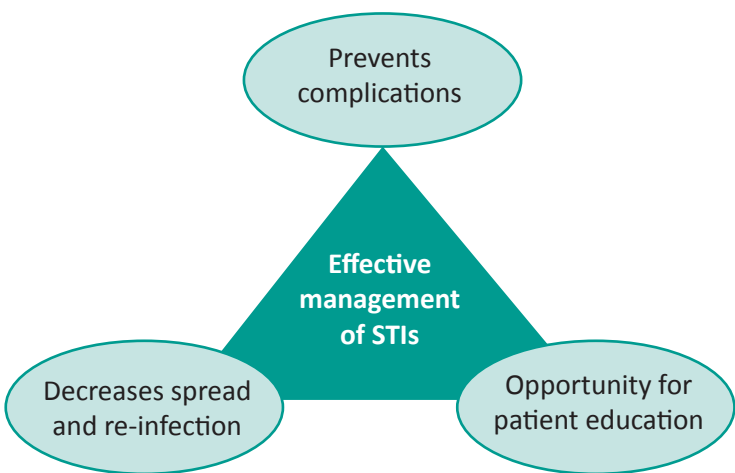
Improving STI/RTI case management at health centers expands the smallest bar, resulting in higher cure rates among those who seek care. Still, it is apparent that improving services has its limits. Clients do not usually come to health centers unless they have symptoms. Even among people with symptoms, some choose to seek care from places other than clinics and hospitals. Self-treatment, direct purchase of antibiotics from pharmacists or drug peddlers, and consultation with traditional healers are among the many options available to someone with STI/RTI symptoms.

In order to convince people to use services, information about STI/RTI and the importance of prompt treatment must be available at the community level.

STI/RTI control strategies

There are two main elements of STI/RTI control:

- **Prevention** is the primary strategy for controlling STI/RTI and HIV/AIDS. Prevention means using community education and other strategies to prevent infection from occurring. In order to raise community awareness, messages should be included about STI/RTI and their consequences, reducing the number of sex partners, using condoms, and having safer sex. As a strategy, **prevention works**.
- **Effective case management** means correctly diagnosing and treating symptomatic and asymptomatic patients, providing patient education for consistent condom use and partner management to prevent reinfection and transmission to others.



Effective case management strategy

Control strategies are often different for those who are at high risk and those at lower risk of contracting and transmitting infection. Reaching those at high risk will provide the greatest overall reduction of STI/RTI in the community.

MODULE NO. 3

COMMON STI/RTI AND THEIR COMPLICATIONS

Sr. No.	Topic	Page No
1.	Body sites of STI/RTI occurrence in males and females	22
2.	Types of STI/RTI	26
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1. Body sites of STI/RTI occurrence in males and females

Anatomy of sexual and reproductive tract

An understanding of sexual and reproductive anatomy and physiology helps providers to educate clients about their bodies and helps both clients and providers in a better way to discuss the sexual and reproductive health issues.

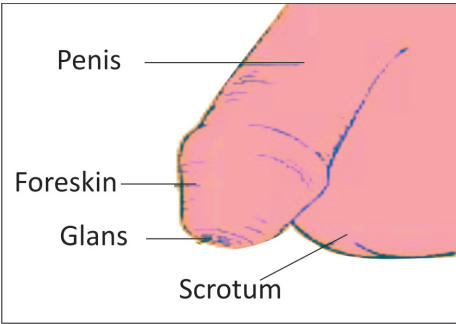
When describing sexual anatomy to clients, the health care providers should be sure that they should use language that the clients understand. Remember that many a times, clients may not use medical terminology when discussing their genital structures; they might use slang, or might even be too embarrassed to mention the names. To communicate effectively with clients, learn their terminology as you share the technical names for body parts.

Male sexual and reproductive organs

External male genitals

The external male genitals consist of the penis and the scrotum.

The penis is a cylindrical structure with the capacity to be flaccid or erect. The penis provides passage for both urine and semen. It can be a source of pleasure in response to sexual stimulation and is the organ that penetrates the mouth, vagina, or anus during penetrative sex. The head of the penis, the **glans penis**, is the part of the penis that is most sensitive and has the most nerve endings. The glans is covered by the foreskin, or **prepuce**, in men who are not circumcised.



The **scrotum** is a pouch of skin hanging directly under the penis that contains the testes. The scrotum protects the testes and maintains the temperature necessary for the production of sperm.

Internal male genitals

The internal male genitals are: the testes, the epididymis, the vas deferens, the seminal vesicles, the prostate gland, and the Cowper's glands.

The **testes**, the paired, oval- shaped organs that produce sperm and male sex hormones (testosterone), are located in the scrotum. They are highly innervated and sensitive to touch and pressure. The testes produce **testosterone**, which is responsible for the development of male sexual characteristics and sex drive (**libido**).

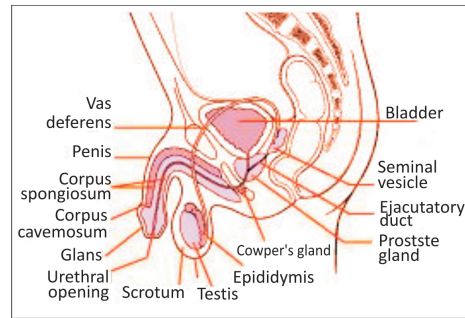
The **epididymis** are the two highly coiled tubes against the back side of the testes where sperm mature and are stored until they are released during ejaculation.

The **vas deferens** are the paired tubes that carry the mature sperm from the epididymis to the urethra.

The **seminal vesicles** are a pair of glandular sacs that secrete about 60% of the fluid that makes up the semen in which sperm are transported. Seminal fluid provides nourishment for sperm.

The **prostate gland** is a walnut-sized, glandular structure that secretes about 30% of the fluid that makes up semen. The alkaline quality of the fluid neutralizes the acidic environment of the male and female reproductive tracts. A muscle at the bottom of the prostate gland keeps the sperm out of the urethra until ejaculation begins. The prostate gland is very sensitive to stimulation and can be a source of sexual pleasure for some men.

The **Cowper's glands** are two pea-sized glands at the base of the penis under the prostate gland that secrete a clear alkaline fluid into the urethra during sexual arousal and before orgasm and ejaculation. These glands produce mucus-like, pre-ejaculatory fluid in the urethra that acts as a lubricant for the sperm and the urethra as semen flows out of the penis.



Female sexual and reproductive organs

External female genitals

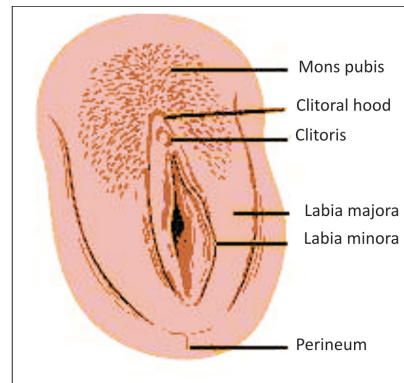
The external female genitals are: the mons pubis, the clitoris, the labia majora, and the labia minora. Together, along with the opening of the vagina, they are known as the **vulva**.

The **mons pubis** is a pad of fatty tissue over the pubic bone. This structure, which becomes covered with hair during puberty, protects the internal sexual and reproductive organs.

The **clitoris** is an erectile, hooded organ at the upper joining of the labia that contains a high concentration of nerve endings and is very sensitive to stimulation.

The **labia majora** are two spongy folds of skin, one on either side of the vaginal opening, that cover and protect the genital structures. The **labia minora** are the two erectile folds of skin between the labia majora that extend from the clitoris on both sides of the urethral and vaginal openings. (The area covered by the labia minora that includes the openings to the vagina and urethra, as well as the Bartholin's and Skene's glands, is called the **vestibule**.)

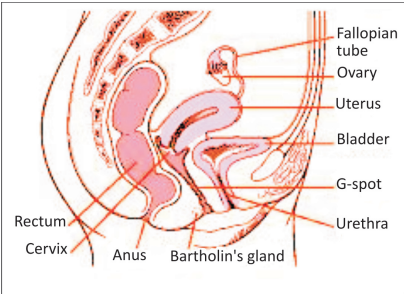
The **perineum** is a network of muscles located between and surrounding the vagina and anus that supports pelvic cavity and help keep pelvic organs in place.



Internal female genitals

The internal female genitals are: the vagina, the cervix, the uterus, the fallopian tubes, and the ovaries.

The **vagina** is a muscular, highly expandable, tubular cavity leading from the vestibule to the uterus. The anterior vaginal wall is more densely innervated and more highly sensitive to stimulation than the posterior vaginal wall.



The **Bartholin's glands** are two small, round structures, one on either side of the vaginal opening. These glands secrete a mucus-like fluid during sexual arousal, providing vaginal lubrication.

The **cervix** (the lower part of the uterus that protrudes into the vaginal canal) has an orifice that allows passage for menstrual flow from the uterus and passage of sperm into the uterus. During vaginal intercourse, contact with this structure may provide sexual pleasure in some women.

The **uterus** is a hollow, thick-walled, pear-shaped, muscular organ located between the bladder and rectum. It is the site for implantation of the fertilized ovum (egg), the location where the fetus develops during pregnancy, and the structure that sheds its lining monthly during menstruation. The upper portion of the uterus contracts during orgasm.

The **fallopian tubes (oviducts)** are a pair of tubes that extend from the upper uterus, extending out toward the ovaries (but not touching them), through which ova (eggs) travel from the ovaries toward the uterus and in which fertilization of the ovum takes place. The fallopian tubes contract during orgasm.

The **ovaries** are two organs located at the end of each fallopian tube that produce ova (releasing one per month from puberty to menopause). The ovaries produce **estrogen** and **progesterone**, the hormones responsible for the development of sex characteristics. These hormones are also responsible for elasticity of the genitalia, integrity of the vaginal lining, and lubrication of the genitalia. **Testosterone** is also produced – although in smaller amounts than is produced in men – and is responsible for sexual desire.

Where do STI/RTI occur?

STI/RTI in females

In women, RTI involve the outer genitals, vagina, cervix, and are referred to as lower reproductive tract infections. Infections in the uterus, fallopian tubes, and ovaries are considered upper reproductive tract infections.

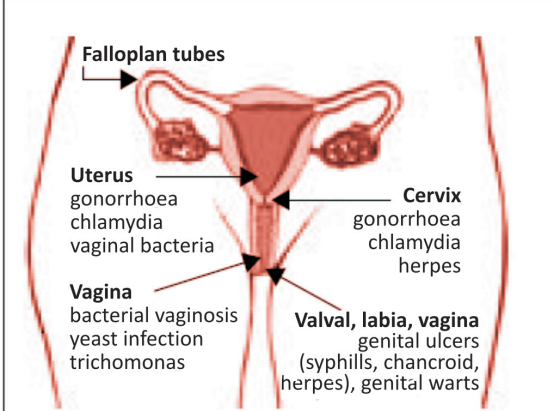
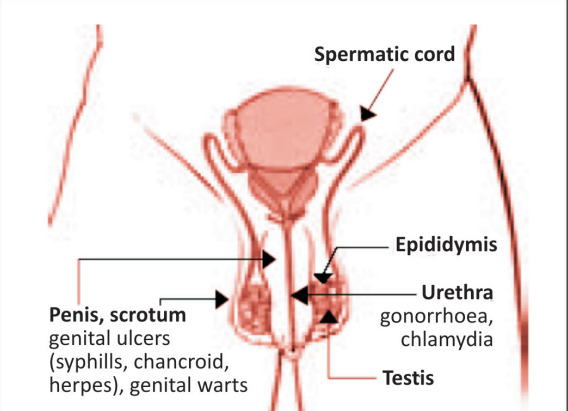
Note: Infections of the cervix are considered more severe than vaginitis because they much more commonly result in upper reproductive tract infection with its serious consequences. Unfortunately they are also more difficult to detect, as they are frequently asymptomatic.

STI/RTI in males

RTI generally begin in the lower reproductive tract (the urethra). If untreated, they may ascend through the vas deferens (sperm tube) to the upper reproductive tract (which includes the epididymis and testes). It also leads to prostatitis and epididymitis

Note: In general, RTI in men are easier to identify and treat, as they are more likely to be symptomatic.

Sites of STI/RTI in females and males

Female anatomy	Male anatomy
	

Source: Adopted from “Integrating STI/RTI care for reproductive health, sexually transmitted and other reproductive tract infections, A guide to essential practice-2005 WHO”

2. Types of STI/RTI

Any individual can become infected with a **sexually transmitted infection (STI)** or **reproductive tract infection (RTI)**, regardless of age, background, or socioeconomic class.

RTI that are most common but may not always be sexually transmitted are:

1. **Bacterial vaginosis (BV)**- A RTI in women that is caused by an imbalance in the vagina's normal environment and overgrowth of bacteria in the vagina.
2. **Vaginal yeast infection**- A RTI in women that occurs when the normal environment in the vagina changes and there is overgrowth of yeast, commonly *candida albicans*.

There are over 20 STI. But the most common are:

1. **Syphilis**- A STI caused by *Treponema Pallidum* that initially causes painless sores that will heal on their own but, if left untreated, can cause serious complications or even death.
2. **Gonorrhoea**- A STI due to infection by *Neisseria gonorrhoea* that can cause infertility in both men and women. It includes ophthalmia neonatarum
3. **Chlamydial infection**- A STI due to infection by *chlamydia trachomatis* in both men and women. It is often asymptomatic.
4. **Trichomonas infection**- A STI due to infection by *Trichomonas vaginalis* in both men and women. It is often asymptomatic.
5. **Chancroid**- A STI due to infection by *Haemophilus ducreyi*, that causes lymph node swelling and painful ulcers in the genital area.
6. **Genital herpes**- A STI due to *Herpes simplex* virus that causes painful genital ulcers.
7. **Genital and cervical warts due to Human papilloma virus (HPV)** - Growth or warts in the genital area caused by some forms of HPV. Other forms of HPVs can lead to cervical cancer.
8. **HIV infection** - is caused by a retrovirus (Human immunodeficiency virus infection virus) that weakens the immune system and causes AIDS.
9. **Hepatitis B and hepatitis C infection**- can cause liver damage, and possibly even liver failure.
10. **Donovanosis**- A STI due to infection by *Calymmatobacterium granulomatis* or *Klebsiella granulomatis* that can cause serious ulcers at the site of infection. These ulcers can grow together and cause permanent scarring and genital destruction.

11. **Lymphogranuloma venereum (LGV)** - A STI due to a subtype of *Chlamydia trachomatis* that causes inflammation of and prevents drainage of the lymph nodes in the genital area. LGV can cause destruction and scarring of surrounding tissue.
12. **Molluscum contagiosum** -A STI due to a virus that causes relatively benign skin infections. Molluscum contagiosum infection can lead to secondary bacterial infections.
13. **Genital scabies**- A STI in both men and women caused by itch mite, *Sarcoptes scabiei*.
14. **Pubic lice**- A STI in both men and women caused by pubic lice (*Phthirus pubis*).

3. Signs and symptoms of common STI/RTI

The following list identifies signs and symptoms of the most common STI/RTI:

In men:

- *Urethral discharge:* chlamydia, gonorrhoea, trichomonas infection
- *Genital ulcer:* treponema pallidum, H. ducreyi, Herpes Simplex infection
- *Genital itching:* chlamydia, gonorrhoea, trichomonas infection
- *Swollen and/or painful testicles:* chlamydia, gonorrhoea

In women:

- *Unusual vaginal discharge:* BV, Chlamydia, gonorrhoea, trichomonas infection, vaginal yeast infection
- *Genital itching:* BV, trichomonas infection, vaginal yeast infection
- *Abnormal and/or heavy vaginal bleeding:* chlamydia, gonorrhoea (*Note: This symptom is often caused by factors other than STI.*)
- *Bleeding after intercourse:* chlamydia, gonorrhoea, chancroid, genital herpes
- *Lower abdominal pain (pain below the belly button; pelvic pain):* chlamydia, gonorrhea and mixed anaerobic infection.
- *Persistent vaginal candidiasis:* HIV/AIDS
- *Dyspareunia*

In men or women:

- *Blisters or ulcers (sores) on the mouth, lips, genitals, anus, or surrounding areas:* chancroid, genital herpes, and syphilis
- *Burning or pain during urination:* chlamydia, genital herpes, trichomonas infection, and gonorrhoea
- *Itching or tingling in the genital area:* genital herpes, candidiasis
- *Jaundice (yellowing of the eyes and skin) and/or fever, headache, muscle ache, dark urine:* hepatitis B, hepatitis C
- *Warts or bumps on the genitals, anus, or surrounding areas:* HPV (genital warts)
- *Flu-like syndromes (fever, fatigue, headaches, muscle aches), mild liver inflammation:* CMV
- *Small, dimpled bumps or lesions on the skin that usually do not hurt or itch and are flesh colored, but can vary from white to yellow to pink:* molluscum contagiosum
- *Small, red lesions or ulcers in the genital or anal area; lymph node swelling in the genital area; chronic ulcers on the genitals or anus:* LGV
- *Red nodules or bumps under the skin on the mouth, genitals, or anus that ulcerate, become tender, and often bleed easily:* donovanosis

4. Classifications of STI/RTI

STI/RTI can be classified in several ways. They can be classified based on the actual **infectious agent** or the **type of agent** causing the STI/RTI and mode **of transmission, syndrome** (the combination of symptoms a person experiences and clinical signs a provider sees on physical exam)

To successfully incorporate the management of RTI and STI into reproductive health services, providers need to know what RTI and STI are, how they differ from one another, and how to recognize the signs and symptoms that indicate that a client has an STI or RTI. However, providers must also be aware that some RTI and STI are asymptomatic.

i. Classification of STI/RTI based on mode of transmission

	Where do they come from	How they spread	Common examples
Endogenous infections	Normally found in small numbers in vagina	Overgrowth can lead to symptoms	Yeast infection, Bacterial vaginosis
Sexually transmitted infections (STI)	Sex Partners	Sexual contact	Gonorrhoea, Chlamydia. Syphilis Chancroid, Trichomoniasis, Genital herpes, Genital warts, HIV
Iatrogenic infections	Inside or outside the body: - Endogenous (vagina) - STI (cervix or vagina) - Outside contamination	Infection may be pushed through the cervix into the upper genital tract and cause serious infections of the uterus, fallopian tubes and other pelvic organs. Contaminated needles or other instruments may also transmit infection if infection control is poor.	Pelvic inflammatory disease (PID) following abortion or other transcervical procedures. Also, many infectious complications of pregnancy and postpartum period. Transmission from patient to patient (or healthcare provider) of HIV, HBV, syphilis or other infection.

Adopted from “Integrating STI/RTI care for reproductive health, sexually transmitted and other reproductive tract infections: A guide to Essential practice-2005 WHO”

ii. Classification of STI/RTI based on symptoms/syndromes

Clients suspected of having STI/RTI usually present with one or more of the following complaints. These clinical entities may present as (i) vaginal or urethral discharge; (ii) vesicular and/or non-vesicular genital ulcers; (iii) inguinal bubo; (iv) lower abdominal and/or scrotal pain; and (v) genital skin conditions.

STI/RTI	Causative organisms	Symptoms/Signs
Presenting symptoms: Vaginal/Urethral discharge		
Gonorrhoea “drip”	<i>Neisseria gonorrhoea</i>	Women • Purulent (containing mucopus) vaginal discharge • Pain or burning on passing urine (dysuria) • Inflamed (red and tender) urethra Men • Pain or burning on passing urine (dysuria) • Purulent (containing mucopus) urethral discharge (drip) • Infection of the epididymis (coiled tube leading from the testis to the spermatic cord) • Urethral abscess or narrowing (stricture)
Trichomoniasis	<i>Trichomonas vaginalis</i>	• May produce few symptoms in either sex • Women often will have a frothy (bubbly), foul-smelling, greenish vaginal discharge • Men may have a urethral discharge
Chlamydia	<i>Chlamydia trachomatis</i>	Women • Produces few symptoms, even with upper genital tract infection (silent PID) • Purulent cervical discharge, frequently a “beefy” red cervix which is friable (bleeds easily) Men • Most frequent cause of non-gonococcal urethritis (NGU)
Bacterial vaginosis	<i>Overgrowth of anaerobes (e.g., Gardenella vaginalis)</i>	• Not necessarily sexually transmitted • Vaginal discharge with fishy odor, grayish in color

STI/RTI	Causative organisms	Symptoms/Signs
Candidiasis	<i>Candida albicans</i>	Women • Curd-like vaginal discharge, whitish in color • Moderate to intense vaginal or vulval itching (pruritus) Men • Itchy penile irritation (balanitis)
Presenting symptoms: Genital ulcers and buboes		
Chancroid (Soft chancre)	<i>Haemophilus ducreyi</i>	• Painful, “dirty” ulcers located anywhere on the external genitalia. • Development of painful enlarged lymph nodes (bubo) in the groin.
Syphilis	<i>Treponema pallidum</i>	Occurs in 3 forms: primary and secondary and late • Primary syphilis Initially, painless ulcer (chancre): in women on the external genitalia (labia), in men on the penis; in both sexes oral and anal ulcers and enlarged nontender, nonsuppurative rubbery lymph nodes • Secondary (disseminated) syphilis Several weeks later non-itchy body rash especially on palm and sole, headaches, muscle aches, weight loss, low-grade fever. The rashes may disappear spontaneously • Late syphilis Develops in about 25% of untreated cases and is often fatal due to involvement of the heart, great blood vessels and brain.
Lymphogranuloma venereum (LGV)	<i>Chlamydia trachomatis</i> (serovars L1, L2, L3)	• Small, usually painless papules (like pimples) on the penis or vulva, followed by • Buboes in the groin which ultimately breaks down forming many sinuses (draining openings) • If untreated, the lymphatic system may become blocked, producing elephantiasis (swelling of the genitals or extremities)

STI/RTI	Causative organisms	Symptoms/Signs
Granuloma inguinale (Donovanosis)	<i>Calymmatobacterium granulomatis</i> or <i>KleibSELLa granulomatis</i>	• An uncommon cause of ulcerative genital tract infection • Typically, the infected person develops lumps under the skin which break down to form “beefy” red, painless ulcers
Genital herpes	<i>Herpes simplex virus</i>	• Multiple painful vesicles later forming shallow ulcers which clear in 2 to 4 weeks (first attack) and may be accompanied by watery vaginal discharge in women • Recurrent (multiple bouts) more than 50% of the time.
Presenting symptoms: Lower abdominal pain		
Pelvic inflammatory disease (PID)	• <i>Neisseria gonorrhoea</i> • <i>Chlamydia trachomatis</i> • <i>Anaerobes</i>	• Lower abdominal pain, fever, vaginal discharge • Menstrual irregularities like heavy irregular vaginal bleeding • Dysmenorrhoea • Dyspareunia (pain during sexual intercourse) • Dysuria • Tenesmus • Low backache • Temperature> 390C • Vaginal/cervical discharge, congestion or ulcers • Lower abdominal tenderness or guarding • Uterine/adnexal tenderness, cervical movement tenderness, presence of a pelvic mass
Presenting symptoms: Acute scrotal pain and /or swollen scrotum		
Epididymitis/ Orchitis	• <i>Neisseria gonorrhoea</i> • <i>Chlamydia trachomatis</i>	Acute: severe pain in one or both testes, sudden swelling of the testes.
Presenting symptoms: Genital skin conditions		
Genital warts (Condyloma acuminata)	Human papilloma virus	• Single or multiple soft, painless, “cauliflower” growth which appear around the anus, vulvo-vaginal area, penis, urethra and perineum

STI/RTI	Causative organisms	Symptoms/Signs
Molluscum contagiosum	Pox virus	Multiple, smooth, glistening, globular papules of varying size from a pinhead to a split pea can appear anywhere on the body. Sexually transmitted lesions on or around genitals can be seen. Not painful except when secondary infection sets in.
Pediculosis pubis	Phthirus pubis	There may be small red papules with a tiny central clot caused by lice irritation. General or local urticaria with skin thickening may or may not be present.
Genital scabies	Sarcoptes scabiei	Severe pruritis (itching) is experienced by the client, which becomes worse at night. The burrow is the diagnostic sign. It can be seen as a slightly elevated grayish dotted line in the skin, best seen in the soft part of the skin.

Based on the above table the seven major STI/RTI syndromes are incorporated in the National Guidelines on Management of STI/RTI, they are:

1. Urethral discharge
2. Vaginal discharge
3. Genital ulcers
4. Inguinal buboes
5. Lower abdominal pain
6. Acute scrotal pain and /or scrotal swelling
7. Genital skin conditions

Please note that the STI/RTI are modified due to HIV infection. The clinical presentations of STI/RTI are seen in an exaggerated form.

5. Complications of STI/RTI

STI/RTI if left untreated can cause serious complications in males, females and neonates. Millions of men, women, and children all over the world are affected by the long-term complications of RTI and STI.

These infections can lead to numerous serious, long-term, and sometimes deadly complications, particularly in women. Some STI/RTI can also cause pregnancy-related complications or congenital infections. Unfortunately, symptoms and signs of many infections may not appear until it is too late to prevent serious consequences and damage to the reproductive organs.

In addition, the complications of RTI and STI affect even more than an individual's health. The morbidity associated with them has a profoundly adverse effect on the quality of life and economic productivity of many women and men, their families, and, consequently, entire communities.

Some of the most common complications of STI/RTI include:

- Pelvic inflammatory disease (PID), which can lead to ectopic pregnancy, infertility, and chronic pelvic pain
- Increased susceptibility to opportunistic infections
- Infertility, early labor and delivery, stillbirths, and spontaneous abortions
- Neurological, cardiovascular, and other systemic conditions
- Chronic pain and discomfort

Complications of STI/RTI in males

(i) Infertility

Infection of the upper reproductive tract can occasionally result in partial or complete blockage of the sperm ducts, and disorders in sperm production. This can cause low sperm counts in semen or abnormal sperm, which contribute to male infertility.

(ii) Carcinoma of the penis

Infection with Human papilloma virus (HPV) is associated with the development of penile cancer.

Complications of STI/RTI in females

(i) Pelvic inflammatory disease

Some of the most serious consequences of STI/RTI in women occur when an infection of the lower genital tract (cervix or vagina) or outside organisms reach the upper genital tract (uterus, fallopian

tubes, ovaries and surrounding structures). Infection may become generalized and life threatening, and resulting tissue damage and scarring may cause infertility, chronic pelvic pain and increased risk of ectopic pregnancy.

Untreated gonococcal and chlamydial infection in women results in pelvic inflammatory disease in upto 40% of cases. One in 4 of these will result in infertility.

(ii) Adverse outcomes of pregnancy

STI such as chlamydia, gonorrhoea, syphilis, genital herpes etc. are responsible for the adverse outcomes of pregnancy. In addition to ectopic pregnancy, other poor pregnancy outcomes that are linked to STI include:

- Fetal wastage - spontaneous abortion or stillbirth.
- Low birth weight due to premature delivery or intra-uterine growth retardation.
- Congenital or perinatal infections - eye infections causing blindness, infant pneumonias and mental retardation.

(iii) Infertility

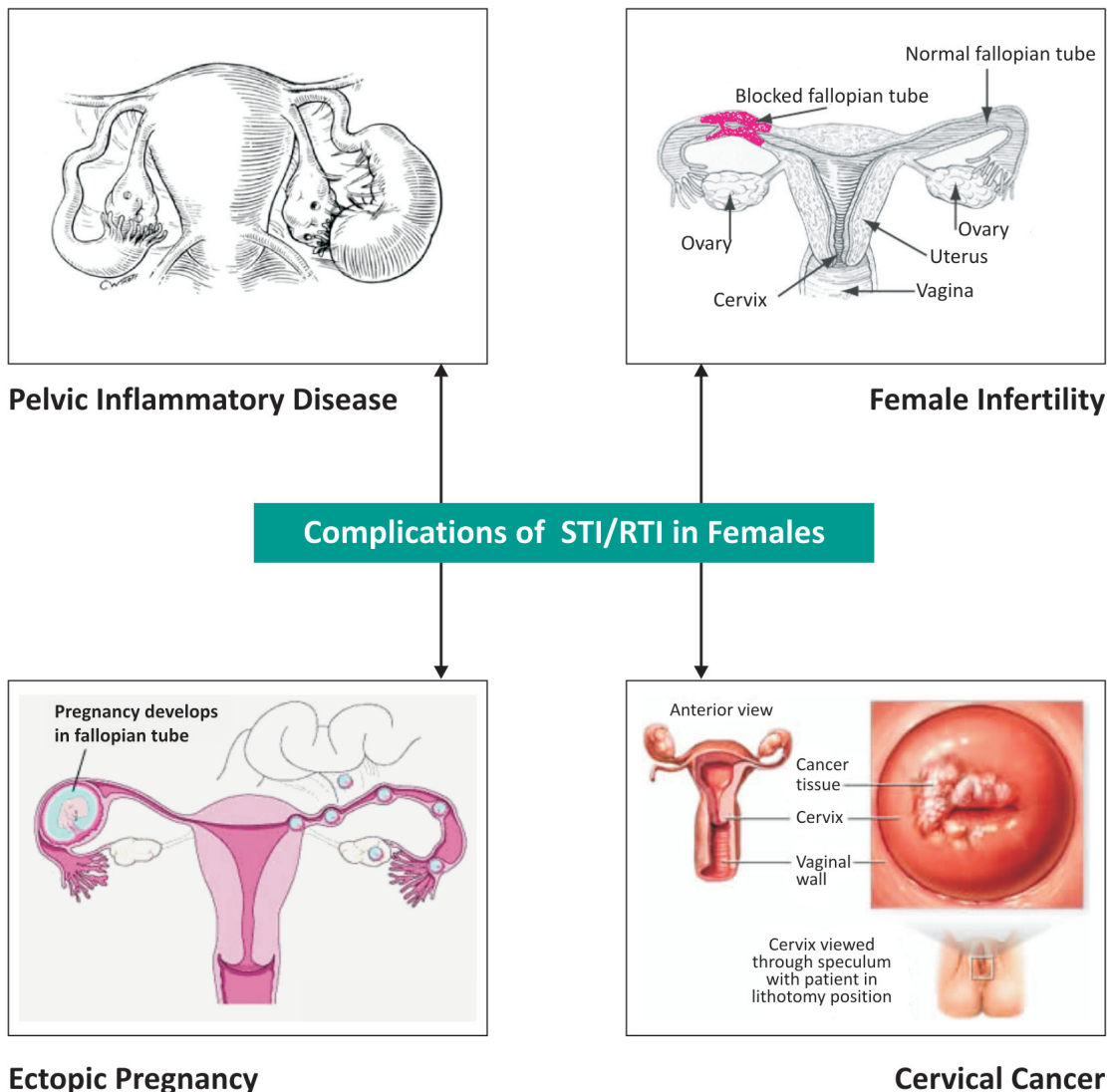
Infertility often follows after untreated pelvic inflammatory disease in women, and epididymitis and urethral scarring in men. In fact, complications of STI are the most important preventable causes of infertility in regions where childlessness is most common. Repeated spontaneous abortion and stillbirth often due to STI such as syphilis are other important reasons why couples are unable to have children.

(iv) Ectopic pregnancy

The tubal scarring and blockage that often follows PID may be total or partial. Fertilization can still occur with partial tubal blockage but risk of implantation in the fallopian tubes or other site outside the uterus (ectopic pregnancy) is high. Ruptured ectopic pregnancy, along with complications of abortion and postpartum infection, is a common preventable cause of maternal death in places with high prevalence of STI/RTI and PID.

(v) Cervical cancer

Infection with Human papilloma virus (HPV) appears to be strongly associated with the development of cervical cancer. HPV causes about 5,00,000 cases of cervical cancer resulting in 2,40,000 deaths mainly in the resource poor countries. It is the most common genital cancer among women in India. Cervical cytological screening (Papanicolaou smears) facilities are still not available in the primary health care facilities and therefore majority of diagnosed cases are detected in advanced stages when treatment has lower successful outcome.



Complications of STI/RTI in neonates

1. Perinatal and neo-natal infections

(i) Congenital syphilis

Congenital syphilis results from the transmission of *Treponema pallidum* infection from an infected pregnant woman to her fetus. Maximum transmission (up to 100%) occurs if the mother herself is in the primary or secondary stages of the disease and this transmission rate drops to 10% to 30% if the mother is in the late latent stage. The symptoms and signs of the congenital infection may not be evident till the infant is about 3 months old when hepatosplenomegaly, conjugated hyperbilirubinemia, skeletal lesions, skin and mucus membrane lesions and other features are detectable. If untreated, late manifestations appear in the second year of life.

(ii) Gonorrhoea

An untreated *Neisseria gonorrhoea* infection in pregnant woman results in its transmission to her neonate. The neonate may present with only conjunctivitis, which usually appears within the first four days of life and may progress to panophthalmitis unless treated. The newborn may also have systemic disease, which may present as sepsis, arthritis or meningitis.

(iii) Chlamydia

Chlamydia trachomatis can be vertically transmitted from an infected pregnant woman to her neonate and may cause only conjunctivitis or have systemic infection like pneumonitis.

Worldwide upto 4000 newborn babies become blind every year because of eye infection attributable to untreated maternal gonorrhoea and chlamydial infections.

(iv) Human immunodeficiency virus (HIV)

Most of the HIV transmission takes place during delivery but it must be remembered that HIV is also transmitted through breast milk (14%).

(v) Herpes simplex viruses 1 & 2 (HSV1 & HSV2)

The herpes simplex virus has a very high intrapartum transmission rate (75% to 90%) and can lead to localized or central nervous system or disseminated disease in the affected neonates with a very high rate of long-term residual sequelae.

(vi) Hepatitis B virus

Hepatitis B virus infection in the mother can be transmitted to the neonate. Neonatal infections result in higher carrier rates with more chances of long term sequelae.

There are a number of other infections like cytomegalovirus, candida, trichomonas and other organisms (TORCH infection) that are transmitted from the mother to the neonate and can cause serious morbidity.

2. Prematurity

STI/RTI in pregnancy especially bacterial vaginosis and trichomoniasis may result in preterm delivery, which can lead to prematurity and associated complications in the neonate.

3. Low birth weight

Low birth weight can be a result of prematurity or intrauterine growth retardation caused due to associated STI/RTI in pregnancy.

MODULE NO. 4

HISTORY TAKING AND RISK ASSESSMENT IN STI/RTI

Sr. No.	Topic	Page No
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2.	History taking and risk assessment for STI/RTI prevention	44
3.	Demonstration of history taking and risk assessment using a standardized checklist	45

1. Knowledge and skills necessary for STI/RTI history taking

The most important aspects of STI/RTI case management are accurate diagnosis and effective treatment. This needs time and skill in taking a detailed sexual history for both client and his/her sexual contacts; carrying out a comprehensive physical examination and minimal investigations in resource poor settings. To prevent the spread and complications, treatment must be effective, by selecting the effective drugs for treating the infection, carefully monitoring its administration and carrying out regular follow up. The sexual contact(s) must be traced so that they can be treated thereby preventing the infection from spreading further. They should be educated on prevention of STI/RTI as well.

The components of case management include:

- History taking
- Clinical examination
- Early and correct diagnosis
- Prompt and effective treatment
- Advice on sexual behavior
- Provision of condoms
- Partner management
- Case reporting
- Clinical follow-up as appropriate.

Thus, effective case management consists not only of antimicrobial therapy to obtain cure and reduce infectivity, but also comprehensive consideration and care of the Client's reproductive health.

How history taking helps in STI/RTI case management?

A patient history is taken to get the information needed to make an accurate assessment of the problem and to provide appropriate treatment. It is one of the most important and sensitive parts of the patient encounter, since we ask and probe about private sexual behaviors and concerns. Risk assessment involves asking how likely it is that someone has been or will be exposed to a STI/RTI. In this module we will cover the elements of history taking and risk assessment required to counsel patients on STI/RTI prevention, and for syndromic management of STI/RTI. Counseling and communication skills will be covered in further module on patient education.

What are the goals of taking history?

- To collect efficiently essential information that will help in diagnosis, treatment and prevention of STI/RTI.
- To establish the patient's risk of contracting or transmitting a STI/RTI.
- To determine if the patient has had any partners who may have been infected.

What information and skills are necessary for accurate history taking?

The most important part of history taking is to maintain its confidentiality and develop good rapport with patient. The provider needs to establish good rapport with the patient from the start.

How to establish rapport with patient?

- Smile and use welcoming tone of voice.
- Use patient's name during conversation.
- Offer seat to the patient.
- Stay close to the client, as culturally appropriate. Sometimes the desk or table creates barrier so ask the patient sit on the stool near you rather than on the opposite side of the table.
- Initiate talking only when you have privacy.
- Make eye contact, if it is culturally appropriate.
- Be respectful and understanding, especially if the client is hesitant.

The service provider should apply good interpersonal communication skills. While taking a history, the provider must reassure the patient that confidentiality will be maintained and explain the reason for asking certain questions. Patients are often embarrassed and may withhold important information if they think that others will know what they say. An effective provider is able to apply good interpersonal communication skills when taking a history, during an examination, and while providing information and counseling. An effective provider:

- Has a non-judgmental attitude
- Empathizes with the patient
- Listens actively
- Uses language the patient understands
- Poses questions clearly
- Recognizes and correctly interprets nonverbal clues and body language
- Paraphrases, interprets and summarizes patient's comments and concerns
- Offers praise and encouragement

Key considerations for effective history taking

- Always use the language, which the client understands well or is comfortable with.
- Ensure auditory as well as visual privacy: The STI/RTI patients are always concerned about hiding their identity and complaints. Therefore, unless privacy is ensured, the patient may not open up. This may lead to getting insufficient or incomplete information and thereby incorrect treatment.
- Assure confidentiality: The patients are also worried if their information will be known to others. Therefore, assure the patient that the information will remain between him and you (the provider), none else will come to know about it.
- Be non-judgmental.
- Start the conversation by welcoming your client, taking them into confidence and encouraging him/her to talk about their complaints. If a couple comes together, each of them also needs to be interviewed and examined separately.
- Be clear and confident in asking personal and sexuality related questions. Explain the patient why it is important to ask these questions. Tell her/him that the information have bearing on diagnosis and management of your problem. It has been observed that many health care providers themselves are hesitant about asking sexuality related question which make the patient also hesitant and uncomfortable.
- Often, because the client feels uncomfortable talking about STI/RTI, individuals may come to the clinic with other non-specific complaints or requesting a check-up, assuming that the health care provider will notice anything abnormal that needs treatment. Therefore, health care workers should maintain a high index of suspicion about STI/RTI.
- Clients seeking antenatal care and family planning services should be viewed as opportunities to provide general information about STI/RTI and should be asked about STI/RTI symptoms and contraception.
- One of the reasons why service providers hesitate to discuss STI/RTI with clients is that they don't want to start partner suspicion and partner conflict. One may assure that STI/RTI are not necessarily acquired through sexual contact but they can also be acquired through unhygienic conditions. For example, there is some evidence that HPV could be transmitted vertically from mother to child. Hence whilst emphasizing that they should not suspect only the partners, clearly indicate the possibility of sexual transmission and the need for both partners to be treated simultaneously. This is absolutely essential to get partner confidence and co-operation.
- The health care provider should be aware of the commonly used culturally appropriate STI/RTI related terminology as well as those used for high-risk behavior.

Information to be collected in history taking

General information:

- Name,
- Age,
- Sex,
- Address,
- Employment,
- Income,
- Marital status,
- Number of children,
- Use of contraceptive method if any, and
- Date of last menstrual period.

Present illness:

- Symptoms and
- Their duration
- Any treatment taken

Medical history:

- RTI and STI in the past,
- Other illnesses,
- Treatment taken
- Drug allergies.

Sexual history:

- Current sexual activity
- Current partners,
- New partner/s in last 3 months, and
- Risky sexual and other behaviors.

Common problems which may be encountered when taking a history related to STI/RTI are:

- Enough time is not available;
- The provider is uncomfortable talking about sex;
- If there is a difference in social status between the patient and the provider and when the provider is of opposite gender; and
- Difficult to maintain enough privacy.

2. History taking and risk assessment for STI/RTI prevention

Risk assessment is a process of confidentially asking a patient particular questions to determine his or her chance of contracting or transmitting a STI/RTI (e.g. many women may be at risk due to the behavior of their husbands or partners). Health workers everywhere use risk assessment to diagnose many kinds of problems.

It is important to assess men and women's risk equally. Risk assessment is most effective when the questions are developed in local language and according to local needs and conditions. Assessing risk may be improved by tailoring questions to reflect local STI prevalence, making questions more culturally appropriate and devising ways to help clients assess their own risk (self-assessment). There is some evidence that self-risk assessment can provide information that is more accurate because it avoids the difficulties of face-to-face questioning on sexual behavior. Self-assessment of risk requires the health care worker to provide the client with sufficient information to allow the client to decide whether s/he is at risk. Often people suspect they are at risk but are reluctant to discuss their situations; and they need encouragement to ask any questions they may have.

Limitations of risk assessment:

- It requires asking difficult, sensitive questions.
- Clients may feel embarrassed about answering such questions, especially if the provider is of opposite sex.
- Clients may not understand the questions being asked since some of the scientific words/sentences cannot be translated in local language/terms.
- Information given may be inaccurate, poorly recalled, or untruthful.

3. Demonstration of history taking and risk assessment using a standardized Checklist

Framing statement

“In order to provide the best care for you and to understand your risk for certain infections, it is necessary for us to talk about your sexual behavior.”

Screening questions

- Have you recently developed any of these symptoms?

STI (Genital infections) symptoms checklist

For men

- i. Discharge or pus (drip) from the penis
- ii. Urinary burning or frequency
- iii. Genital sores (ulcers) or rash or itching
- iv. Scrotal swelling
- v. Swelling in the groin
- vi. Infertility

For women

- i. Abnormal vaginal discharge (increased amount, abnormal odor, abnormal color, consistency)
- ii. Genital sores (ulcers), rash or Itching
- iii. Urinary burning or frequency
- iv. Pain in lower abdomen
- v. Dysmenorrhoea, menorrhagia, irregular menstrual cycles?
- vi. Dyspareunia
- vii. Infertility

High risk sexual behavior

- For all adolescents: Have you begun having any kind of sex yet?
- If sexually active do you use condom consistently?
- Do you have any reason to think you might have a sexually transmitted disease? If so, what reason?
- Have you had sex with any man, woman, with a gay or a bisexual?
- Have you or your partner had sex with more than one partner?
- Has your sex partner(s) had any genital infections? If so, which ones?
- Do you indulge in high risk sexual activity like anal sex
- Do you practice correct and consistent condom usage while having sex? If yes, whether every time or sometimes?

STI history

- In the past have you ever had any genital infections, which could have been sexually transmitted? If so, can you describe?

STI treatment history

- Have you been treated in the past for any genital symptoms? By whom? (qualified or unqualified person)
- Did your partner receive treatment for the same at that time?
- Has your partner been treated in the past for any genital symptoms? By whom? (qualified or unqualified person)

Injection drug use

- Have you had substance abuse? (If yes, have you ever shared needles or injection equipment?)
- Have you ever had sex with anyone who had ever indulged in any form of substance abuse?

Menstrual and obstetric history in women and contraceptive history in both sexes should be asked

MODULE NO. 5

CLINICAL EXAMINATION FOR STI/RTI

Sr. No.	Topic	Page No
1.	Clinical examination for STI/RTI	48

1. Clinical examination for STI/RTI

The purpose of clinical examination is:

- To confirm any STI/RTI symptoms the client has described.
- To look for signs the client may not have noticed if you think s/he is at risk

Elements of clinical examination for STI/RTI

- General examination
- Inspection of the external genitalia (male and female)
- Abdominal examination (female)
- Speculum examination (female)
- Bimanual examination (female)

Remember: A normal finding on physical examination does not mean that the patient does not have a STI/RTI.

What are pre-requisites for physical examination?

- Clients should be examined in the same conditions of privacy as those in which history was taken.
- It is advisable to have an assistant of the same sex as the client present, during examination of clients of sex opposite to the doctors.
- Clients should be told about the examination with the help of diagrams and charts.
- The examination should be done in a well-lit room while providing adequate comfort and privacy. Before you start, keep the examination table with proper illumination ready as well as sterilized speculums (for examination of female clients), collection swabs and labeled slides for smears.
- As far as possible, complete body examination of the client should be carried out so that none of the skin lesions or lymph nodes is missed.

Ideal set up for conducting clinical examination

For Women

- Privacy/separate room
- Light source
- Examination table for client to lie on

- Cusco's Speculum
- Allis' forceps, Sponge holder
- Tray with lid /cover to keep instruments.
- Stainless steel bowls
- Disposable and clean gloves that have been disinfected
- Soap and sufficient water for hand washing and towel
- Cotton
- Cloth drape or undergarments or client's clothing for female exam.
- Lubricant or water for speculum exam
- Savlon/Betadine/Sodium Hypochlorite solution/Bleaching powder
- Sterilizer/Autoclave

For Men

- Separate room with privacy
- Light source
- Examination table/stool
- Soap and water for hand-washing
- Disposable gloves
- Time?

Physical examination of female clients

A. General examination

- All examinations should begin with a general assessment, including vital signs and inspection of the skin and mucous patches, to detect signs of systemic disease, some examples given below.



Lesions of secondary syphilis



Mucous patches in secondary syphilis

Fig Lesions of secondary syphilis

B. Examination of the abdomen

Before you start, ask the patient to empty her bladder if she hasn't done so in the last half hour.

- Explain the procedure to her. Ask her to undress or to pull up her clothing so that you can see her abdomen from just below her breasts down to her pubic hair.
- Ask her to lie flat on her back on a firm bed or table with knees comfortably bent. Ask her to relax her abdominal muscles as much as she can.
- Listen for bowel sounds by putting a stethoscope on her abdomen. If you do not hear anything for 2 minutes, this is a sign of danger.
- Ask her to point to the area that hurts the most. Then begin pressing gently on the other side to see where it hurts most.
- As you press her abdomen, feel for lumps or masses, guarding, if her abdomen is soft or hard, and if she can relax it under your hand.
- To make sure she does not have a life threatening problem like appendicitis, an infection in her gut, or PID, slowly but firmly press on her abdomen on the left side, then her right side, just above where the leg joins the body (the groin).
- Press until it hurts a little. Then quickly remove the hand. If a very sharp pain (rebound pain) happens when the hand is removed, she may have a serious infection. Refer her immediately. If she does not have rebound pain, complete the exam and move on to examine the genitals.

C. External genital examination

While examining a female client, a male doctor should ensure that a female attendant is present. Genital examination in females must be performed with patient in lithotomy position.

Some of the signs of various STI/RTI in women are shown as pictures in the following figures:



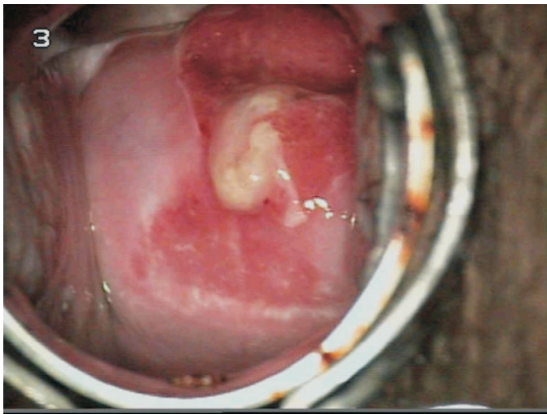
Vesicles of Genital Herpes



Abrasions of Intertrigo



Herpetic ulcers



Pus pouring out of endocervix in extensive mucopurulent cervicitis due to chlamydia trachomatis infection



Growth of genital warts



Chancre of Syphilis

a) Inspection

Staining of underclothes: Vaginal and urethral discharge, exudative ulcers

Inguinal region

- Swelling, ulcer, lesions of fungal infections
- Lymph nodes: look for enlargement, number, location (horizontal or vertical group), single or multiple, scars and puckering, signs of inflammation on the surface and surrounding region
- Abrasions due to scratching and lesions on inner aspect of thigh

Pubic area

- Matting of hairs, pediculosis, folliculitis, or other skin lesions

Labia majora and minora

- Separate the labia majora with both hands and look for erythema, edema, red formation (lobulated fibrosed masses due to chronic lymphedema), fissuring, ulcers, warts or other skin lesions

Ulcers

- Location, number (single, multiple), superficial (erosions) or deep, edge (undermined/punched out), margins (regular/irregular) and floor (presence of exudates, slough/granulation tissue)

Bartholin glands

- Enlargement, ductal opening, discharge

Introitus

- Discharge – colour, odour, profuse or scanty, curdy or thin, back drop of redness and inflammation

Urethral meatus

- Discharge (pressing under the urethra with one finger may show drops of discharge), inflammation

Perianal examination

Separate the buttocks with two hands for better visualization. Look for ulcer, macerated papules of condyloma lata, warts, discharge, patulous anus, haemorrhoids, fissures, fistula

b) Palpation

Inguinal region

- Lymphnodes: tenderness, increased warmth, superficial or deep, discrete or matted, free mobility or fixed to deeper structures, consistency (firm or soft) and fluctuant.
- Rule out hernia

Palpation of ulcer at any site

- Tenderness, induration of the floor base and edges, bleeding on touch

D. Speculum examination

How to do speculum examination in women

- Ask the woman to pass urine.
- Wash your hands well with clean water and soap.
- Ask her to loosen her clothing. Use a sheet or clothing to cover her.
- Tell her to lie on her back, with her clean heels close to her bottom and her knees up.
- Wear clean gloves in both hands.
- Look at the outside genitals – using the gloved hand to gently look for lumps, swelling, unusual discharge, sores, tears and scars around the genitals and in between the skin folds of the vulva.
- Be sure that the speculum has been properly disinfected before you use it. Wet the speculum with clean water before inserting it.
- Put the first finger of your gloved hand in the woman's vagina. As you put your finger in, push gently downward on the muscle surrounding the vagina (work slowly, waiting for the woman to relax her muscles).
- With the other hand, hold the Cusco's speculum blades together between the first and the middle fingers. Turn the blades sideways and slip them into the vagina. (Be careful not to press on the urethra or clitoris because these area are very sensitive). When the speculum is halfway in, turn it so that the handle is down. Remove your gloved finger.
- Gently open the blades a little and look for the cervix. Move the speculum slowly and gently until you can see the cervix between the blades. Tighten the screw on the speculum so it will stay in place.
- Check the cervix, which should look pink, round and smooth. Notice if the opening is open or closed, and whether there is any discharge or bleeding. If you are examining the woman

because she is bleeding from the vagina after birth, abortion or miscarriage, look for tissue fragments coming from the opening of the cervix.

- Look for signs of cervical infection by checking for abnormal yellowish discharge, redness with swelling, or easy bleeding when the cervix is touched with a swab. If the woman has been leaking urine or stools gently turn the speculum to look at the walls of the vagina. Bring the blades closer together to do this.
- To remove the speculum, gently pull it towards yourself until the blades are clear of the cervix. Then bring the blades together and gently pull back. Be sure to disinfect your speculum again.

E. Bimanual pelvic examination

1. Put the index finger of your gloved hand in the woman's vagina. As you put your finger in, push gently downward on the muscles surrounding the vagina. When the woman's body relaxes put the middle finger in also. Turn the palm of your hand up and advance gently until you reach the cervix.
2. Feel the opening of the cervix to see if it is firm and round. Then put one finger on either side of the cervix and move the cervix gently from side to side. It should move easily, without causing pain. If it does cause pain, she may have an infection of the uterus, tubes, or ovaries. If her cervix feels soft, she may be pregnant.
3. Feel the uterus by gently pushing on her lower abdomen with your outside hand– this moves the uterus, tubes, and ovaries closer to your inside hand. The uterus may be tipped forward or backward. If you do not feel it in front of the cervix, gently lift the cervix with your inside hand and feel around it for the body of the uterus. If you feel the uterus under the cervix, it is pointed to the back.
4. When you find the uterus, feel for its size and shape. Do this by moving your inside fingers to the sides of the cervix. Then 'walk' the fingers of your outside hand around the uterus, feeling the uterus between your two hands. It should feel firm, smooth, and smaller than an average sized lemon.

If the uterus:

- Feels soft and large, she is probably pregnant.
 - Feels lumpy and hard, she may have a fibroid or other growth.
 - Hurts when you touch it, she probably has an infection inside.
 - Does not move freely, she could have scars from an old PID infection.
5. Feel for the tubes and ovaries. If these are normal, they will not be felt. But if you feel any lumps that are bigger than an almond or that cause severe pain, she could have an infection or other emergency. If she has a painful lump and her period is late, she could have an ectopic pregnancy.
 6. Feel along the inside of the vagina for unusual lumps or sores.

7. If anything feels abnormal and you don't know what the problem is or how to treat it, refer the patient.
8. On completion of the exam, record data regarding the presence or absence of findings relevant to your diagnosis.

Physical examination of male clients

1. The male patient can be examined standing or lying down on an examination table.
2. Reassure him that you will be gentle and explain everything you are doing and what you find.
3. Ask him to lower his pants so that he is stripped from the chest down to the knees. Examine the penis, noting any rashes or sores. Ask the patient to pull back the foreskin if present, and look at the glans penis and the urethral meatus. Ask the patient to milk the urethra if not seen.
4. Palpate the inguinal region (groin), looking for enlarged lymph nodes and buboes.
5. Palpate the scrotum, feeling for individual parts of the anatomy (the testis, epididymis, and spermatic cord on each side).
6. Have the patient turn his back to you and bend over while spreading his buttocks slightly. Look at the anus for the presence of ulcers, warts, rashes, or discharge.
7. Record the presence or absence of ulcers, buboes, genital warts, and urethral discharge, noting color and amount.

Signs to look for when examining men

a) Inspection

Staining of underclothes: due to urethral discharge, subprepuccial discharge or from exudative ulcers.

Inguinal region: swelling, ulcer, candidial intertrigo, tinea, enlarged lymph nodes: look for number, location (horizontal or vertical group), single or multiple pointings, scars and puckering, signs of inflammation on the surface and surrounding region

Pubic area: matting of hairs, pediculosis, folliculitis, or other skin lesions.

Scrotum: erythema, skin lesions (condyloma lata), asymmetry, scrotal swelling.

Penis: Size, oedema, deformity, phimosis, paraphimosis, autoamputation of genitals, foreign bodies, old scars, circumcision, retraction of prepuce.

Inspection of ulcers: Number (single, multiple), superficial (erosions) or deep, edge (undermine/punched out), margins (regular/irregular) and floor (presence of exudates, slough/granulation tissue).

Meatal examination: Erythema, discharge: thick, creamy or mucopurulent, wart, ulcer. If no discharge then milk the penis (urethra) and look for discharge at the meatus.

Prepuce skin examination: Erosions, ulcer, warts, posthitis or other skin lesions.

Coronal sulcus: Ulcer, warts, pearly penile papules.

Glans penis examination: Erosions, ulcers, warts, balanitis (candidial, trichomonal).

Shaft of penis: papules, nodules, ulcers or other skin lesions, fibrosis.

Perianal examination: Separate the buttocks with two hands for better visualization. Look for ulcer, macerated papules of condyloma lata, warts, discharge, patulous anus, haemorrhoids, fissures, fistula.

b) Palpation

Inguinal region: Lymphnodes: tender or not, increased warmth, superficial or deep, discrete or matted, free mobility or fixed to deeper structures, consistency: firm or soft and fluctuant. Rule out hernia.

Palpation of spermatic cords: Tenderness, asymmetry, and thickening, varicoceles.

Palpation of scrotum: Asymmetry, tenderness, consistency of testes and epididymis, transillumination for hydrocoele. Rule out hernia.

Indicated if unprotected anal intercourse, rectal discharge.

Palpation of ulcer at any site: Tenderness, induration of the floor and edges, bleeding on maneuvering.

c) Digital rectal examination

Performed if symptoms suggestive of prostatic disease. Should not be carried out if the client has painful perianal disease such as herpetic ulcers, fissures, or haemorrhoids.

d) Proctoscopic examination

Indicated if unprotected anal intercourse, rectal discharge.

Some of the signs of various STI/RTI in men are shown in the following figures:



Urethral discharge in gonorrhea



Herpes ulcers



Multiple grouped erosions over shaft of penis



Chancre of glans in Syphilis



Chancre of coronal sulcus in Syphilis



Ulcer of Donovanosis



Condyloma lata of Syphilis

MODULE NO. 6

MANAGEMENT APPROACHES FOR STI/RTI

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2.	Diagnosis and management of STI/RTI by different approaches	62
3.	Use of flowcharts in management of STI/RTI	65

1. STI/RTI case management

The main objectives of STI/RTI management are:

- To diagnose the infection at the earliest,
- Provide correct and complete treatment,
- Encourage change in risk behaviors, and
- Ensure that sexual partners are appropriately treated.

Quality management of STI/RTI is important because it:

- Prevents the development of long-term complications.
- Reduces the length of time a person is infected and, therefore, reduces further spread of STI/RTI including HIV.
- Reduces the level of STI/RTI in the population that present an increased risk for sexual transmission of HIV.
- Allows for education and counseling on risk reduction and health-seeking behaviors.
- Generally improves the quality of people's lives.

Management of STI/RTI involves more than simply diagnosis and treatment of the infection.

The 7 steps of comprehensive STI/RTI case management are:

1. Take history.
2. Conduct physical examination.
3. Provide treatment.
4. Provide health education on prevention.
5. Provide condoms and demonstrate use.
6. Offer Partner treatment.
7. Follow up or refer as needed.

The above steps consists of the following critical components:

Counseling and education: Client-centered counseling helps prevent the spread of infection and reduce clients' risk for infection and reinfection. Counseling and health education also provide clients with information on potential complications, as well as strategies to change risky sexual behaviors.

Condom promotion: Demonstration/instruction on correct use of condoms and access to an adequate supply of condoms are essential parts of STI management. Programs should help clients to understand the importance of consistent and correct use and the steps of proper condom use, as well as help them develop skills for negotiating condom use.

Adherence with treatment: Providers must educate clients about the importance of following and completing treatment regimens, even after all symptoms have disappeared. Providers should explore ways that clients can successfully adhere to treatment regimens by identifying potential barriers to adherence (e.g., costs, schedule, family or partner finding out) and strategize ways to overcome these barriers.

Partner notification: When feasible, sexual partners of clients with STI should be notified and encouraged to seek appropriate care however, strict confidentiality is critical, and issues of domestic violence or potential harm to the client must also be addressed). Treating partners prevents the further spread of the infection and reinfection of the client. There are three options for notifying Partners: 1) clients can be counseled about talking to their partners on their own, 2) providers can tell partners in conjunction with clients, and 3) if resources permit, providers or public health workers can inform partners.

These seven components are sometimes referred to as the “Six C’s”:

1. Counseling and education of patient
2. Contact tracing
3. Condom promotion
4. Compliance with treatment
5. Come back for follow up
6. Cure the patient

The management of sexually transmitted infections (STI) and reproductive tract infections (RTI) can be difficult because:

- Many a times Lab Testing is often not available in low-resource primary health care settings, so diagnosis must be made based on symptoms and signs.
- Some infections are impossible to differentiate, even by highly trained providers, based solely on their signs and symptoms.
- Clients who seek treatment from multiple providers may present with symptoms altered by previous treatments.

2. Diagnosis and management of STI/RTI by different approaches

The two main approaches to STI/RTI diagnosis and management:

- The etiological approach
- The syndromic approach

The etiological approach

The etiological approach, the most traditional of the two, is based on the results of laboratory tests. These tests identify the specific infectious agent, which then determines the treatment to be administered. Although this approach is often reliable for management of STI/RTI, it is often not available to health providers in the developing world especially at the primary health care level because it depends on trained laboratory technicians, availability of lab supplies, and in some cases expensive, specialized equipment; there are limitation of the lab test to identify the causative organism. Additionally, this method may require the client to return for a second visit in order to collect laboratory results and receive treatment.

The syndromic approach

Because of the unavailability of laboratory tests in many low resource primary health care settings and the potential for inaccuracy when providers rely on the clinical approach alone, syndromic management is often the best approach.

In this approach, diagnosis is based on the identification of syndromes, which are combinations of the symptoms the client reports and the signs the health care provider observes. The recommended treatments are effective for all the diseases that could cause the identified syndrome.

Comparison between Etiologic and Syndromic approach

S. No.	Etiologic approach	Syndromic approach
1	Possible to get an exact diagnosis using laboratory tests	Diagnosis may be wrong in certain cases e.g. in case of vaginal discharge syndrome, the approach is not effective to manage gonorrhoea and chlamydia infection
2	Avoids over-treatment	Over-treatment of patient as well as partner may happen.
3	Patient must return for test results and must wait for treatment till the lab results comes.	The patient is diagnosed and treated in one visit
4	More chances of lost to follow up	No loss to follow up
5	Expensive as trained laboratory technicians as well as infrastructure and supplies are needed	Relatively inexpensive as it avoids use of laboratory tests

So looking at advantages and disadvantages of all 2 approaches, it shows that among 2 approaches, the syndromic approach is having more advantages and seems to be an appropriate approach.

Syndromic management of STI/RTI

Syndromic management should be used only when a patient presents with a STI/RTI complaint; it should not be used to screen for STI/RTI because it is not accurate in this situation.

Clients suspected of having STI/RTI usually present with one or more of the following complaints. These clinical entities may present as (i) vaginal or urethral discharge; (ii) vesicular and/or non-vesicular genital ulcers; (iii) inguinal bubo; (iv) lower abdominal and/or scrotal pain; and (v) genital skin conditions.

Limitations of syndromic management

The flowcharts for urethral discharge and genital ulcers are very effective. However, syndromic management cannot address the widespread problem of asymptomatic infections, in which clients do not experience any symptoms at all. Some STI/RTI, such as chlamydia, gonorrhea, human papilloma virus (HPV), hepatitis B, and genital herpes, often cause infections that are asymptomatic. This means that the STI/RTI might never produce signs and symptoms, or that they might not appear for a long time. For example, the majority of HPV infections in women and men cannot be recognized clinically, and up to 75% of primary episodes of herpes are asymptomatic or produce only mild or unrecognized symptoms. More than 75% of women with chlamydia are symptom-free, yet this STI/RTI can lead to pelvic inflammatory disease (PID), which, in turn, can lead to infertility and ectopic pregnancy.

The limitations of syndromic management for women with vaginal discharge

Syndromic management has been widely adopted and has proven useful for most syndromes. However, syndromic management of vaginal discharge is an exception because vaginal discharge is poorly correlated with the major causes of cervicitis, gonorrhoea and chlamydia.

Management of vaginal discharge has the following problems:

1. Vaginal discharge most often indicates vaginitis. A number of studies have shown that the most common causes of vaginal discharge are bacterial vaginosis (BV), trichomonas vaginalis (TV), and candidiasis. Of these, only TV can be sexually transmitted. Signs and symptoms previously thought to be associated with STI such as yellow vaginal discharge are not specific for STI and may be more common with non-sexually transmitted vaginitis.
2. Many women with cervicitis do not have vaginal discharge or lower abdominal pain.
3. Syndromic management of vaginal discharge has been misused as a screening tool. This happens when women, who present to a health facility for other reasons, are asked if they have vaginal discharge and then managed as if they came initially to complain of discharge. We know that often vaginal discharge is either normal or related to vaginal infections. In many settings, 40-50% of women will say, “yes” when asked if they have discharge. This can lead to massive overtreatment of STI. Studies of the validity of syndromic management have shown that vaginal discharge should not be used as a routine screening tool.

4. The cervix is not easily accessible. There is some evidence that syndromic management of vaginal discharge can be improved by examination of the cervix to determine whether there is a cervical discharge or inflammation, but this requires training, tools, time, and supplies.

Overcoming problems in the syndromic management of vaginal discharge

1. We now know that vaginitis itself may have serious consequences. Bacterial vaginosis is associated with PID. BV and trichomoniasis are associated with preterm labor and also with an increase in HIV transmission. There is more benefit from treating vaginitis than previously thought.
2. Assess the STI risk of anyone with vaginal discharge carefully. If you or she suspect high risk based on prevalence of STI in your patient population, her occupation, or her partner's symptoms, occupation or behavior; treat her for cervicitis and vaginitis and try to ensure partner treatment. The higher her risk, the greater the need to treat her immediately at the first visit. If she is at high risk, you might also find ulcers or another STI.
3. Treat vaginal discharge as vaginitis only, unless you have convincing reasons to believe the patient is at high risk for STI. This means not treating her partner initially. Treat with an antifungal if she has evidence of candida.
4. Use every method you have to make a better, more specific diagnosis of STI in those women who have symptoms but are lower risk. If you have the time and privacy to do an external inspection for vaginal discharge and to palpate the abdomen, do so. If you have one glove and can check for cervical motion tenderness and do a bimanual exam, do so. It may conserve your resources to save speculum exams for women who return with persistent symptoms or whose history is confusing. All of this may add to the accuracy (increased sensitivity, specificity, and predictive value) of your diagnosis.
5. Tailor your approach to syndromic management of vaginal discharge according to your clinical setting. Consider how high the risk to your population is (prevalence), how much of an exam you are capable of doing well, and whether or not useful diagnostic tests and effective treatment are available. Also consider the reason for a woman's visit: does she have vaginal discharge or has she come for another reason? Is she going to have a procedure (IUD or abortion), which puts her at increased risk if she is infected with a STI?
6. One of the best ways to reach women at risk who are without symptoms is to target their partners. Find ways to welcome men to your clinic, reach out to men in the community, and make sure any men you treat for STI have their Partners treated and know how to use condoms.

How to practice syndromic management

As we know that through this approach, symptoms and easily identified physical signs are used to diagnose and treat patients for all possible STI/RTI that may cause this syndrome rather than for specific STI/RTI. By using this knowledge decision making flowcharts are prepared to practice syndromic management

3. Use of flowcharts in management of STI/RTI

Steps in using flowcharts

- Determine the clinical problem - ask for patient's presenting symptom
- Find the appropriate flowchart by looking at the clinical problem box at the top
- Usually the flowchart will ask you to take a history and examine the patient
- Use the results from the history and examination to make a decision - usually by choosing "yes" or "no"
- Depending on your decision, there may be more boxes to consider and more choices to make
- Follow the arrows, proceeding one step at a time until you reach the end of a branch, or exit path
- Each of the exit paths leads to an action box. This is the box that tells you how to manage the case.

The benefits of using flowcharts

- They can be used in all types of health facilities
- They suggest clear decisions
- Standard treatment guidelines are given
- Most cases can be treated at the health facility without referrals to higher levels

The main components of a flowchart

(Example from flowchart for genital ulcer)

- 1) The clinical problem—the patient's presenting symptom, such as genital sores. The flowchart always begins with this.
- 2) The STI/RTI causing such presenting symptoms
- 3) The causative organisms for STI/RTI
- 4) The decision that needs to be made based on history, clinical examination and laboratory tests.
- 5) The action that needs to be carried out based on the information given by the client such as monogamous relationship or multiple Partners and in case of women whether she is pregnant or not.

Management approaches of STI/RTI by flowcharts

In the National Guidelines on Management of STI/RTI, the management of seven major STI/RTI syndromes is incorporated in the form of flowchart. These flowcharts will help to guide health care workers in the management of STI/RTI. The flowcharts describe the clinical syndrome, specific STI/RTI under the syndrome and the causative organisms of the STI/RTI syndrome. Differential diagnosis of the conditions is also mentioned wherever appropriate. The approach to the client with specific points to be considered during history taking and examination is highlighted. If facilities and skills are available, the laboratory tests, which need to be done, are also mentioned. The treatment protocols to be followed at the primary health care system with appropriate referrals where indicated is also given. Special emphasis is given on syndrome specific partner management and management issues specific to pregnancy.

Important considerations for management of all Clients of STI/RTI
• Educate and counsel client and sex partner(s) regarding STI/RTIs, genital cancers, safer sex practices and importance of taking complete treatment • Treat partner(s) where ever indicated • Advise sexual abstinence during the course of treatment • Provide condoms, educate about correct and consistent use • Refer for voluntary counseling and testing for HIV, Syphilis and Hepatitis B • Consider immunization against Hepatitis B • Schedule return visit after 7 days to ensure treatment compliance as well as to see reports of tests done. • If symptoms persist, assess whether it is due to treatment failure or re-infection and advise prompt referral.

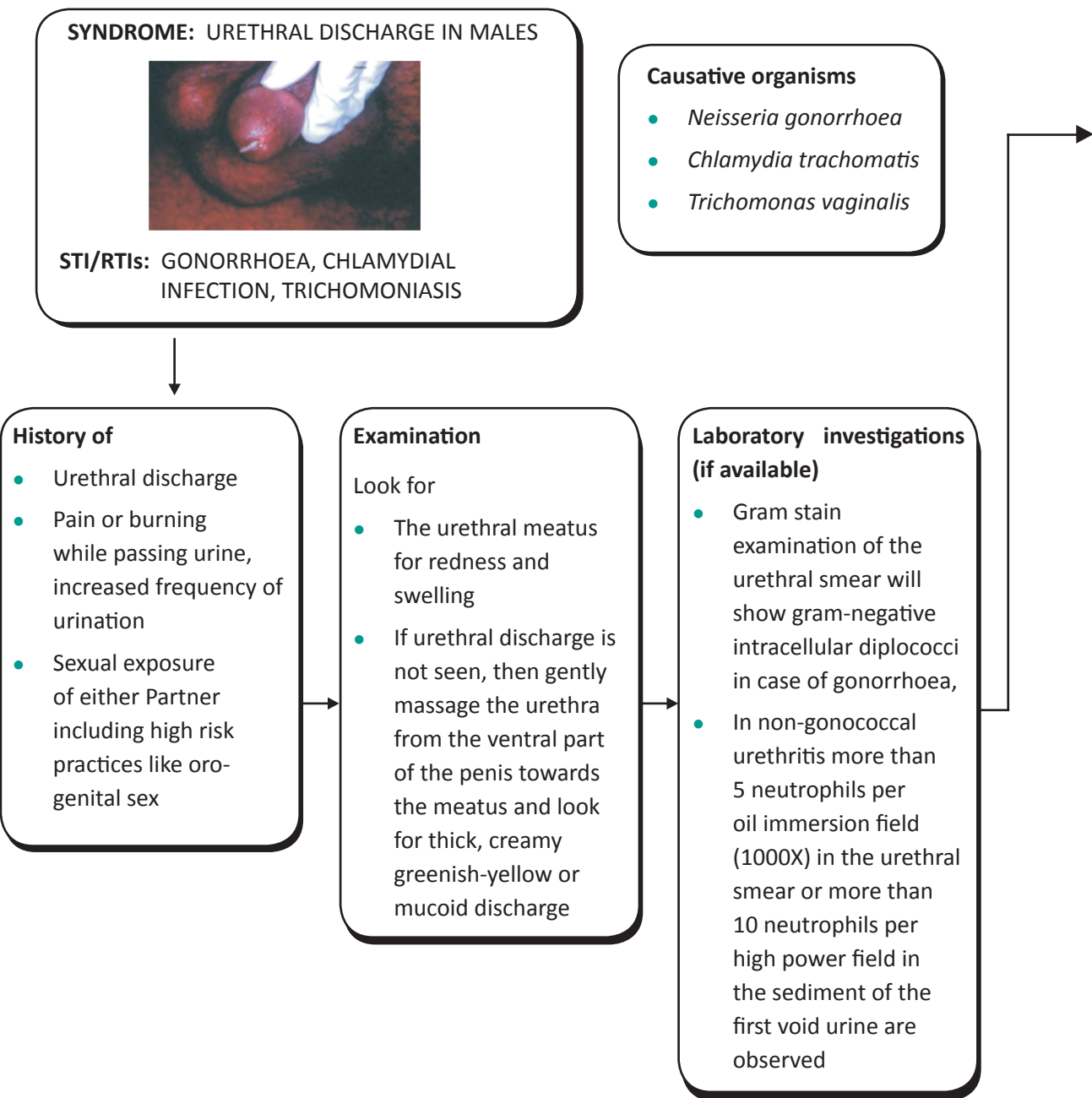
MODULE NO. 7

SYNDROMIC CASE MANAGEMENT FOR MANAGING STI/RTI

Sr. No.	Topic	Page No
1.	Using flow chart in management of STI/RTI	68
2.	Drugs used in STI/RTI management	89

1. Flowcharts for Management of STI/RTI Syndromes

Flowchart 1: Management of Urethral Discharge/Burning Micturition in Males



As dual infection is common, the treatment for urethral discharge should adequately cover therapy for both, gonorrhoea and chlamydial infections.

Recommended regimen for uncomplicated gonorrhoea + chlamydia

Uncomplicated infections indicate that the disease is limited to the anogenital region (anterior urethritis).

- Tab. Cefixime 400 mg orally, single dose Plus
- Tab Azithromycin 1 gram orally single dose under supervision
- Advise the Client to return after 7 days of start of therapy

When symptoms persist after adequate treatment for gonorrhoea and chlamydia in the index client and partner(s), they should be treated for *Trichomonas vaginalis*.

If discharge or only dysuria persists after 7 days

- Tab. Secnidazole 2gm orally, single dose (to treat for *T. vaginalis*)

If the symptoms still persists

- Refer to higher centre as early as possible

Syndrome specific guidelines for Partner management

- Treat all recent Partners
- Treat female partners (for gonorrhoea and chlamydia) on same lines after ruling out pregnancy and history of allergies
- Advise sexual abstinence during the course of treatment
- Provide condoms, educate about correct and consistent use
- Refer to ICTC for testing of HIV & Syphilis
- Schedule return visit after 7 days

Management of pregnant Partner

Pregnant partners of male clients with urethral discharge should be examined by doing a per speculum as well as per vaginal examination and should be treated for gonococcal as well as chlamydial infections.

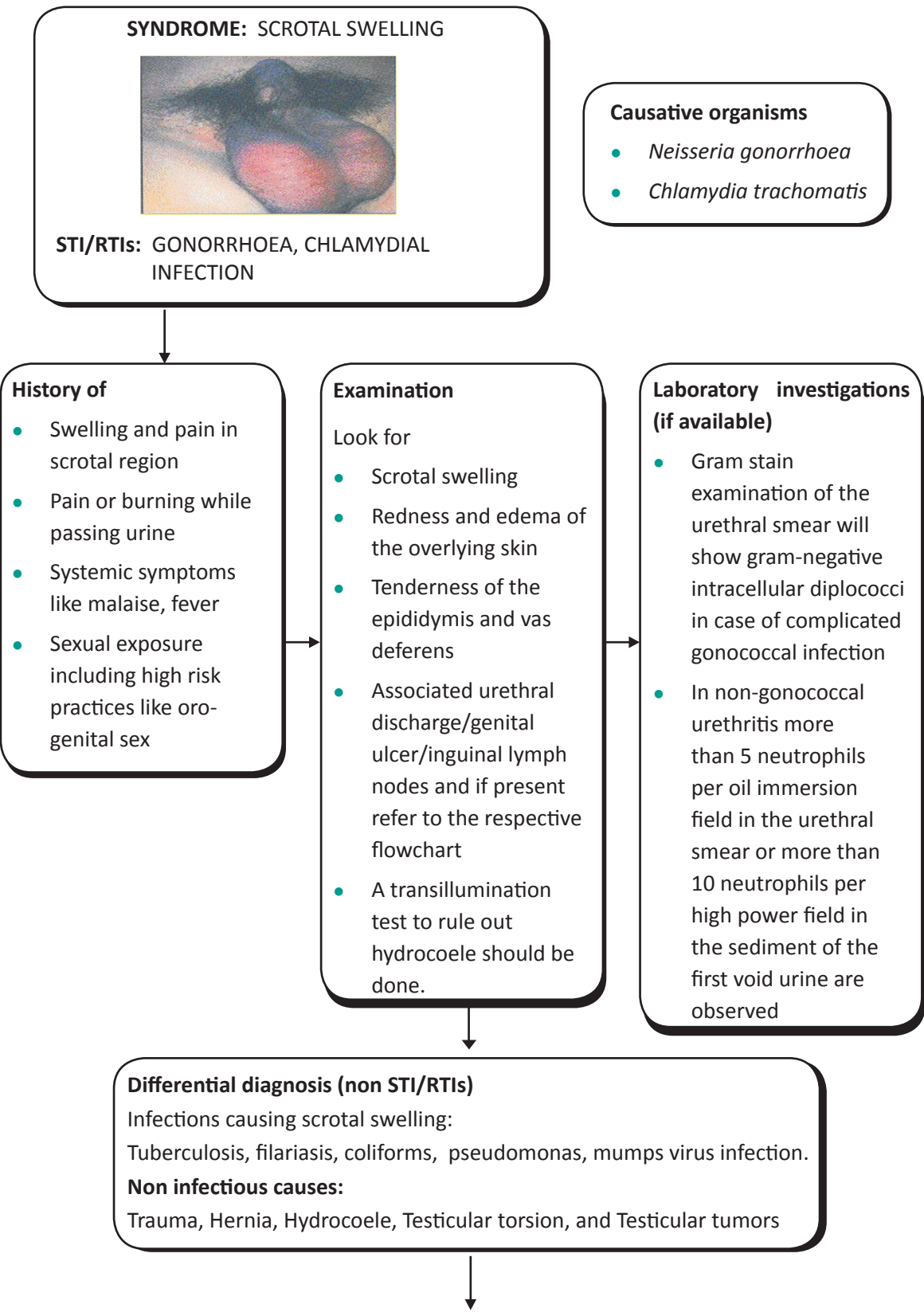
- Cephalosporins to cover gonococcal infection are safe and effective in pregnancy
- Tab. Cefixime 400mg orally, single dose or
- Ceftriaxone 125mg by intramuscular injection +
- Tab. Erythromycin 500mg orally four times a day for seven days or
- Cap Amoxicillin 500mg orally, three times a day for seven days to cover chlamydial infection
- Quinolones (like ofloxacin, ciprofloxacin), doxycycline are contraindicated in pregnant women.

Follow up

After seven days

- To see symptomatic relief
- To see reports of tests done for HIV & syphilis
- If symptoms persist, to assess whether it is due re-infection
- For prompt referral if required

Flowchart 2: Management of Scrotal Swelling



Treatment

- Treat for both gonococcal and chlamydial infections
 - ◆ Tab. Cefixime 400 mg orally, single dose Plus Tab Azithromycin 1 gram orally single dose under supervision, if patient does not respond to the treatment refer to higher centre as early as possible since complicated gonococcal infection may needs parental and longer duration of treatment
- Supportive therapy to reduce pain (bed rest, scrotal elevation with T-bandage and analgesics)

Note

If quick and effective therapy is not given, damage and scarring of testicular tissues may result causing sub fertility

Syndrome specific guidelines for Partner management

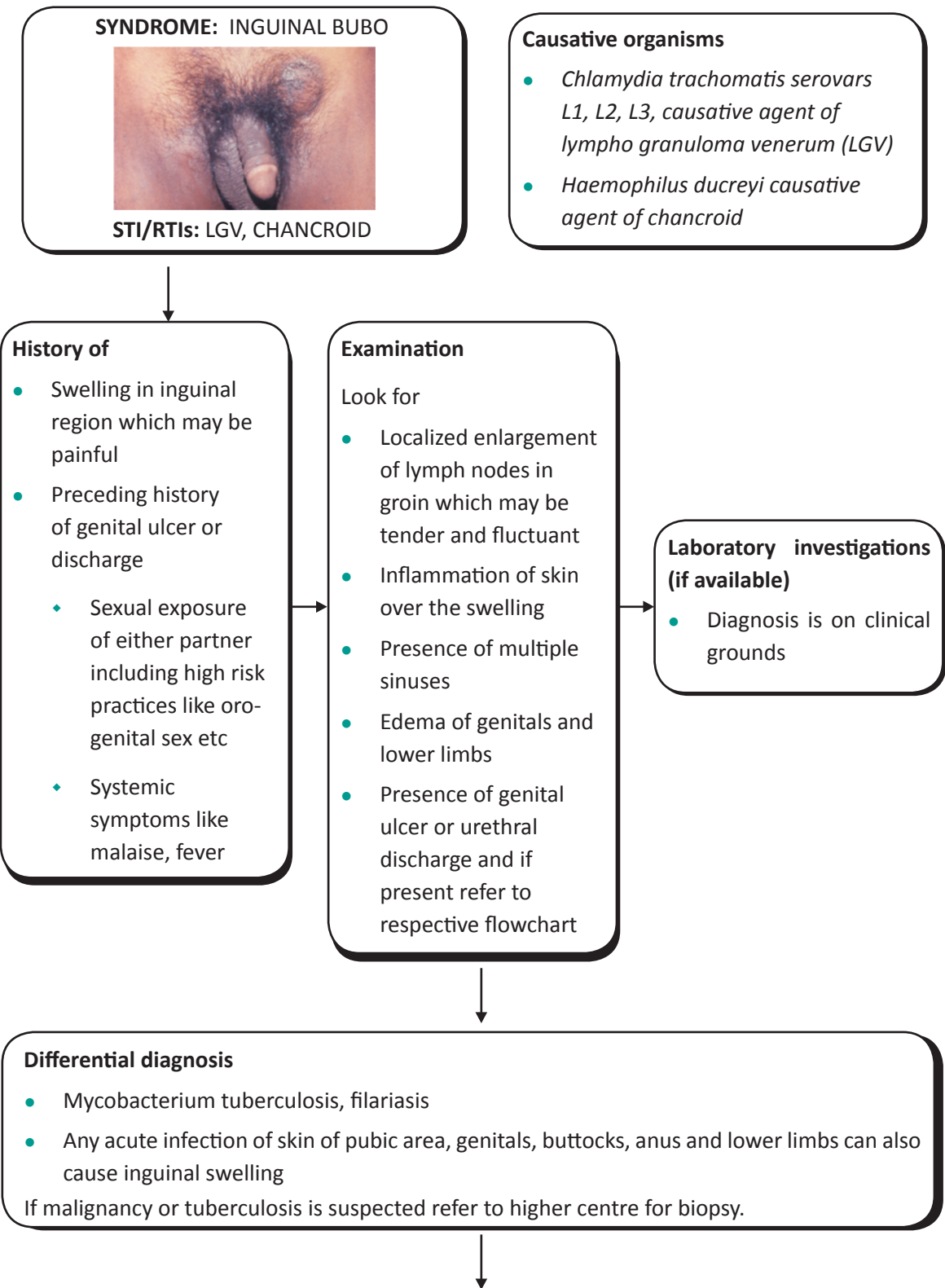
Partner needs to be treated for gonococci & chlamydia infections

Management protocol in case the Partner is pregnant

- Depending on the clinical findings in the pregnant partner (whether vaginal discharge or endocervical discharge or PID is present) the drug regimens should be used.
- Doxycycline is contraindicated in pregnancy
- Erythromycin base/Amoxicillin can be used in pregnancy.

(Erythromycin estolate is contraindicated in pregnancy due to hepatotoxicity. Erythromycin base or erythromycin ethyl succinate should be given)

Flowchart 3: Management of Inguinal Bubo





Treatment

- Start Cap. Doxycycline 100mg orally twice daily for 21 days (to cover LGV) Plus
- Tab Azithromycin 1g orally single dose OR
- Tab. Ciprofloxacin 500mg orally, twice a day for three days to cover chancroid
- Refer to higher centre as early as possible.

Note:

- A bubo should never be incised and drained at the primary health centre, even if it is fluctuant, as there is a high risk of a fistula formation and chronicity. If bubo becomes fluctuant always refer for aspiration to higher centre.
- In severe cases with vulval edema in females, surgical intervention in the form of vulvectomy may be required for which they should be referred to higher centre.



Syndrome specific guidelines for Partner management

- Treat all Partners who are in contact with Client in last 3 months
- Partners should be treated for chancroid and LGV
- Tab Azithromycin 1g orally single dose to cover chancroid
+
Cap Doxycycline 100mg orally, twice daily for 21 days to cover LGV
- Advise sexual abstinence during the course of treatment
- Provide condoms, educate on correct and consistent use
- Refer to ICTC for HIV & syphilis testing
- Schedule return visit after 7 days and 21 days



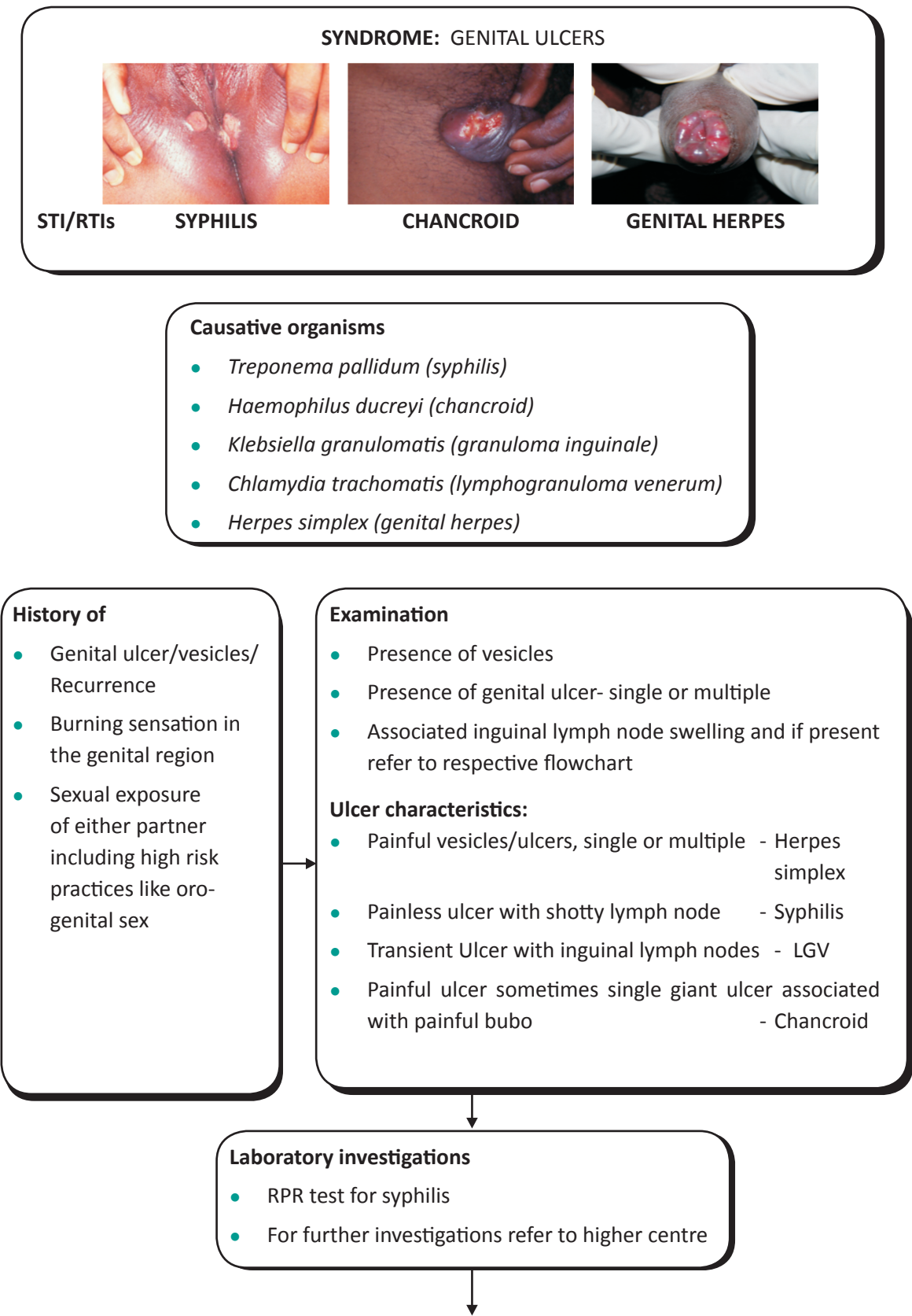
Management of pregnant Partner

- Quinolones (like ofloxacin, ciprofloxacin), doxycycline, sulfonamides are contraindicated in pregnant women.
- Pregnant and lactating women should be treated with the erythromycin regimen, and consideration should be given to the addition of a parenteral amino glycoside (e.g., gentamicin)

Tab. Erythromycin base, 500mg orally, 4 times daily for 21 days and refer to higher centre.

(Erythromycin estolate is contraindicated in pregnancy due to hepatotoxicity. Erythromycin base or erythromycin ethyl succinate should be given)

Flowchart 4: Genital Ulcers



Treatment

- If vesicles or multiple painful ulcers are present treat for herpes with Tab. Acyclovir 400mg orally, three times a day for 7 days
- If vesicles are not seen and only ulcer is seen, treat for syphilis and chancroid and counsel on herpes genitalis To cover syphilis give Inj Benzathine penicillin 2.4 million IU IM after test dose in two divided doses (with emergency tray ready) (In individuals allergic or intolerant to penicillin, Doxycycline 100mg orally, twice daily for 14 days)

+

Tab Azithromycin 1g orally single dose or

Tab. Ciprofloxacin 500mg orally, twice a day for three days to cover chancroid

Treatment should be extended beyond 7 days if ulcers have not epithelialized i.e. formed a new layer of skin over the sore)

If both ulcers (GUD-NH) & blisters (GUD-H) are present or when the provider is not able to differentiate between the two then treat for both GUD – NH and GUD herpetic infections.

Refer to higher centre

- If not responding to treatment
- Genital ulcers co-existent with HIV
- Recurrent lesion

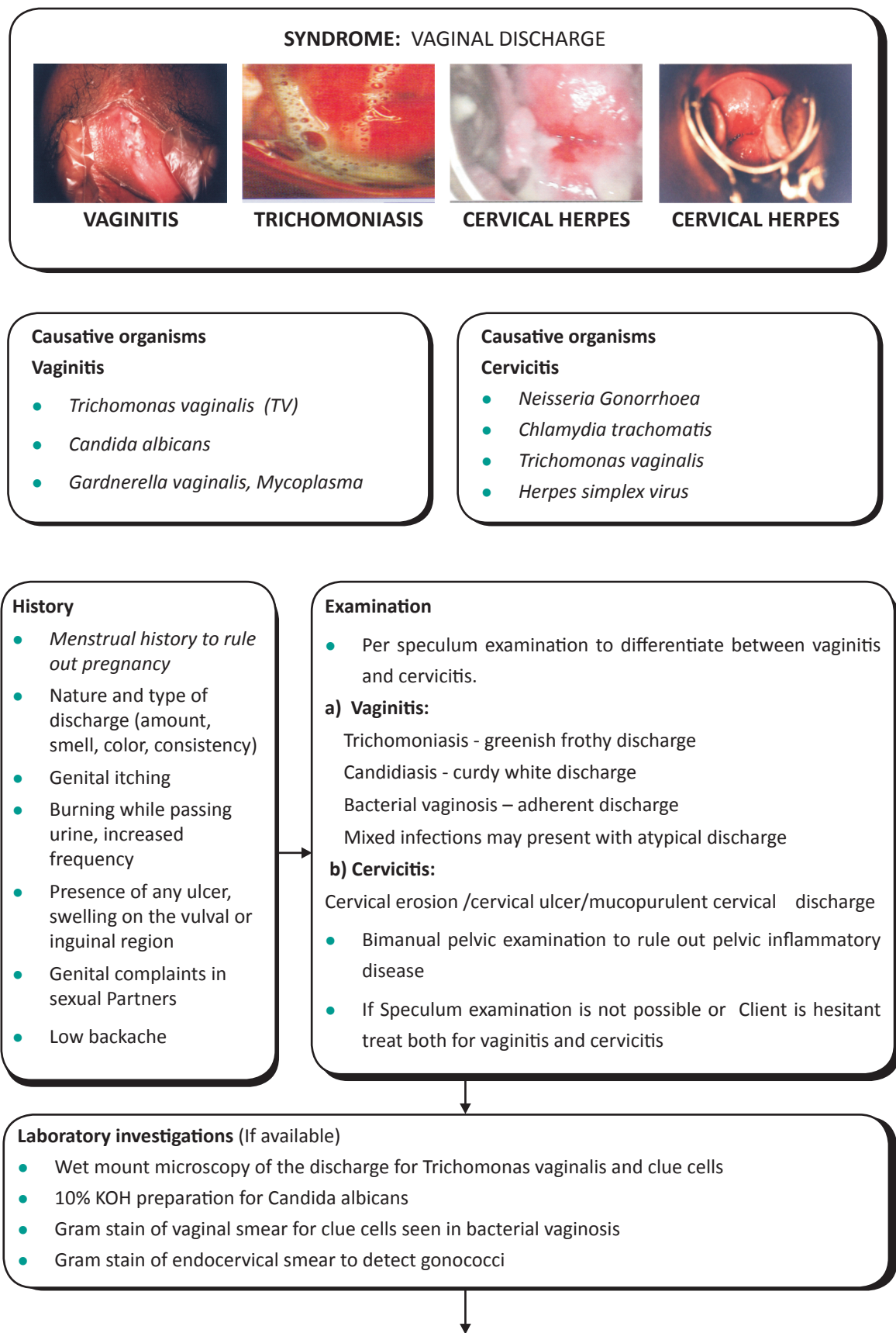
Syndrome specific guidelines for Partner management

- Treat all Partners who are in contact with client in last 3 months
- Partners should be treated for syphilis and chancroid
- Advise sexual abstinence during the course of treatment
- Provide condoms, educate about correct and consistent use
- Refer to ICTC for HIV & Syphilis testing
- Schedule return visit after 7 days

Management of Pregnant Women

- Quinolones (like ofloxacin, ciprofloxacin), doxycycline, sulfonamides are contraindicated in pregnant women.
- Pregnant women who test positive for RPR should be considered infected unless adequate treatment is documented in the medical records and sequential serologic antibody titers have declined.
- Inj Benzathine penicillin 2.4 million IU IM after test dose (with emergency tray ready)
- A second dose of benzathine penicillin 2.4 million units IM should be administered 1 week after the initial dose for women who have primary, secondary, or early latent syphilis.
- Pregnant women who are allergic to penicillin should be treated with erythromycin and the neonate should be treated for syphilis after delivery.
- Tab. Erythromycin 500mg orally four times a day for 15 days
(Note: Erythromycin estolate is contraindicated in pregnancy because of drug related hepatotoxicity. Only Erythromycin base or erythromycin ethyl succinate should be used in pregnancy)
- All pregnant women should be asked history of genital herpes and examined carefully for herpetic lesions.
- Women without symptoms or signs of genital herpes or its prodrome can deliver vaginally.
- Women with genital herpetic lesions at the onset of labour should be delivered by caesarean section to prevent neonatal herpes.
- Acyclovir may be administered orally to pregnant women with first episode genital herpes or severe recurrent herpes.

Flowchart 5: Management of Vaginal Discharge in Females



Treatment

Vaginitis (TV+BV+Candida)

- Tab. Secnidazole 2gm orally, single dose or
Tab. Tinidazole 500mg orally, twice daily for 5 days
- Tab. Metoclopramide taken 30 minutes before Tab. Secnidazole, to prevent gastric intolerance
- Treat for candidiasis with Tab Fluconazole 150mg orally single dose or local Clotrimazole 500mg vaginal pessaries once

Treatment for cervical infection (chlamydia and gonorrhoea)

- Tab cefixim 400 mg orally, single dose
- Plus Azithromycin 1 gram, 1 hour before lunch. If vomiting within 1 hour, give anti-emetic and repeat
 - ♦ If vaginitis and cervicitis are present treat for both
 - ♦ Instruct client to avoid douching
 - ♦ Pregnancy, diabetes, HIV may also be influencing factors and should be considered in recurrent infections
 - ♦ Follow-up after one week

Specific guidelines for Partner management

- Cervicitis: Treat all Partners for gonorrhea and Chlamydia.
- Vaginitis: Generally partner treatment is not required. If Partner is symptomatic, treat Partner for the symptom.
- Advise sexual abstinence during the course of treatment
- Provide condoms, educate about correct and consistent use
- Schedule return visit after 7 days

Management in pregnant women

Per speculum examination should be done to rule out pregnancy complications like abortion, premature rupture of membranes

Treatment for vaginitis (TV+BV+Candida)

In first trimester of pregnancy

- Local treatment with Clotrimazole vaginal pessary/cream only for candidiasis. Oral Flucanazole is contraindicated in pregnancy.
- Metronidazole pessaries or cream intravaginally if trichomoniasis or BV is suspected.

In second and third trimester oral metronidazole can be given

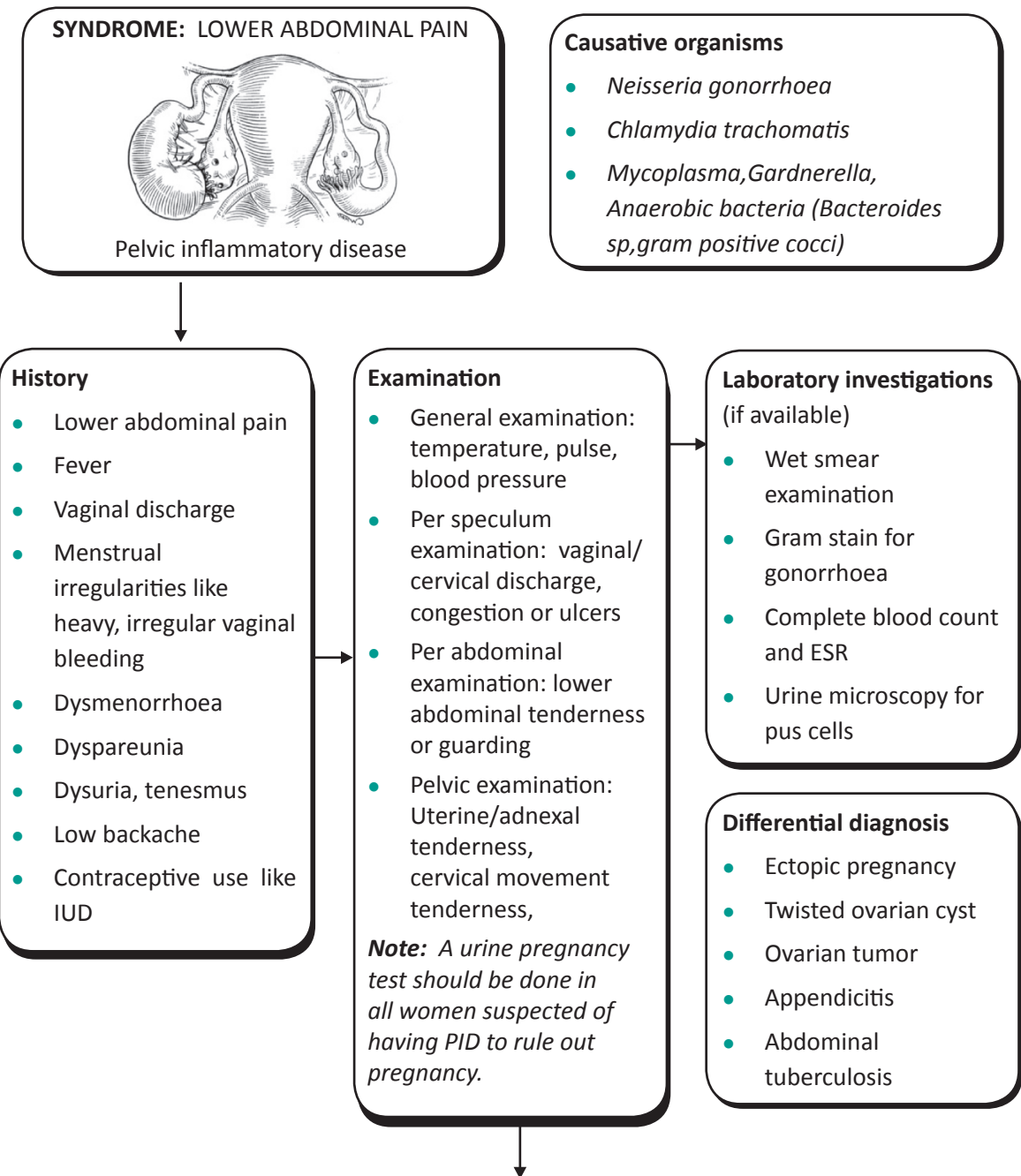
- Tab. Secnidazole 2gm orally, single dose or
Tab. Tinidazole 500mg orally, twice daily for 5 days
- Tab. Metoclopramide taken 30 minutes before Tab. Metronidazole, to prevent gastric intolerance

Management of pregnant women with cervicitis

Pregnant women with cervical discharge should be examined by doing a per speculum as well as per vaginal examination and should be treated for gonococcal as well as chlamydial infections.

- Cephalosporins to cover gonococcal infection are safe and effective in pregnancy
 - ♦ Tab. Cefixime 400 mg orally, single dose or
 - ♦ Ceftriaxone 125 mg by intramuscular injection +
 - ♦ Tab. Erythromycin 500mg orally four times a day for seven days or
 - ♦ Cap Amoxicillin 500mg orally, three times a day for seven days to cover chlamydial infection
 - ♦ Quinolones (like ofloxacin, ciprofloxacin), doxycycline are contraindicated in pregnant women.

Flowchart 6: Management of Lower Abdominal Pain in Females



Treatment (Out Client treatment)

In mild or moderate PID (in the absence of tubo ovarian abscess), Out Client treatment can be given. Therapy is required to cover *Neisseria gonorrhoea*, *Chlamydia trachomatis* and anaerobes.

- Tab. Cefixim 400 mg orally Stat + Tab. Metronidazole 400mg orally, twice daily for 14 days
+
- Doxycycline, 100mg orally, twice a day for 2 weeks (to treat Chlamydial infection)
- Tab. Ibuprofen 400mg orally, three times a day for 3-5 days
- Tab. Ranitidine 150mg orally , twice daily to prevent gastritis
- Remove intra uterine device, if present, under antibiotic cover of 24-48 hours
- Advise abstinence during the course of treatment and educate on correct and consistent use of condoms
- Observe for 3 days. If no improvement (i.e. absence of fever, reduction in abdominal tenderness, reduction in cervical movement, adnexal and uterine tenderness) or if symptoms worsen, refer for in Client treatment.
- Schedule return visit after 3 days, 7 days & 14 days to insure compliance.

Caution: PID can be a serious condition. Refer the Client to the hospital if she does not respond to treatment within 3 days and even earlier if her condition worsens.

Hospitalization of Clients with acute PID should be seriously considered when:

- The diagnosis is uncertain
- Surgical emergencies e.g. appendicitis or ectopic pregnancy cannot be excluded
- A pelvic abscess is suspected
- Severe illness precludes management on an outpatient basis
- The woman is pregnant
- The Client is unable to follow or tolerate an out regimen
- The Client has failed to respond to outpatient therapy

Note: All Clients requiring hospitalization should be referred to the district hospital

Syndrome specific guidelines for Partner management

- Treat all Partners
- Treat male Partners for urethral discharge (gonorrhoea and chlamydia)
- Advise sexual abstinence during the course of treatment
- Provide condoms, educate on correct and consistent use
- Refer to ICTC for HIV & Syphilis testing
- Inform about the complications if left untreated and sequelae

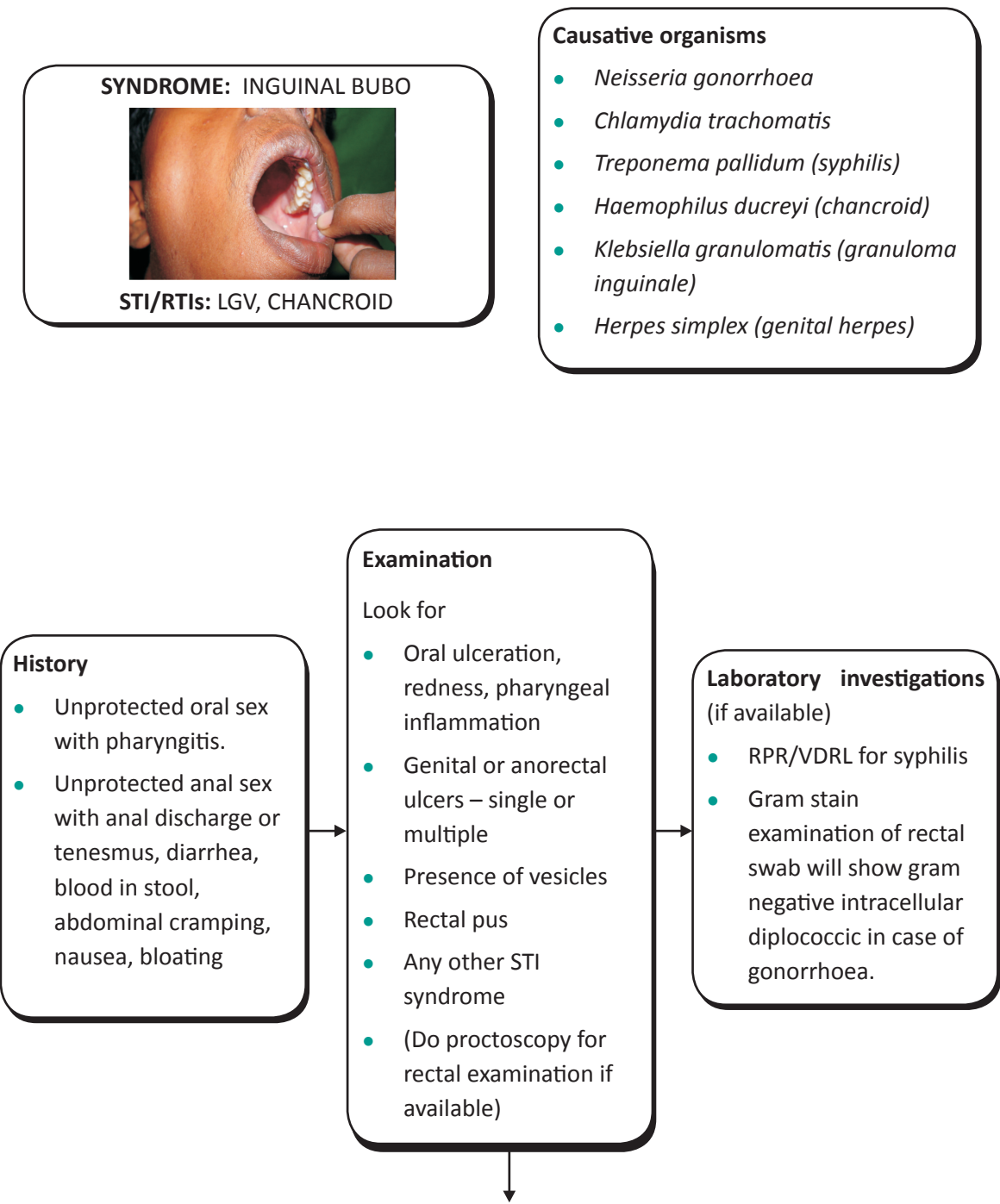
Management of pregnant women

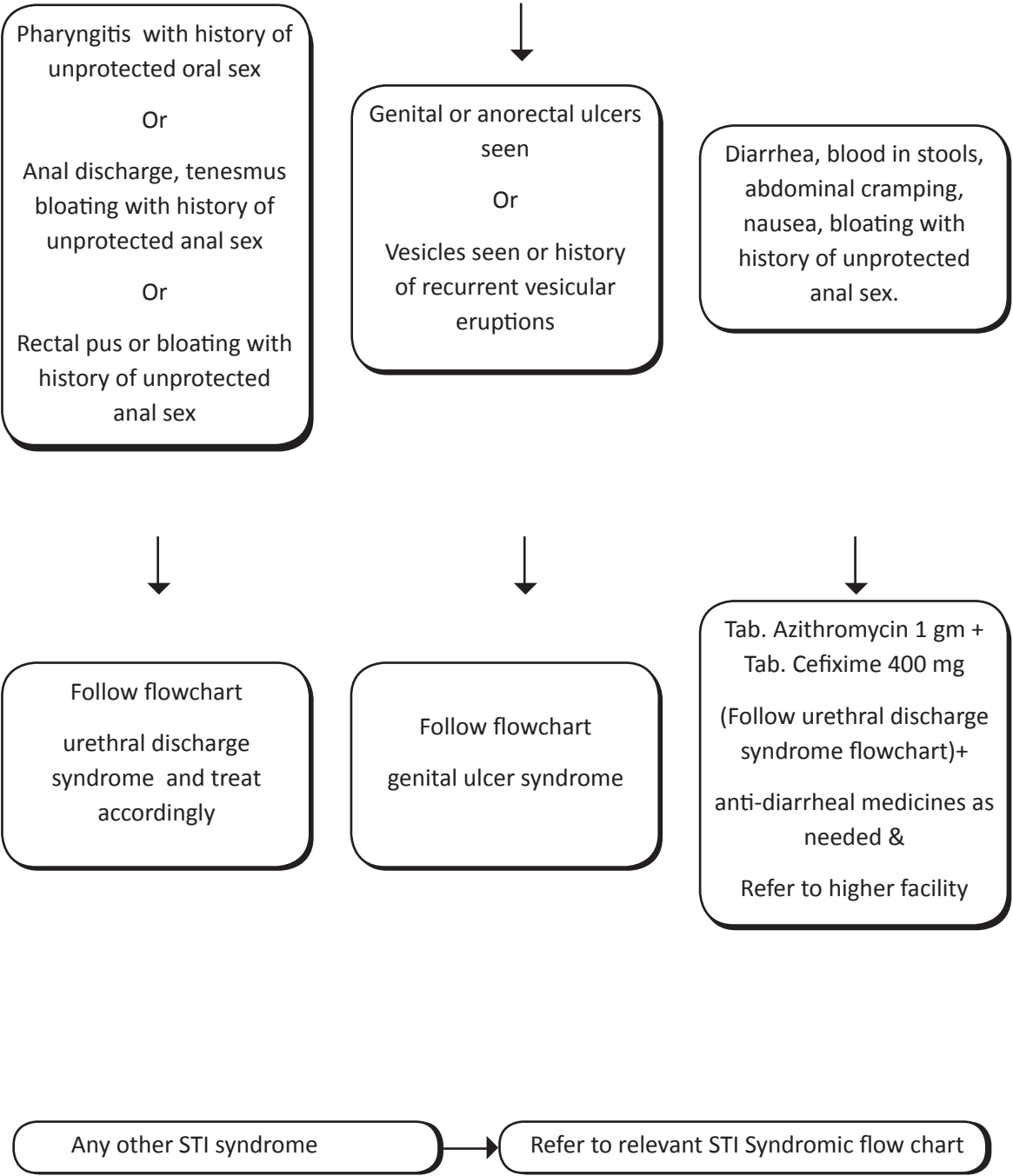
Though PID is rare in pregnancy,

- Any pregnant woman suspected to have PID should be referred to district hospital for hospitalization and treated with a parenteral regimen which would be safe in pregnancy.
- Doxycycline is contraindicated in pregnancy.

Note: Metronidazole is generally not recommended during the first three months of pregnancy. However, it should not be withheld for a severely acute PID, which represents an emergency.

Flowchart 7: Management of Oral and Anal STI





8. Management of Anogenital warts

Causative organism

Virus: Human Papilloma Virus (HPV)

Clinical features

Single or multiple soft, painless, pink in color, “cauliflower” like growths which appear around the anus, vulvo-vaginal area, penis, urethra and peri-neum. Warts could appear in other forms such as papules which may be keratinized.

Diagnosis

Presumptive diagnosis by history of exposure followed by signs and symptoms.

Differential diagnosis

- i. Condyloma lata of syphilis
- ii. Molluscum contagiosum

Treatment

Recommended regimens:

Penile and perianal warts

- 20% Podophyllin in compound tincture of benzoin applied to the warts, while carefully protecting the surrounding area with Vaseline, to be washed off after 3 hours. It should not be used on extensive areas per session.
- Treatment should be repeated weekly till the lesions resolve completely.

*Andt KA, Has JT.S. Manual of Dermatologic Therapeutic. ed 7th Lippincott William & Wilkins, New Delhi 2007. Pg.236

Note: Podophyllin is contra-indicated in pregnancy. Treatment should be given under medical supervision. Clients should be warned against self-medication.

Cervical warts

- Podophyllin is contra-indicated.
- Biopsy of warts to rule out malignant change.
- Cryo cauterization is the treatment of choice. Cervical cytology should be periodically done in the sexual Partner(s) of men with genital warts.

Some of the pictures of Anogenital warts are shown below in Fig a to c



Fig a: Perivulval warts



Fig b: Penile warts



Fig c: Perianal warts

9. Management of Molluscum contagiosum and Ectoparasitic infection



Fig d: Molluscum contagiosum

Causative Organism

Pox virus

Clinical features

Multiple, smooth, glistening, globular papules of varying size from a pinhead to a split pea can appear anywhere on the body. Sexually transmitted lesions on or around genitals can be seen. The lesions are not painful except when secondary infection sets in. When the lesions are squeezed, a cheesy material comes out.

Diagnosis

Diagnosis is based on the above clinical features.

Treatment

- Individual lesions usually regress without treatment in 9-12 months.
- Each lesion should be thoroughly opened with a fine needle or scalpel. The contents should be exposed and the inner wall touched with 25% phenol solution or 30% trichloroacetic acid.

10. Pediculosis pubis

Causative organism

Lice - Phthirus pubis

Clinical features

There may be small red papules with a tiny central clot caused by lice irritation.

General or local urticaria with skin thickening may or may not be present. Eczema and Impetigo may be present.

Treatment

Recommended regimen:

- Permethrin 1% creme rinse applied to affected areas and wash off after 10 minutes

Special instructions

- Retreatment is indicated after 7 days if lice are found or eggs observed at the hair-skin junction.
- Clothing or bed linen that may have been contaminated by the Client should be washed and well dried or dry cleaned.
- Sexual Partner must also be treated along the same lines.

11. Genital scabies

Causative organism: Mite - *Sarcoptes scabiei*.



Fig e: Genital Scabies

Clinical features

Severe pruritis (itching) is experienced by the Client, which becomes worse at night. Other members of family also affected (apart from sexual transmission to the Partner, other members may get infected through contact with infected clothes, linen or towels).

Complications

- Eczematization with or without secondary infection
- Urticaria
- Glomerulonephritis
- Contact dermatitis to antiscabietic drug

Diagnosis

The burrow is the diagnostic sign. It can be seen as a slightly elevated grayish dotted line in the skin, best seen in the soft part of the skin.

Treatment

Recommended regimens:

- Permethrin cream (5%) applied to all areas of the body from the neck down and washed off after 8--14 hours.
- Benzyl benzoate 25% lotion, to be applied all over the body, below the neck, after a bath, for two consecutive nights. Client should bathe in the morning, and have a change of clothing. Bed linen is to be disinfected.

Special instructions

- Clothing or bed linen that have been used by the Client should be thoroughly washed and well dried or dry cleaned.
- Sexual Partner must also be treated along the same lines at the same time.

Notes on the use of flowcharts

1. Urethral discharge syndrome

- When a man complains of urethral discharge or burning on urination, go to the urethral discharge flowchart.
- Examine him. Burning may also be caused by genital ulcers or other problems. You should be able to see a discharge, but even if you do not, he should be treated for genital discharge. However, try milking the penis and observe the meatus for a discharge.
- If he also has ulcers, go to the flowchart for ulcer management.

2. Genital ulcer disease (GUD)

- When a man or woman complains of genital sores or ulcers, go to the “sore or ulcer” flowchart.
- Syphilis and chancroid are the most common cause of curable ulcers in men and women in most places in the world, so we treat for those unless lesions that look like herpes are present.
- The grouped, vesicular, and painful lesions of herpes are usually distinctly different from the lesions of syphilis and chancroid. If you are unsure, treat for syphilis and chancroid because their consequences are more serious than herpes and they can be cured. Additionally treat and counsel for herpes, as this may be the most symptomatic disease. It also promotes cervical cancer.
- If you find only genital warts, you do not need to treat for syphilis and chancroid. Treat the warts if it is possible in your facility, or refer if necessary. Small genital wart infections may resolve themselves without treatment, but they are contagious.

3. Lower abdominal pain

- Go to flowchart “Lower Abdominal Pain” (LAP) if a woman presents with LAP, or if she presents with vaginal discharge, tells you she also has LAP and appears ill or feverish.
- The history is important. Anyone with recent delivery, abortion, IUD insertion or other intrauterine procedure within the last 3 weeks could have serious infection or sepsis and should be referred. Anyone with a missed period or intermittent vaginal bleeding along with LAP could have an ectopic pregnancy and should be referred immediately.
- A temperature over 38°C, cervical motion tenderness, and vaginal discharge all indicate acute PID and the patient should be managed as indicated on the flowchart. If the patient appears extremely ill (fever of 40°C, cannot walk, vomiting, and cannot tolerate oral medication), then she may need inpatient treatment and should be referred.
- Otherwise, treat as an outpatient, but make sure she returns for follow up and refer if she does not clearly improve on the medication.

4. Vaginal discharge

- When a woman complains of vaginal discharge, go to the “vaginal discharge” flowchart.
- Often vaginal discharge is either normal or related to vaginal infections(vaginitis). Common causes of vaginal discharge are bacterial vaginosis (BV), trichomonas vaginalis (TV), and candidiasis. All these three diseases are sexually transmissible. Most women with cervicitis do not have vaginal discharge or lower abdominal pain.
- Assess the STI/RTI risk of anyone with vaginal discharge carefully. If you or she suspects high risk based on prevalence of STI/RTI in your patient population, her occupation, or her partner’s symptoms, occupation or behavior, treat her for cervicitis and vaginitis and try to ensure partner treatment.
- Women with cervicitis will also present with vaginal discharge.
- Many women with discharge may have GUD additionally and multiple symptoms or diseases are common.

5. Inguinal bubo syndrome

- When a man or woman complains of swelling in inguinal region, go to the “inguinal bubo” flowchart.
- Often swelling in inguinal region is either because of chancroid or LGV infection. Preceding genital ulcer or discharge before swelling develops which may be painful.
- Assess the STI/RTI risk of anyone with inguinal bubo carefully. If presence of genital ulcer or discharge please refer to respective flowchart.

6. Scrotal pain and/or swelling

- When a man complains of scrotal swelling and/or pain, go to the “scrotal swelling” flowchart.
- Often scrotal swelling and/or pain is either due to gonorrhoea or chlamydial infection. It may be associated with pain or burning while passing urine or urethral discharge.

- Assess the STI/RTI risk of anyone with scrotal swelling and/or pain carefully. Treat the patient for both the infection simultaneously.
- Many men with discharge may have GUD additionally and multiple symptoms or diseases are common.

7. Oral and anal STI

- When a woman or man complains of oral or anal STI, go to the “oral or anal STI” flowchart.
- Often oral or anal STI are either due to gonorrhoea, syphilis, chancroid, herpes simplex, granuloma inguinale or chlamydial infection.
- Assess the STI/RTI risk of anyone with oral or anal lesions carefully. Look for genital lesions and accordingly follow the flowcharts and treat accordingly.

8. Ano- genital warts

- When a woman or man complains of swelling or growth at ano-genital region, it could be because of HPV infection, HSV infection or due to syphilis, go to the “ano-genital wart” section and treat according to signs specific for STI/RTI.

9. Genital skin conditions

- When a woman or man complains of other genital skin conditions, go to the “genital skin conditions” section.
- Often the commonest genital skin condition is because of either scabies or pubic lice

2. Drugs used in STI/RTI management

Different kinds of medications are used for each STI/RTI syndrome. Bacterial resistance to antibiotics has become a major barrier to the effective control of some STI/RTI. Bacterial resistance can be attributed to natural resistance and to the misuse of medicines, particularly not taking the full recommended dose or giving wrong, insufficient, or expired medications.

Good counseling on the proper use of medications is just as important as prescribing the right medication. Using ineffective medication, taking too low a dose or stopping treatment early because of side effects can contribute to the spread of STI/RTI and may cause antibiotic resistance. Programs that provide STI/RTI management need to keep an uninterrupted supply of antibiotics on hand or to correctly prescribe low-cost, effective medications that patients can afford.

Drugs to be stocked at STI clinics

All clinics must maintain adequate stock of drugs required for treatment of STI as per the standard protocol. Following is the inventory of essential STI treatment drugs. They should be stored in a secure location and used before their expiry date.

1. Inj. Benzathene Penicillin – 24 lakhs unit vial
2. Inj. Ceftriaxone (250 mg & 1 gm)
3. Tab. Azithromycin (1g)
4. Tab. Cefixime (400mg)
5. Tab. Fluconazole (150 mg)
6. Tab. Secnidazole (500 mg)
7. [Tab Metronidazole (400 mg)] Tinidazole (500 mg) as per recommended on the syndrome approach
8. Tab. Erythromycin (500 mg) base/stearate
9. Cap. Doxycycline (100 mg)
10. Cap. Acyclovir (400 mg)
11. Clotrimazole Vaginal pessary (500 mg)
12. Podophyllin tincture 20%
13. Permethrin cream (5%) and (1%)
14. Benzyol benzoate lotion.

What is antibiotic resistance?

Antibiotic resistance is the ability of bacteria to adapt to changing environments in order to survive. With increased use of antibiotics over the 50 years since their discovery, weaker, susceptible

strains of bacteria have been killed off. This has led to the selection of the strongest, most resistant strains. Such resistant strains are often very difficult to treat with more commonly used, low-cost antibiotics.

There are many examples of resistance, such as multi-drug resistant tuberculosis (TB). Other bacteria, such as *Chlamydia trachomatis* have remained extremely sensitive to drugs of the tetracycline family, though this drug is often misused.

The principle causes of antibiotic resistance are:

- Not completing the treatment regimen (i.e. stopping when feeling better, or sharing the medication).
- Self-medication with too low a dose or the wrong medication, using drugs sold on the street.
- Use of antibiotics when they are not needed (for example, to treat viral infections such as colds).
- Misuse of antibiotics (using the wrong drug or the wrong dose).

How to prevent antibiotic resistance in the community

- Use antibiotics appropriate for specific infections or syndromes.
- Make sure you have prescribed the right drug for the right amount of time.
- Always give clear instructions on how to take drugs and on the dangers of taking drugs incorrectly. Emphasize the need to take the entire drug, even if the patient is feeling better. Tell the patient not to save any of the drugs or give it to someone else.
- Use supervised regimens (e.g. as used in DOTS) whenever possible
- Be aware of changing resistance patterns by keeping in touch with the national STI control program.

Screening for asymptomatic clients for STI/RTI

It is well known that most STI/RTI are asymptomatic, especially amongst the women. Therefore screening asymptomatic clients for STI/RTI will provide great help in detection of more cases and timely treatment of them along with their partner can control most of the STI/RTI. Antenatal and family planning service setting could be the situation where asymptomatic women may be screened. In this session we will see, which are the common laboratory screening tests used for detection of STI/RTI and their role for control of STI/RTI.

Most common screening programmes worldwide are those for detecting syphilis in pregnant women. Untreated syphilis in pregnant female is associated with number of adverse outcomes such as pregnancy loss, stillbirths and congenital syphilis. Providers are recommended to follow Government of India's following guidelines while providing services to pregnant women:

1. Guidelines for Pregnancy Care and Management of common obstetric complications by Medical Officers, 2005.
2. Guidelines for Antenatal Care and Skilled Attendance at birth by ANMs and LHV's, 2006.

MODULE NO. 8

PARTNER MANAGEMENT

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1. Purpose of timely partner management

What is Partner management?

Partner management is one of the most important parts in control and prevention of STI/RTI. Many times partners do not seek services because of number of reasons like absence of symptoms, lack of assurance of confidentiality, hence to motivate partner is a critical task. In such situations, partner management is essential which is a process in which the partners of those identified as having STI/RTI are identified, informed of their potential risk of infection, and offered treatment and counseling services. In this module we will discuss the critical issues regarding partner management.

Timely partner management serves following purpose:

- Prevention of re-infection to index patients
- Prevention of transmission from infected partners and
- Help in detection of asymptomatic individuals, who do not seek treatment.

2. Critical issues on partner management

Confidentiality: Partners should be assured of confidentiality. Many times partners do not seek services, as they perceive confidentiality as a serious problem. Respecting dignity of client and ensuring confidentiality will promote partner management.

Voluntary reporting: Providers must not impose any pre-conditions giving treatment to the index client. Providers may need to counsel client several times to emphasize the importance of client-initiated referral of the partners.

Client initiated partner management: Providers should understand that because of prevailing gender inequities a woman might not be in position always to communicate to her husband/partner regarding need for partner management. Such client initiated partner management may not work in some relationships and may also put women at the risk of violence. Hence alternative approaches should be considered in such situations.

Availability of services: STI/RTI diagnostic and treatment services should be available to all partners. This may mean finding ways to avoid long waiting times. This is important because many asymptomatic partners are reluctant to wait for services when they feel healthy.

Ignorance: The partner has to know the importance of his treatment, which will prevent reinfection to his/her regular or other casual partners and development of complications to himself/herself, and free provision of treatment and other facilities like provision of condoms etc.

3. Approaches for partner management

There are two approaches to partner management:

i. Referral by index client

In this approach, index client informs the partner/s of possible infection. This appears to be a feasible approach, because it does not involve extra personnel, is inexpensive and does not require any identification of partners. A partner notification card with relevant diagnostic code should be given to each index client, where partner management is indicated. This approach may also include use of client-initiated therapy for all contacts.

The index client might approach the partner treatment in the following ways:

- By directly explain the partner/s about STI and the need for getting treated
- By motivating and accompanying the partner/s to the treatment center/health care provider
- Asking the partner/s to attend the clinic without specifying the reasons
- Providing referral card to the partner/s and asking him/her to attend the clinic.

ii. Referral by providers

In this approach service provider contacts client's partners through issuing appropriate partner notification card and telephone calls if telephone number is available from the index case. The information provided by client is used confidentially to trace and contact partners directly. This approach needs extra staff and is expensive. Telephone call will be less expensive, does not require extra staff.

Making client referral mechanism feasible

The possible steps in initiating client referral for STI/RTI are:

- a. Making patient him/herself take STI/RTI treatment
- b. Help him/her understand how to avoid re-infection
- c. Help him/her understand importance of possible transmission that might have occurred and further transmission
- d. Helping him on how and what to communicate with partner/s

a. Making the client take STI/RTI treatment

The first and most important step in initiating partner treatment is help and encourage the patient to initiate his own treatment, as prescribed by the doctor. This will take care of the infection in index (or presenting) patient.

b. Help client understand how to avoid re-infection

In addition to his/her own treatment, the patient needs counseling on how to prevent re-infection. And, one of the important strategies for it is treatment of all the partners. As the person is suffering from the infection and is worried about his/her health, the impact of health education and counseling is much better as he/she is ready to receive any advice for getting well. Thus, the patient more likely to listen to the messages attentively and act upon it, thereby increasing the possibility of partner treatment, at least for his own sake (if not for partner/s).

c. Help client understand importance of possible transmission that might have occurred and further transmission

The messages during counseling of client receiving the STI/RTI treatment should emphasize on immediate impact as well as strategies for long term prevention. The messages for immediate impact should include prevention of re-infection during treatment period, thereby increasing the possibility of getting good results from the treatment. Emphasis should also be given on preventive strategies such as condom use.

The long term prevention messages should include risk reduction strategies such as reducing number of partners, condom use, safe sexual practices and immediate treatment seeking if symptoms reappear.

d. Helping client on how and what to communicate with partner/s

The providers must understand how challenging and embarrassing it will be for the index patient to convey the news of getting infected with STI/RTI, due to social stigma attached to these issues. Therefore, the providers must help clients to build courage for taking the partners into confidence. The providers must emphasize on how partner treatment is best for the good health of the index client and his/her partner/s and overall family. They should also provide the client with the option of conveying the news and treatment themselves (healthcare providers) and help them in resolving the infection.

e. Provide the index client a partner referral card as prescribed in the table below:

Syndrome of index patient	Treatment for Partner/s
Urethral Discharge	Treat for Gonorrhoea & Chlamydia
Genital Ulcer – Non Herpetic	Treat for syphilis and Chancroid
Genital Ulcer –Herpetic	Routine partner treatment not given unless partner is symptomatic
Vaginal Discharge (Cervicitis)	Treat for Gonorrhoea & Chlamydia
Vaginal Discharge (Vaginitis)	Routine partner treatment not given unless partner is symptomatic
Lower Abdominal Pain (PID)	Treat for Gonorrhoea & Chlamydia
Scrotal Swelling	Treat for Gonorrhoea & Chlamydia
Inguinal Bubo	Treat for Lymphoagranuloma Venereum & Chancroid
Oral/Ano – rectal Discharge	Treat for Gonorrhoea & Chlamydia
Neonatal Conjunctivitis	Treat both parents for Gonorrhoea & Chlamydia

What if the client referral fails?

Two situations in this regards are possible:

- 1. Client refuses to refer partner/s
- 2. If the partner fails to come for treatment

1. Client refuses to refer partner/s: In spite of your gallant efforts, if the patient does not agree to refer the partner/s to the clinic, the only option for the provider is to go for the “provider referred partner treatment”.

However, it is worthwhile to attempt explore some other options such as providing the presumptive treatment through index clients. Many providers do not agree with this option in the fear of incomplete treatment or misuse of medicines provided. However, the providers may want to consider this as sort of “last resort” for providing partner treatment. The provider will have to take a call in such situations depending on how much he/she can trust the patient based on the short interaction they had during client education session.

2. If the partner fails to come for treatment: The only option left with the provider is to go for the “provider referral”.

Provider referral:

If the system is efficient to obtain the details of the partners including their coordinates, the provider, through his/her field staff may want to get in touch with the partners of index client and motivate them to take treatment.

General principles for partner management

- In general, partners should be treated for the same STI as the index client, whether or not they have symptoms or signs of infection.
- Health care providers should be as sure as possible about the presence of an STI before informing and treating the partner, and should remember that other explanations are possible for most RTI symptoms like vaginal discharge.
- Special care is required in notifying partners of women with lower abdominal pain who are being treated for possible pelvic inflammatory disease. Because of the serious potential complications of PID (infertility, ectopic pregnancy), partners should be treated to prevent possible re-infection. It should be recognized, however, that the diagnosis of PID on clinical grounds is inaccurate, and the couple should be adequately counseled about this uncertainty. It is usually better to offer treatment as a precaution to preserve future fertility than to mislabel someone as having an STI when they may not have one.
- It is important to explain to the couple that some of these infections are acquired through unhygienic conditions like unclean toilets, fomites, swimming pools etc. However if one of them has acquired the infection, it cannot be treated fully unless the partner is also treated, as there is a definite chance of reinfection through sexual transmission. This ensures compliance from both partners.

Follow-up visits

Follow up visits should be advised

1. To see reports of tests done for HIV, Syphilis and Hepatitis B.
2. Advise clients to come back for follow up after 7 days. In case of PID, follow up should be on day 3, day 7 and day 14 and in case of LGV, followup is on day 7, 14 and after 21 days.

Two-step strategy for partner management

A two-step strategy can be used where clients are first asked to contact partners themselves. If no response till one or two weeks, clinic or health department staff can attempt to trace the contact for treatment.

Note: Efforts needed to diagnose and treat Partner but whether the Partner should be treated, the choice to be rested with the patient

Box: Sample Partner reporting card

Sample coupon for a free examination

Coupon for a free examination
Date:
Please attend following centers along with the card:
Stamp of the Facility:
Timings:
Diagnostic Code:

MODULE NO. 9

LABORATORY TESTS FOR STI/RTI

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3.	Laboratory tests for STI/RTI	101
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1. Definitions of common terms

Antigen: A molecule, which is recognized by the immune system and induce an immune reaction (the organism itself)

Antibody: A class of serum proteins, which are induced in response to the immune reaction following contact with antigen (an infectious organism)

False positives: Uninfected people diagnosed as positive

False negatives: Infected people diagnosed as negative (missed infections)

Sensitivity:

- How good a test is at identifying people who are infected?
- Higher the sensitivity, the lower the rate of false negatives (missed infections)
- Example: if sensitivity of a test is 95% and 100 infected people are tested, 95 will have positive test results and 5 will have negative test results (even though they are infected)
- The minimum number of organisms needed in a sample for a test to be positive varies from one type of test to another. The lower the number of organisms that can be detected, the greater the sensitivity of the test. The new amplified DNA techniques [e.g., polymerase chain reaction (PCR), ligase chain reaction (LCR)] are extremely sensitive and can detect between 1 and 50 organisms in the sample tested.

Specificity:

- How good a test is at identifying people who are not infected?
- Higher the specificity, the lower the rate of false positives
- Example: if specificity of a test is 95% and 100 people who are not infected are tested, 95 will have negative test results and 5 will have positive test results (even though they are not infected)

Sensitivity & specificity are used to give an indication of how good a diagnostic test is. Ideally one would like a test that has 100% sensitivity (i.e. everyone who is infected tests positive) and 100% specificity (i.e. everyone who is not infected tests negative).

2. Role of the laboratory in STI/RTI control

1. Screening and detection of disease in those without symptoms who seek health care for other reasons, e.g. antenatal women
2. Screening groups of people who may be at risk for a STI/RTI but have no symptoms.
3. Testing a sample of the population to see what percentage is infected (prevalence) and how many new infections are occurring in a certain time period (incidence).
4. Conducting simple studies to check on the accuracy of syndromic management (validation).
5. Testing for antimicrobial resistance.
6. Sentinel surveillance of STI.
7. Making an etiologic diagnosis for patients who present with STI/RTI symptoms.
8. Simple laboratory tests improve the diagnostic sensitivity and specificity of syndromic approach to symptomatic STI/RTI, particularly in women.

However, most labs in PHC have little or no capacity to test for gonorrhoea, chlamydia, herpes and other STI/RTI. Even when they do such tests, the accuracy of diagnosis is likely to be poor.

3. Laboratory tests for STI/RTI

- A. Microscopic examination:** Directly visualizing the organism on vaginal/cervical smear under the microscope. Examples: Wet mount for *Trichomonas vaginalis*, *Candida* (budding cells), Bacterial vaginosis (BV), Gram staining for gonococcus, BV causing organism, *Candida* and Dark field microscopy for *Treponema pallidum*
- B. Detection of antigen** (a specific molecule from the infecting organism itself): Example: Enzyme immunoassay (EIA) for chlamydia, gonorrhoea and other infections.
- C. Antibody tests:** To measure the body's response of producing antibodies to the infecting organism. Examples: EIA used for *Treponema pallidum* or HIV antibodies.
- D. Culture of different organisms** (Growing the organism in the laboratory). Examples: Culturing *Trichomonas vaginalis*, *Candida albicans* and other species, *Chlamydia trachomatis* and *N.gonorrhoea*
- E. Detection of DNA of the organism using non-amplified techniques:** Example: Nucleic acid hybridization used for herpes.

- F. Detection of DNA of the organism using amplified techniques:** Examples: PCR (polymerase chain reaction), LCR (ligase chain reaction) and TMA (transcription mediated amplification) used for chlamydial infection and HIV infection.
- G. Other:** Use of Vaginal pH for BV

1. What are the laboratory tests for detecting common STI/RTI and how they are performed?

The pH of vaginal fluid should be measured using pH paper of appropriate range (3.8 to 6.0). The vaginal fluid sample is collected with a swab from the lateral and posterior fornices of the vagina and the swab is then touched directly on to the paper strip. Alternatively, the pH paper can be touched to the tip of the speculum after it has been withdrawn from the vagina. Care must be taken not to use any jelly (eg K.Y jelly) or disinfectant (eg. savlon) before doing pH test. Contact with cervical mucus must be avoided since it has a higher pH. The normal vaginal pH is 4.0. In bacterial vaginosis (BV), the pH is generally elevated to more than 4.5.

The vaginal pH test has the highest sensitivity (less false negativity) of the four characteristics used for identification of BV, but the lowest specificity (more false positivity); an elevated pH is also observed if the vaginal fluid is contaminated with menstrual blood, cervical mucus or semen, and in women with a *T. vaginalis* infection. In simple words it means that if pH test is negative the result can be taken as it is but if it is positive one has to rule out the other factors contaminating the sample such as menstrual blood, cervical mucus or semen or presence of *T. vaginalis* infection

2. Wet mount microscopy

Wet mount microscopy is the direct microscopic examination of vaginal discharge for the diagnosis of trichomoniasis, candidiasis and bacterial vaginosis (Box 1).

Box 1 Wet mount microscopy examination of vaginal discharge

Collect specimen	Take a specimen of discharge with a spatula from the sidewalls or deep in the vagina where discharge accumulates.
Prepare slide	Mix specimen with 1 or 2 drops of saline on a glass slide and cover with a cover slip.
What to look for	- Examine at 100X magnification and look for typical jerky movement of motile trichomonads (ovoid, globular, pear-shaped flagellated protozoan). - Examine at 400X magnification to look for yeast cells (round to ovoid cells with typical budding) and trichomonads. - To make identification of yeast cells easier in wet mount slides, mix the vaginal swab in another drop of saline and add a drop of 10% potassium hydroxide to dissolve other cells. Note any fishy odour to suggest BV. - Presence of clue cells (squamous epithelial cells covered with many small coccobacillary organisms). Wet mount shows stippled granular cells without clearly defined edges because of the large numbers of adherent bacteria present and an apparent disintegration of the cells. The adhering bacteria are predominantly <i>G. vaginalis</i>, sometimes mixed with anaerobes).
Important	Look for evidence of other vaginal or cervical infections as multiple infections are common.

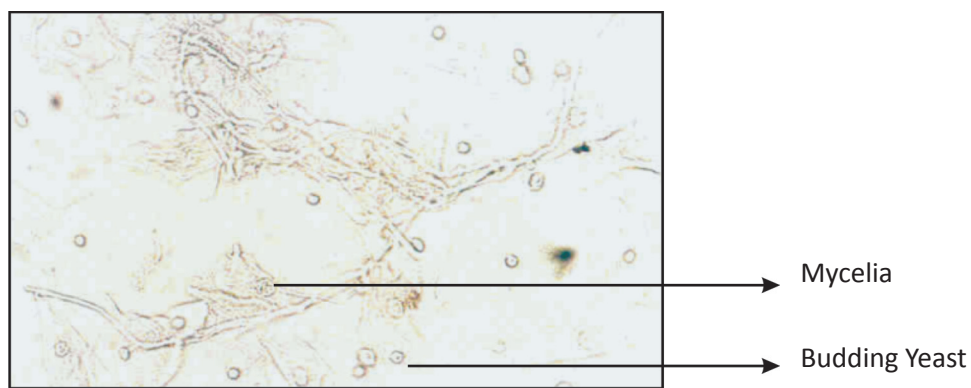
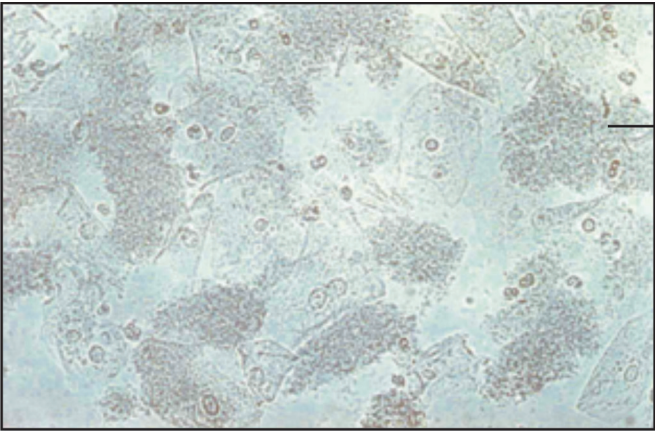
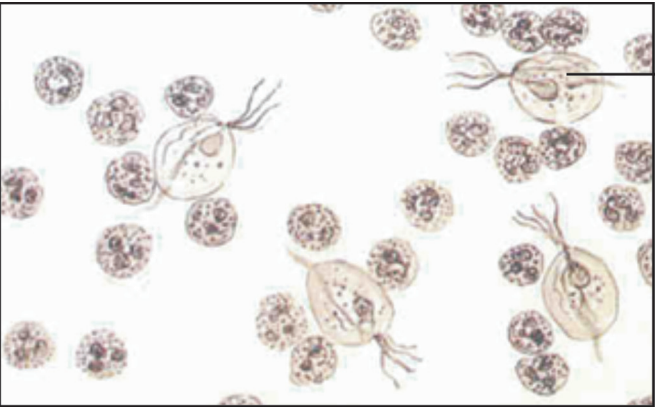


Fig 1: Potassium hydroxide preparation of vaginal fluid showing budding yeast and mycelia



Clue Cell

Fig 2: “Clue cells” in vaginal wet mount (x 400)



Trichomonas vaginalis

Box 2 Clinical criteria for Bacterial vaginosis (BV)

BV can be diagnosed using simple clinical criteria with or without the aid of a microscope	
Collect specimen	Take a specimen of discharge from the sidewalls or deep in the vagina where discharge pools (or use discharge remaining on speculum). Note color and consistency of discharge. Touch pH paper to discharge on swab or speculum and note pH.
Prepare slide	- Place specimen on a glass slide. Add a drop of 10% potassium hydroxide (KOH) and note for any fishy smell. - Make a wet smear with 0.9% normal saline, cover with cover slip and see under microscope for clue cells.
What to look for	The diagnosis of BV is based on the presence of at least 3 of the 4 following characteristics - Homogeneous white-grey discharge that sticks to the vaginal walls - Vaginal fluid pH >4.5 - Release of fishy amine odour from the vaginal fluid when mixed with 10% potassium hydroxide (positive Whiff test) “Clue cells” visible on microscopy on wet preparation
Important	Look for evidence of other vaginal or cervical infections as multiple infections are common.

3. Whiff test

Women with BV often complain of a foul vaginal smell. This odour is due to the release of amines, produced by decarboxylation of the amino acids (lysine and arginine) by anaerobic bacteria. When potassium hydroxide is added to the vaginal fluid, these amines immediately become volatile, producing the typical fishy odour.

Place a drop of vaginal fluid on a glass slide and add a drop of 10% potassium hydroxide. Hold the slide close to nose to detect the amine odour. After a positive reaction, upon standing the specimen will quickly become odourless because the amines will be rapidly and completely volatilized.

4. Gram stain microscopy

A gram stain of a vaginal smear has a higher specificity (i.e lesser false positivity) for the diagnosis of bacterial vaginosis (BV) than a wet mount preparation. Moreover, a Gram stain allows good evaluation of the vaginal bacterial flora. Normal vaginal fluid contains predominantly lactobacillus species and exceedingly low numbers of streptococci and coryneform bacteria. In BV, lactobacilli are replaced by a mixed flora of anaerobic bacterial morphotypes and *G. vaginalis*. However, gram stain microscopy has a very low sensitivity for detecting *N.gonorrhoea* among women; culture remains the method of choice.

Box 3 Gram stain microscopy of vaginal smears

Collect specimen	A Gram stain slide can be prepared at the same time as the wet mount by rolling the spatula/swab on a separate slide.
Prepare slide	1. Heat fix. 2. Stain with crystal violet (60 seconds) and rinse. 3. Stain with iodine (60 seconds) and rinse. 4. Decolorize with acetone-ethanol for few seconds (until the liquid runs clear). 5. Stain with safranin (30 seconds) and rinse. 6. Gently blot dry and examine under oil immersion (1000X) and count each type of organisms.
What to look for	1. Lactobacilli (large Gram positive bacilli) only: Normal 2. Mixed flora, mainly lactobacilli with a few short rods (coccobacilli): Considered normal 3. Presence of clue cells; mixed flora, mainly Gardnerella and anaerobic bacteria with a few lactobacilli diagnose as BV 4. Presence of clue cells, mixed flora of Gram-positive, Gram-negative and Gram-variable rods; no lactobacilli diagnose as BV
Important	Look for evidence of other vaginal or cervical infections as multiple infections are common.

*Nugent score

Scoring system (0 to 12) from Gram-stained vaginal smears

Total score	Lactobacillus morphotypes (large Gram positive bacilli)	Gardnerella and Bacteriodes spp. morpho- types (small Gram negative/ Gram variable bacilli)	Mobilincus curved Gram- negative/ variable bacilli
0	0 + (>30/oif)	0 (0/oif)	0 (0/oif)
3	1 + (6-30/oif)	1 + (<1/oif)	1 + (</oif)
6	2 + (1-5/oif)	2 + (1-5/oif)	2 + (2-5/oif)
9	3 + (<1/oif)	3 + (6-30/oif)	3 + (6-30/oif)
12	4 (0/oif)	4 + (>30/oif)	4 + (.30/oif)

Morphotypes are scored as the average number seen per oil immersion field (oif). Note that less weight is given to curved Gram negative/ variable rods. Total score = lactobacilli + *G. vaginalis* and *Bacteriodes* spp. + curved rods.

Interpretation of Nugent score

0-3 = normal, never treat

4-6 = intermediate, decide on symptoms for treatment

7-or more = BV infection, Treat

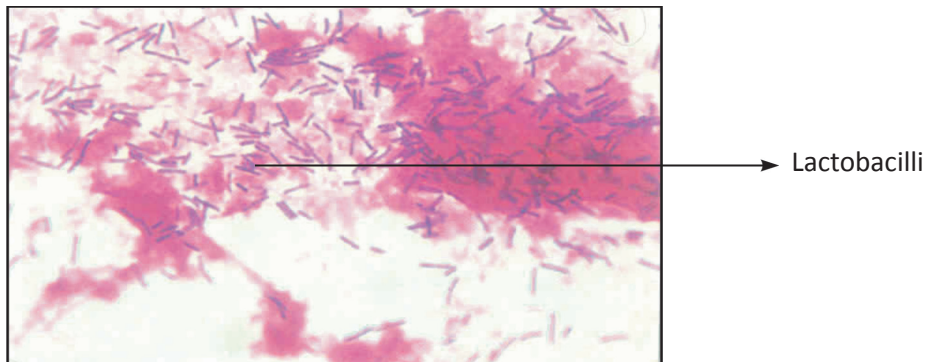


Fig 4: Gram stained vaginal smear showing a normal flora of lactobacilli (x 1000)

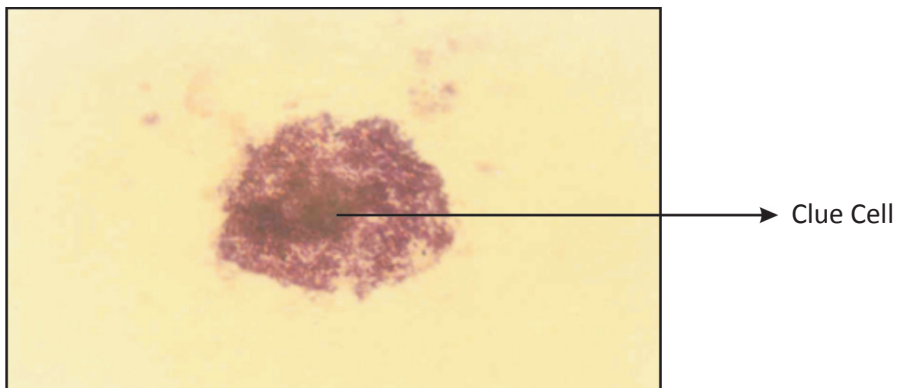
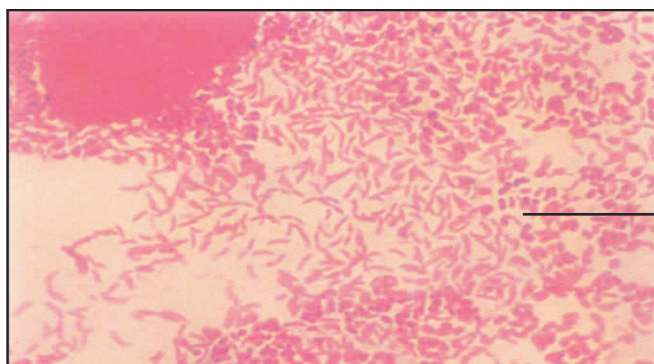


Fig 5 : Gram stained vaginal smear with typical "clue cell" (x 1000)



Gram - negative rods

Fig 6 : Gram stained vaginal smear showing large Gram-negative rods (*Mobiluncus mulieris*) (x 1000)

Use of gram stain for diagnosis of cervical infection

1. The Gram stain method in female does not provide conclusive evidence of the presence of gonococcal infection. Presence of intracellular gram negative diplococci indicates infection but their absence does not rule out infection.
2. The costs associated with the method, including the cost of maintaining microscopes, outweigh the benefits in terms of improved quality of care.

Use of gram stain for diagnosis of Urethral/Ano-rectal infection

1. For men, gram stain microscopy of urethral discharge smear will show pus cells and gram-negative intracellular diplococci as well as extra cellular diplococci in case of gonorrhoea.
2. In case of non-gonococcal urethritis more than 5 neutrophils per oil immersion field (1000X) in the urethral smear or more than 10 neutrophils per high power field (400X) in the sediment of the first void urine, in the absence of N. gonorrhoea, is observed.
3. The Gram stain method in male provide conclusive evidence of the presence of gonococcal infection.

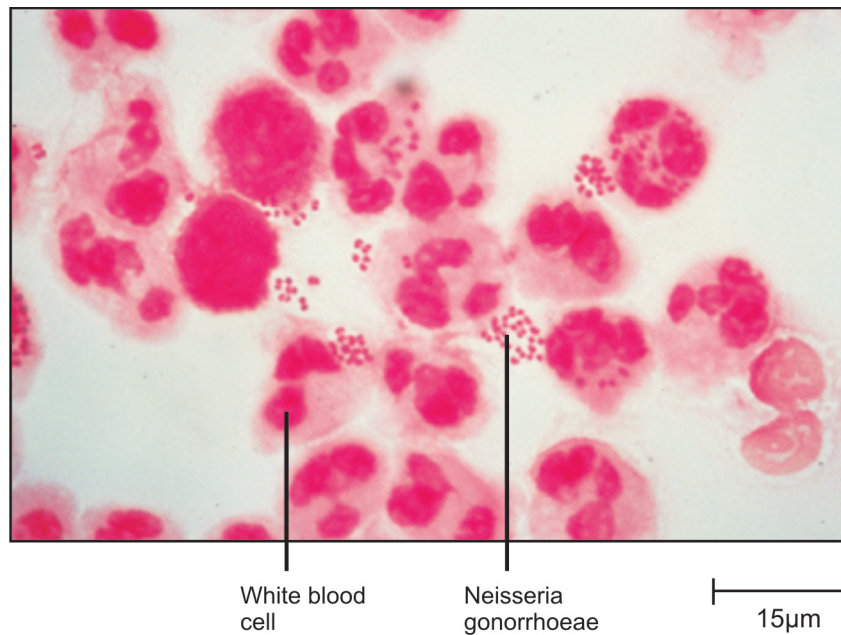


Fig 7: Gram stain Urethral discharge smear : Gram-negative diplococci of *Neisseria gonorrhoea*

5. Rapid plasma reagin (RPR) test for syphilis

The current non-treponemal tests for syphilis are Venereal Disease Research Laboratory Test (VDRL Test) and Rapid Plasma Reagin (RPR) test. RPR test is most suitable for the primary health care set-up.

Procedure of RPR test

- Seek consent
- Use a sterile needle and syringe. Draw 5 ml of blood from a vein. Put in a plain test tube
- Let the test tube stand for 20 minutes to allow serum to separate (or centrifuge 3–5 minutes at 2000–3000 rpm). In the separated sample, serum will be on top.
- Use sampling pipette to transfer the serum. Take care not to include any red blood cells from the lower part of the separated sample.
- Hold the pipette vertically over a test card circle. Squeeze teat to allow one drop (50 µl) of serum to fall onto a circle. Spread the drop to fill the circle using a toothpick or other clean spreader.

Important: Several samples may be done on one test card. Be careful not to contaminate the remaining test circles. Use new tip and spreader for each sample. Carefully label each sample with a patient name or number

- Attach dispensing needle to a syringe. Shake antigen.* Draw up enough antigen for the number of tests done (one drop per test).
- Holding the syringe vertically, allow exactly one drop of antigen to fall onto each test sample. Do not stir.
- Rotate the test card smoothly on the palm of the hand for 8 minutes (or rotate on a mechanical rotator.)

Interpreting results

After 8 minutes rotation, inspect the card in good light. Turn or tilt the card to see whether there is clumping (reactive result). Test cards include negative and positive control circles for comparison.

Interpretation of test results	1. Non-reactive (no clumping or only slight roughness): Non reactive for syphilis 2. Reactive (highly visible clumping): Reactive for syphilis 3. Weakly reactive (minimal clumping): Reactive for syphilis Note: Weakly reactive can also be more finely granulated and difficult to see than this illustration
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* Make sure antigen was refrigerated (not frozen) and has not expired.

Correlation and confirmation of test results

- Tests for syphilis detect antibodies, which are evidence of current or past infection.
- Non-treponemal tests (such as RPR test and VDRL test) are the preferred tests for screening. These tests detect almost all cases of early syphilis, but false positives are possible. RPR test can be performed without a microscope.

- Quantitative RPR test titres can help evaluate the response to treatment.
- Treponemal tests, such as Treponema pallidum haemagglutination test (TPHA), fluorescent Treponema antibody absorption test (FTA-Abs), microhaemagglutination assay for antibodies to Treponema pallidum (MHA-TP), if available, can be used to confirm non-treponemal test results.

Quantitative RPR test titres can help evaluate the response to treatment.

RPR Quantitative Slide test
Additional Equipment and Reagent 1) Micropipette (1000ul) with blue plastic tips. 2) Normal Saline (0.9 %) 3) Test tubes or Cuvettes- 6 to 8 per reactive serum. 4) Rubber teats Procedure: A) Preparing sera in dilutions - 1) Take 6 test tubes (cuvette),label them from 1-6 and keep them in a rack. 2) Pipette 0.5 ml normal saline in each tube. 3) Pipette 0.5 ml of test serum in tube 1 and mix well. (Serum dilution = 1:2). 4) Take 0.5 ml of diluted serum from test tube 1 and add to tube 2. Mix well and transfer 0.5 ml to test tube 3, mix well and go on adding 0.5 ml of diluted serum to next tube till tube 6 is reached. The dilution obtained in these 6 tubes are 1:2, 1:4, 1:8, 1:16, 1:32, 1:64 respectively. 5) Dilutions can be done up to 1: 1024 levels by following above described procedure. B) Performing quantitative testing of diluted sera - 6) Take a RPR card and add 0.5 ml of serum from the sixth tube on one circle as shown in figure 9. 7) Similarly add 0.05 ml of serum from the tube no 5, 4, 3, 2 and 1 in the remaining circles respectively. 8) In circle 1 take 0.05 ml of neat, undiluted serum as for the qualitative test. 9) Positive and negative controls for each qualitative test should be incorporated. 10) Add 1 drop (1/60 ml) of RPR antigen to each circle with a 18 gauge needle and syringe. 11) Rotate the card on a RPR/VDRL rotator for 8 min or as oer manufacturers instruction making a diameter of 3/4 inch and rotating at a speed of 180 RPM. 12) Observe the card immediately under 10 x magnification of light microscope. 13) Report the titer as the highest dilution of serum that shows a reactive result.

Reporting:

Undiluted Serum	Serum Dilution*					Report
(1:1)*	1:2	1:4	1:8	1:16	1:32	
R	W	N	N	N	N	Reactive undiluted only or 1 dil +
R	R	W	N	N	N	Reactive, 1:2 dilution, or 2 dils
R	R	R	W	N	N	Reactive, 1:4 dilution, or 4 dils
W	W	R	R	W	N	Reactive, 1:8 dilution, or 8 dils
N (ROUGH)	W	R	R	R	N	Reactive 1:16 dilution, or 16 dils
W	N	N	N	N	N	Weakly reactive, undiluted only or 0 dil
*R = Reactive W = Weakly Reactive N = Non-reactive						
+ A titre of 1:1 means that the serum was reactive in a dilution of 1 to 1. This may also be termed as “1 dil”						

The following table can be used to interpret syphilis test results.

Note: where additional tests are not available, all patients with reactive RPR or VDRL should be treated.

Interpreting serological test results

	RPR	RPR titre	TPHA
Active infection	+	>1:8	+
Latent syphilis	+	Often <1:4	+
False positive	+	Usually <1:4	-
Successful treatment	+ or -	2 titres decrease (e.g. from 1:16 to 1:4)	+

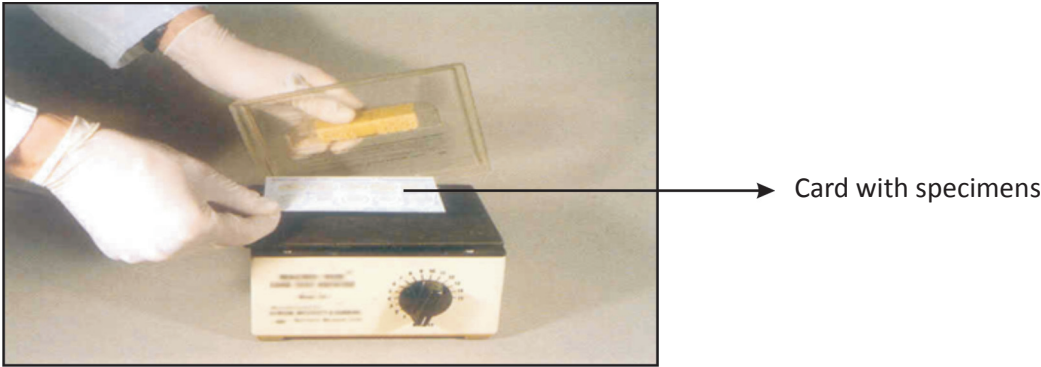


Fig 8: Test serum is mixed with antigen and the card is placed on appropriate rotator

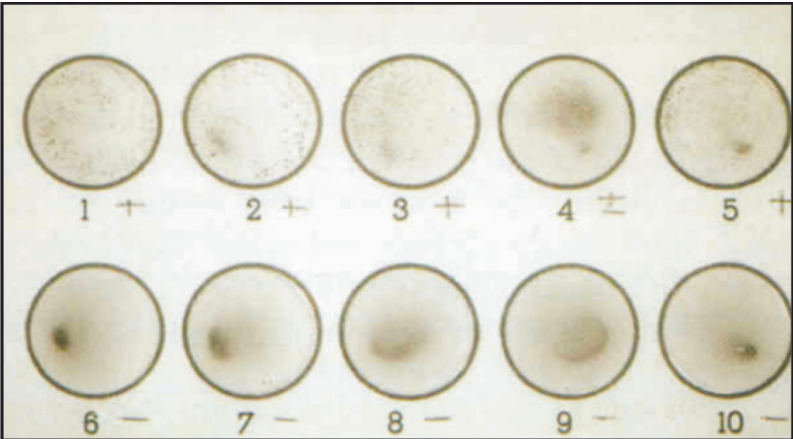


Fig 9: Reading RPR test results for 10 undiluted sera showing reactive (1,2,3,5, 4: Borderline) and non-reactive samples (6 – 10). The presence of small to large flocculated clumps indicates reactivity, whereas no clumping or a very slight roughness indicates non-reactivity

4. Laboratory tests for STI/RTI at various levels of health care

The laboratory tests can be done at 3 tier level:

(i) Primary health care level:

At PHC following tests can be offered -

- Microscopic examination of fresh and stained samples of urethral and cervical discharges
- Wet mounts for examination of vaginal discharge.
- Collect cervical samples such as Pap smears and send them to more sophisticated laboratories for reading
- RPR testing for syphilis can easily be done at the PHCs
- In case of 24x 7 PHCs (ICTC centers) they may be able to do gonorrhoea cultures, confirmatory tests for syphilis and HIV antibody testing.

(ii) Secondary health care level:

- At CHC level laboratories are usually larger than at the PHC level
- May have more skilled workers
- More reliable infrastructure
- They may be able to do gonorrhoea cultures, confirmatory tests for syphilis, HIV antibody testing
- If there is a cytotechnician, Pap (cervical) smears could be done and read.

(iii) Tertiary health care level:

- These laboratories are usually located in a District hospital or teaching hospital
- They have the highest level of services
- Most of the above tests are done at these facilities

MODULE NO. 10

CLIENT EDUCATION AND COUNSELING

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1. Definitions of key terms used in Client education

Client education: For STI, giving relevant information based on public health needs. This includes information on infections, transmission, recommended treatment, prevention, risk reduction, behavior change, and partner referral. This information can be communicated one-on-one, in group settings in the clinic; and via posters, videos, and brochures. It should involve all possible staff. Client education requires teaching and group facilitation skills.

Interpersonal communication: The face- to-face process of giving and receiving information between two or more people. This involves both verbal and non-verbal communication.

Verbal communication: The way we talk with clients, the words we use, and their meanings.

Non-verbal communication: The way we behave with clients, including actions, behaviors, gestures, and facial expressions.

Behavior change communication: The process of developing and providing simple messages based on proven information that suggests realistic ways to change risky behavior. This includes exploration of life situation and risk, consideration of options, and skill building, practice, and support to implement and sustain the behavior change

2. Communicating with Clients on STI/RTI

Adult education principles

Acknowledge that adults learn:

- 20% of what they hear.
- 40% of what they hear and see.
- 80% of what they do or discover for themselves.

Therefore, teaching clients to increase their awareness of STI/RTI, risk reduction, behavior change, etc. must involve three things to be effective: action, feelings, and ideas. These correspond to the areas of skills, attitudes, and knowledge in this training.

Types of communication

- Interpersonal communication
- Verbal communication
- Non-verbal communication
- Behavior change communication

Interpersonal communication

The face-to-face process of giving and receiving information between two or more people, involves both verbal and non-verbal communication.

Verbal communication

- Refers to words and their meanings.
- Begins and ends with what we say and how we say it.
- Is largely conscious and controlled by the speaker.

Verbal communication skills

- Facilitation: Encouraging, summarizing, and checking with the Client to be sure you understand her/his concerns.
- Reassurance: Showing your support.
- Direction: Guiding a Client back to the reason for the visit.
- Empathy: A critical skill acknowledging feelings and showing you care.
- Partnership: Offering your commitment to help.
- Asking questions: Use open and closed-ended questions to get the information you need.

- ♦ Open questions: Invite the Client to give a long answer. (“Tell me more about your back pain.” “What else is troubling you?”).
- ♦ Closed questions: Require only a “yes” or “no” or very short answer. (“Is your back painful?” “How old are you?”).

Non-verbal communication

- Refers to actions, gestures, behaviors, and facial expressions that express how we feel in addition to speaking.
- Is often complex and largely unconscious.
- Often reveals the real feelings or messages being conveyed.
- Can involve all of the senses.

Behavior change communication

The process of developing and providing simple messages based on proven information that suggests realistic ways to change risky behavior. This includes exploration of life situation and risk, consideration of options, and skill building, practice, and support to implement and sustain the behavior change

How to communicate with clients having STI/RTI

We all attach strong emotions, values, and attitudes to sex. Sometimes we are judgmental or disrespectful toward clients who do not share our views. This leads to a client feeling attacked or judged, a situation that makes learning difficult, and to poor understanding and compliance with treatment.

Most of us, including health care providers, respond emotionally to words that relate to the sexual organs and sexual activity.

Such words often make us uncomfortable. This is communicated to clients who then feel even more uncomfortable bringing up their problems. Providers often use medical terms that clients do not understand to cover up their own embarrassment about sex.

Be comfortable with the real words your clients use to communicate about sexual matters and use them yourself when appropriate in order to:

- Put clients at ease.
- Make what you are saying understandable.
- Make compliance with treatment and behavior change more likely.

3. Client education on STI/RTI

Goals of client education

- Primary prevention or preventing infection in uninfected clients. This is the most effective strategy to reduce the spread of STI/RTI and can be easily integrated into all health care settings.
- Curing the current infection.
- Secondary prevention, which prevents further transmission of that infection in the community and prevents complications and re- infection in the client.

Where to find the opportunities for client education?

Client education does not happen only one-to-one. A friendly and supportive atmosphere clinic-wide promotes client confidence and use of services. Important messages on prevention and treatment can be reinforced everywhere in the clinic. The attitudes of all clinic staff, from cleaning to administrative and laboratory personnel, may contribute significantly to the success of a STI/RTI prevention and management program. To foster positive and welcoming behavior towards clients with STI/RTI, it may be helpful to sensitize all clinic staff so that they are comfortable giving out condoms, medications, and information on prevention and treatment. Positive, helpful staff behavior can be encouraged by:

- Holding staff training sessions on the importance of STI/RTI prevention and management.
- Conducting values clarification exercises.
- Staff participation in decision making around addition of new services.
- Staff participation in the development of educational materials.

Prevention and quality of care can be promoted at various places around the clinic:

Waiting room – health talks, posters, pamphlets, videos, condom demonstrations.

Registration desk– friendly clerk, confidential ways to identify clients' complaints (such as choosing your problem from a list of pictures), brochures, condoms.

Laboratory – posters, information about condoms, condoms to take.

Client Examination area – friendly providers, written material, educational posters on the wall, condom demonstration by provider, pictorial list of where to get STI/RTI and HIV testing and services.

What the client needs to know?

Prevention of STI/RTI

- Risk reduction
- Using condoms, correctly and consistently, availability of condoms
- Limiting the number of partners
- Alternatives to penetrative sex
- Negotiating skills

Information about STI/RTI

- How they are spread between people
- Consequences of STI/RTI
- Links between STI/RTI and HIV
- STI/RTI Symptoms - what to look for and what symptoms mean

STI/RTI treatment

- How to take medications
- Signs that call for a return visit to the clinic
- Importance of partner referral and treatment
- Acknowledge gender inequalities, which may impact male Partners coming forward to seek services

Risky behaviors

We know that certain behaviors increase the risk of STI/RTI transmission. Most of these behaviors involve sexual activity and are called unsafe sex.

What is safer sex?

Safer sex is sex with a partner who is uninfected or any sexual activity that reduces the risk of passing STI and HIV from one person to another.

Some safer sex practices

- Mutually faithful relationship between two uninfected partners
- Reducing the number of sex partners
- Using a barrier such as a condom for all types of intercourse
- Non-penetrative sexual practices such as kissing, hugging, rubbing, and masturbating
- Avoiding sex when either partner has signs of a STI
- Abstinence

Some practices that make sex risky

- Unprotected vaginal sex if you don't know whether your partner is infected.
- Sex with a partner who has signs of a STI.
- Sex with a partner who has other partners.
- Unprotected anal sex.
- Unprotected oral sex.
- Use of alcohol or drugs with sex.
- Sex with an intravenous drug user.
- Multiple partners.
- Casual sex or sex with strangers.
- Frequent change of partners.
- Douching.
- Use of vaginal drying agents

Principles of effective Client education

- Shows respect and concern for the safety of clients through body language, telling clients you are concerned, being attentive to and acknowledging clients' feelings, and taking sufficient time with them.
- Is client-centered. Provides messages that are tailored for each individual –different message for married men, women, and adolescents.
- Involves 3 kinds of learning: through ideas, actions, and feelings (cognitive, psycho-motor, and affective).
- Uses multiple channels (eyes, ears and face-to-face/visual, auditory, interpersonal).
- Delivers messages via the eyes, ears, and face-to-face communication.

Principles of behavior change for prevention

- **Give good information-** Give clients clear and accurate information on risky behaviors, the dangers of STI, and specific ways to protect themselves. Identify behaviors that put particular clients at risk.
- **People need motivation to change a behavior-** People change behavior as a result of a personal experience or crisis. Meeting someone who has HIV/AIDS, hearing statistics about HIV/AIDS, hearing about a family member or friend who is infertile due to a STI, hearing about the children of someone who died of AIDS, or learning that a partner is HIV-positive are all experiences that might motivate someone to change.
- **Identify barriers to behavior change-** What keeps someone from changing behavior? Is it personal views, lack of information, or social restraints such as the need to please a husband?

- **Establish goals for behavior change** - Set up short- and long-term goals that Client and provider can agree upon.
- **Offer real skills** -Teach negotiation skills for women, demonstrate how to use a condom, and conduct role- playing conversations.
- **Offer choices**- Clients need to feel that they have choices and can make their own decisions. Offer substitute behaviors that are less risky.
- **Plan for setbacks**- Rehearse how the client can deal with a situation that temporarily worsens (for example, the husband becomes angry, or refuses to use condoms).

4. Counseling on STI/RTI

Counseling: Face-to-face, personal, confidential communication in which one person helps another to make decisions and then to act on them. Good counseling has two major elements: mutual trust between client and provider and the giving and receiving of relevant, accurate, and complete information that enables the client to make a decision. It requires conversational and listening skills

Client counseling on STI/RTI

During counseling session, provider should talk about causation, transmission, recommended treatment, prevention, risk reduction, behavior change, and partner referral. Clinics can have take away information brochures in simple local languages with illustrations to reinforce messages.

Guidelines for counseling

- Welcome your client warmly by name and introduce yourself.
- Sit closely enough so that you can talk comfortably and privately.
- Make eye contact and look at the client as s/he speaks.
- Use language that the client understands.
- Listen and take note of the client's body language (posture, facial expression, looking away, etc.).
- Seek to understand feelings, experiences and points of view.
- Be encouraging. (Nod or say, "Tell me more about that.")
- Use open-ended questions.
- Provide relevant information.

- Try to identify the client's real concerns.
- Provide various options for the client.
- Respect the client's choices.
- Always verify that the client has understood what has been discussed by having the client repeat back the most important messages or instructions.

Barriers to good counseling

- Lack of privacy.
- Not greeting or not looking at the client.
- Appearing to be distracted (for example, by looking at your watch or reading papers while s/he is talking).
- Using a harsh tone of voice or making angry gestures.
- Sitting while the client stands or sitting far away from the client.
- Allowing interruptions during the consultation.
- Being critical, judgmental, sarcastic, or rude.
- Interrupting the client.
- Making the client wait for a long time.
- Not allowing enough time for the visit.

Guidelines for communicating with clients

Safer sex rules

- Use protection (condom or other barriers) every time you have sex unless you have sex with only one faithful partner who is uninfected.
- Keep away from unsafe practices like "dry sex" that may break the skin—the vagina should be wet inside when you have intercourse.
- Do not have sex in the anus, but if you must, always use a condom with lubrication because the skin there can tear easily and allow HIV to pass.
- Try massage, rubbing, touching, dry kissing, hugging, or masturbation instead of intercourse.
- Have oral sex with a male or female condom if this is acceptable to you.
- DO NOT have sex when either partner has sores on the genitals or when there is a discharge from the penis.

Guidelines to teach the Client negotiation skills for safer sex

- **How to make sex safer**

Have sex that does not let semen into the vagina, mouth, anus, or an open sore. Safer sex can be real sex, and not just “eating a sweet with the wrapper on.” Couples can talk about sex together to learn to please each other. Bargain for safer sex. Safer sex can be more pleasurable for both partners because it is less likely to cause worry, discomfort, or disease. Instead of intercourse, try outer course, which is having sex without putting the penis into the vagina.

- **Use condoms**

Male condoms are the most effective way to prevent transmission of all STI/RTI (including HIV), during sexual intercourse. If the man will not use condoms, the woman can use one of the other barrier methods that might help protect her.

These methods include

1. The female condom
2. The diaphragm or cervical cap
3. Spermicide cream, jelly, film, foam, or foaming tablets
4. Vaginal sponge

These methods have been shown to be somewhat effective against bacterial STI/RTI, but not HIV. Frequent use of spermicides, in fact, may increase the risk of becoming infected because it irritates the vaginal lining, which makes it easier for HIV, and probably STI/RTI, to enter the body. No method works perfectly all the time to prevent HIV/AIDS. But if you use male condoms correctly every time you have sex, you will be 90% protected.

- **Negotiating for safer sex**

Negotiating for safer sex is similar to negotiating for other things that we need. Thinking about how to negotiate successfully in other areas will help. A way to begin is for someone to decide what s/he wants, and what s/he is willing to offer in return.

- **Focus on safety**

In bargaining for safer sex, the focus should be on safety, not lack of trust, blame, or punishment. It is easier to reach agreement around safety because both people benefit from it.

- **Use other people’s as examples**
Knowledge that others are practicing safer sex can make it easier to start.

- **Ask for help if you need it**
Inviting another trusted person to help discuss safer sex with a Partner may make it easier.

Summary table for client education and counseling

Health education			Counseling
To raise awareness	For prevention	As a part of STI/RTI management	
Talk about STI/RTI and its complications	Promote correct and consistent condom use	Emphasize compliance with treatment	Discuss risk and vulnerability
Explain about symptoms and how to recognize them	Encourage fewer sexual partners	Promote condom use (including during treatment to avoid re-infection)	Examine barriers to prevention
Promote early use of services	Support delay in starting sex (for young individuals)	Encourage referral of partners for treatment	Discuss solutions and build skills for safe sex
			Make a plan and follow up

5. Integrated counseling and testing centers (ICTC) and their role in STI prevention and management

Clients with STI have shown high-risk sexual behaviour. Based on this high-risk behavior, the health care worker should inform the client about the links between STI and HIV and should encourage all clients to undergo an HIV test, as the risk of HIV among STI is upto 10 times higher. In order to get HIV test, Integrated Counseling and Testing Centers (ICTC) have been established. Each ICTC has counselor(s) and a laboratory technician. As of November 2009, there are 5330 counseling centers and more are being established. ICTCs are located in the medical colleges, district hospitals in all states and in addition in selected CHCs and PHCs especially in the high prevalence states. It is envisaged to establish ICTCs at all CHC and additional at selected PHCs in all states.

In Integrated Counseling and Testing Centers the STI Client will receive comprehensive and accurate information on HIV/AIDS and HIV counseling to facilitate an informed choice regarding an HIV test. The integrated centers serve as single window system by pooling all counselors and laboratory technicians working in ICTC, PPTCT, blood safety, STI, ART/OIs and HIV - TB together to offer round the clock counseling and testing services. This common facility will remove fear, stigma and discrimination among the clients, PLHAs and the referrals.

The ICTC have common television and video based health education materials that are screened continuously in the clients waiting area. The information related to preventive, promotive and curative health care along with information regarding HIV/AIDS, and various services provided by the hospital is provided to all the clients.

Opt-out strategy – In this, the counselor “assumes” that the client has come to get an HIV test (implied consent). The HIV test will be done unless the client actively denies the test.

Opt-in strategy – In this, the counselor specifically asks the client, whether s/he would like to undergo the HIV test. The client has to actively agree to the HIV test.

As per the National AIDS Prevention and Control Policy, all HIV tests are voluntary, based on the clients consent, accompanied by counseling and confidentiality of the results.

Aims of pre-test counseling

- To ensure that any decision to take the test is fully informed & voluntary
- To prepare the client for any type of result, whether negative or positive or indeterminate
- To provide client risk reduction information & strategies irrespective of whether testing proceeds

The clients are advised about preventive measures and use of condoms.

If the client declines to take the test, he/she leaves the ICTC. Some clients return to the ICTC after a few days for the test. If the client agrees to undergo the test, he/she proceeds to the attached laboratory for blood collection. After the blood sample is taken, the client either waits for the results or is asked to return on assigned date with Patient Identification Digit (PID) number

The tests are performed by using the rapid test kits. If the test is negative and the client has history of high risk factors, he/she is advised to repeat the test after 3 months as he/she may be in the window period. If the result is positive the test is repeated with kits using a different method of antibody detection. The result is considered positive if all three tests are positive. Before the results are revealed to the client, post counseling is done.

Aims of post- test counseling aims to:

- Help client understand and cope with the HIV test results
- Provide the client with any further information required
- Help clients decide what to do about disclosing their test result to partners and others
- Help clients reduce their risk of HIV/ AIDS and take action to prevent infection to others including condom, avoiding multiple partners and other high-risk behavior (Positive prevention).
- Help clients access the medical and social care and support they need
- Establish link with PLHA groups, if needed

In STI settings, the following is recommended

- HIV testing should be recommended for all STI clients after pre-test counseling and informed consent. There should be guarantee for confidentiality. Clients should be referred to the nearest ICTC.
- In some cases of STI in the presence of HIV infection, larger doses and longer treatment duration of the drugs listed under the different STI may be required. These clients should be followed up regularly for longer duration.
- Excessive use of anti-microbials should be avoided, as it is likely to lead to more rapid development of antibiotic resistance.
- Although counseling of individual clients on risk reduction, and prevention of STI transmission to the partners should be done in all clients of STI, this is of vital importance for those infected with HIV.

6. Glossary of STI/RTI related terminology

S. No	Terms	Meaning
1.	Sexual Aberration	A sexual activity, which differs from those generally, practised, or considered 'right' or 'moral'; also called deviation, paraphilia or perversion
2.	Adultery	Sexual intercourse between a married person and an individual other than his or her legal spouse
3.	AIDS	Acquired Immune Deficiency Syndrome; a fatal viral disease that impairs the body's ability to fight infections and cancers; while the disease may be treated, the underlying immune deficiency cannot up to now be cured by any means.
4.		
5.	Anal intercourse	Sexual intercourse in which the penis is inserted into the partner's anus; sometimes termed sodomy or buggery
6.	Anilingus	The act of using the mouth or tongue in erotic stimulation of the anus (the rim)
7.	Aphrodisiac or Zoophilia	Anything, such as drug or perfume, that is believed to stimulate sexual desire
8.	Bestiality	Sexual relations between a human and an animal
9.	Bisexual	a. Having a sexual interest in, or sexual relation with, both sexes ('AC-DC') b. Literally, having sex organs of both sexes, as in hermaphrodites
10.	Celibacy	a. The state of being unmarried, usually implying sexual abstinence b. Abstaining from sexual intercourse
11.	Clap	A layman's expression for gonorrhoea
12.	Coitus / Copulation (To engage in coitus, to bang, to fuck, to lay, to screw, to climb on)	Sexual intercourse between a male and a female, in which the penis is inserted into the vagina
13.	Coitus interruptus (premature withdrawal, pulling out)	The practice of withdrawing the penis from the vagina just before ejaculation;

S. No	Terms	Meaning
14.	Condom (French letter or FL, rubber sheath, Nirodh) In females the condom is placed in the vagina.	A contraceptive commonly used by males and recently introduced for females. For males it consists of a rubber or gut sheath that is drawn over the erect penis before sexual intercourse
15.	Fellatio (penilingus) (a blow job; to blow, to go down on, to eat, to suck)	The act of taking the penis into the mouth and sucking it for sexual pleasure
16.	Fidelity	Being faithful to one's chosen or given sexual Partner(s) and having sexual intercourse only with that / those partner(s)
17.	Fondling	Touching or stroking lovingly; caressing
18.	Foreskin (Prepuce)	The skin covering the tip of the penis or the clitoris
19.	French kissing (deep kissing or wet kissing)	Use of the tongue in kissing; thrusting of the tongue into the partner's mouth during a kiss
20.	Gay	Another term for male homosexual
21.	Glans	The head of the clitoris or the penis; comes from the Latin term for acorn
22.	High-risk behaviour	Term used to describe certain activities which increase the risk of transmitting an STI; includes frequent change of sex partners, anal and vaginal intercourse without using a condom, oral-anal contact, semen or urine in the mouth, sharing intravenous needles or syringes, intimate blood contact and sharing of sex toys contaminated by body fluids; often referred to as 'unsafe' activities
23.	HIV	Human immunodeficiency virus which renders the human immune (defense) system deficient and unable to resist opportunistic infections and the development of specific cancers
24.	HIV – sero negative	When HIV antibodies are not detected in the body
25.	HIV- sero positive	When HIV antibodies are detected in the body
26.	IDU	Injecting drug users
27.	Impotence (Erectile dysfunction)	Inability of a man to have sexual intercourse; usually refers to inadequacy of penile erection
28.	Incest	Sexual intercourse between close relatives, such as father and daughter, mother and son, or brother and sister
29.	Labia majora	The major or outer lips of the vulva
30.	Labia minora	The minor or inner lips of the vulva
31.	Lecherous	Being very lustful
32.	Lesbian	A female homosexual
33.	Libido	Sexual drive, interest or urge

S. No	Terms	Meaning
34.	Masturbation (Hand practice, playing with oneself)	Self stimulation of the genitals through manipulation; autoeroticism; self gratification
35.	Missionary position	Face to face coital position with the male on top of the female
36.	Monogamy	A marital arrangement in which a person has only one spouse
37.	Nymphomania	The constant, extreme and irrepressible desire of a woman for sexual satisfaction
38.	Oral –genital sex	Application of the mouth or tongue of one partner to the genitals of the other
39.	Oral-sex (head job, come down on, eat each other)	Sexual activity which involves mouth contact with another person’s genitals or anus; contact may include kissing, sucking or licking of the sexual organs
40.	Orgasm (The big O, to experience orgasm, to come)	The peak or climax of sexual excitement in sexual activity
41.	Paedophile	An adult who engage in or desires sexual activity with a child
42.	Partner exchange (Swinging, swapping)	The planned exchange of sexual partners between four or more individuals
43.	Pederasty	1. Male sexual relations with boy, often- anal intercourse 2. Sexual relations via the anus
44.	Petting (Making out, necking, dry fuck, dry lay)	Sexual contact that excludes coitus
45.	Polyandry	The form of marriage in which a woman has several husbands
46.	Polygamy	A marital arrangement in which a person has more than one spouse
47.	Polygyny	The form of marriage in which a man has several wives
48.	Pornography	The explicit description or exhibition of sexual activity in literature, photographs, films, etc, intended to stimulate erotic rather than emotional feelings
49.	Promiscuous	Engaging in sexual intercourse with many persons; engaging in casual sexual relations
50.	Prostitute	A person who engages in sexual relationships for payment (hooker, streetwalker, whore, pros); nowadays referred to as a commercial sex worker to avoid a negative bias
51.	Prostitution	Engaging in sexual activity for money
52.	Sadism	The achievement of sexual gratification by inflicting physical or psychological pain upon the sexual partner

S. No	Terms	Meaning
53.	Sado-masochism	A form of behaviour in which sex and pain become pathologically attached bondage, discipline
54.	Safe- sex	Term used currently to describe sexual activities mostly to reduce the risk of transmission of STI; includes always using a condom during sexual intercourse, mutual masturbation, dry kissing, massage, fantasy, touching; opposed to unsafe sex practices
55.	Vaginal lubrication	A clear fluid (like sweat) that appears on the walls of the vagina within a few seconds after the onset of sexual stimulation
56.	Virgin	A woman or girl who has never had sexual intercourse

MODULE NO. 11

CONDOM AND IT’S PROPER USAGE TECHNIQUE

Sr. No.	Topic	Page No
1.	Condom for STI/RTI prevention	134
2.	How to use condom	135
3.	How to use female condom	136

1. Condoms for STI/RTI prevention

Condom is one of the barrier methods of contraception. They are made by using either latex or polyurethane, which cannot be penetrated by sperm, STI or HIV organism, so it provides dual protection, helps in avoiding unwanted pregnancies and gives protection against STI. Therefore promotion of the use of condoms and ready accessibility of condoms is important for the control of STI and HIV. Management of STI includes counseling on preventive measures and use of condoms. All health facilities providing STI services must always have in stock the essential drugs and condoms. The necessity of using condoms must be explained to the clients along with the advice on the treatment schedule and important for compliance of the full course of medicines prescribed.

General Instructions for condom use

Remember:

The condom does not include spermicide. If you want additional protection, you must add your own spermicide.

Use a new condom each time you have sex.

Use a condom only once.

For best results, store condoms in a cool, dry place.

Do not use a condom that may be old or damaged.

Do not use a condom if:

The package is broken.

The condom is brittle or dried out.

The color is uneven or has changed.

The condom is unusually sticky.

Male Condom

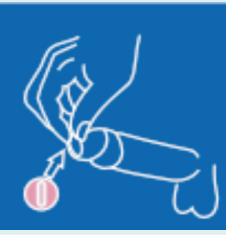
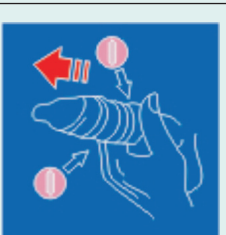
Most male condoms are made of latex, while some are made of polyurethane. Male condoms are of two types: Non lubricated and lubricated.

Female condom

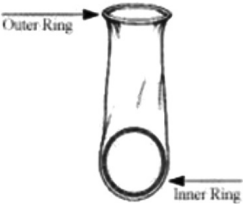
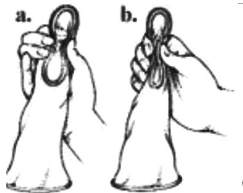
Female condoms are made of polyurethane. One advantage of it over the male condom is that its size and shape enable it to cover the wider surface area including some of the external genitalia, thus it may offer additional protection against infections that can be transmitted by contact with skin normally not covered by a male condom. However, the female condom is expensive. It is freely available in open market but not yet included in the National Family Welfare program.

2. How to use a condom

How to use a male condom

	Step 1: Open package • Use a new condom each time you have sex • Check that it has not expired and that the packaging has no holes by pressing the pack between your fingers • Push condom to one side of package to allow room to tear open other side • Remove condom carefully • DO NOT use finger nails, teeth or sharp objects to open package or remove condom
	Step 2: Put it on • Squeeze closed top end of condom to make sure no air is inside (can make it break) • Place condom over top of erect penis • With other hand, unroll condom gently down the full length of your penis (one hand still squeezing top end)
	Step 3: During sex • Make sure condom stays in place • If it comes off, withdraw your penis and put on a new condom before intercourse continues • Once sperm has been released into condom (ejaculation), withdraw the erect penis and HOLD the condom in place on penis
	Step 4: Dispose of condom • Remove condom ONLY when penis is fully withdrawn • Keep both penis and condom clear from contact with your Partners body • Knot the end of the used condom
	• Place in tissue or bag before throwing it in dustbin • DO NOT flush condoms down the toilet. It will block the system.

3. How to use a female condom

	Before intercourse Step 1 : Open package Remove the female condom from the package, and rub it between two fingers to be sure the lubricant is evenly spread inside the sheath. If you need more lubrication, squeeze two drops of the extra lubricant included in the package into the condom sheath.
	Step 2 : Put it in The closed end of the female condom will go inside your vagina. Squeeze the inner ring between your thumb and middle finger.
	Step 3 : Assure right position Insert the ring into your vagina. Using your index finger, push the sheath all the way into your vagina as far as it will go. It is in the right place when you cannot feel it. Do not worry, it can't go too far. <i>Note: The lubrication on the female condom will make it slippery, so take your time to insert it.</i>
	During sex Step 4 : - The ring at the open end of the female condom should stay outside your vagina and rest against your labia (the outer lip of the vagina). Be sure the condom is not twisted. - Once you begin to engage in intercourse, you may have to guide the penis into the female condom. If you do not, be aware that the penis could enter the vagina outside of the condom's sheath. If this happens, you will not be protected.
	After intercourse Step 5: Dispose of condom - You can safely remove the female condom at any time after intercourse. If you are lying down, remove the condom before you stand to avoid spillage. - Throw the female condom away. Do not reuse it.

During intercourse remember to remove and insert a new female condom if: Condom rips or tears during insertion or tears during insertion or use, the outer ring is pushed inside, the penis enters outside the pouch, the condom bunches inside the vagina, or you have sex again.

MODULE NO. 12

MANAGEMENT OF SEXUAL VIOLENCE

Sr. No.	Topic	Page No
1.	Health services and sexual violence	138
2.	Medical management of sexual violence	139

1. Health services and sexual violence

Sexual violence is defined as “any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic women’s sexuality, using coercion, threats of harm or physical force, by any person regardless of relationship to the victim, in any setting, including but not limited to home and work”.

Often, because the victims feel uncomfortable talking about sexual violence, they may come to the clinic with other non-specific complaints or requesting a check-up, assuming that the health care provider will notice anything abnormal that needs treatment. Therefore, health care workers should maintain a high index of suspicion and ask about experience of sexual violence or abuse.

What services should be made available for a victim of Sexual violence?

The following services should be available, on-site or through referral, for Clients who have experienced sexual violence:

1. Visual inspection

Before proceeding for examination consent of the victim or the legal guardian in case of minors (less than 18 years) must be taken. Counseling of the victim must be done. Examination of clothes, injuries and genital must be carried out. Look for injury, erosions, scratch marks, bleeding, discharge, odour, irritation, warts and ulcerative lesions.

2. Collection of Medicolegal evidence

Medicolegal examination should be available to document evidence if the person chooses to take legal action. Staff should be trained in how to take forensic specimens, or referral links should be made. Forensic examination must include physical and genital examination. (Refer to the State-specific guidelines for forensic examination).

3. Collection of samples for detecting STI/RTI

If facilities permit, swabs must be collected from various sites for wet mount examination or culture of a number of causative organisms. Blood could be collected for VDRL/RPR, HIV and HbsAg tests. If facilities are not available, sample collection not to be done and refer the victim where appropriate health care facility is available.

4. Essential medical care for injuries and health problems

Medical management includes:

- Care of injuries
- Prevention of pregnancy by offering emergency contraception
- STI prophylaxis

Note: It is important to obtain informed consent for any examination, treatment or referral in a case of a victim of sexual assault.

2. Medical management of sexual violence

Medical management includes:

- Prevention of pregnancy by offering emergency contraception
- STI chemoprophylaxis
- Care of injuries

Post exposure prophylaxis against pregnancy

Emergency contraception (EC) to prevent unwanted pregnancy should be given within 72 hrs of unprotected sexual intercourse.

Post exposure prophylaxis with Emergency contraceptives

Type of Emergency contraception	Dose and schedule
Levonorgestrel-only pills (contains 0.75 mg of levonorgestrel per pill)	Levonorgestrel to be taken in 2 doses First dose- to be taken within 72 hours after unprotected intercourse Second dose- same dose to be taken after 12 hrs of first dose

Post exposure prophylaxis of STI

STI prophylaxis should be started as early as possible, although the doses should be spread out (and taken with food) to reduce side effects such as nausea.

A. *Post exposure prophylaxis of STI for adults and older children and adolescents weighing more than 45 kg.*

1. For protection against chancroid, gonorrhoea and chlamydia

- Tab. Azithromycin 1gm orally on empty stomach, single dose under supervision
+
- Tab. Cefixine 400mg orally after food single dose

2. For protection against T. Vaginalis and B. vaginosis

- Tab Metronidazole 2gm orally after food single dose

OR

- Tab Tinidazole 2gm orally after food single dose

B. *Post exposure prophylaxis of STI for adult, adolescents & children weighing under 45 kg.*

1. For protection against chancroid and chlamydia

- Azithromycin 20 mg/kg of body weight in empty stomach single dose orally.

2. For protection against gonorrhoea

- Cefixime 8 mg/kg of body weight as a single dose,
OR
- Ceftriaxone 125 mg by intramuscular injection, single dose

3. For protection against T. Vaginalis

- Metronidazole 15 mg/kg of body weight orally 3 times a day for 7 days

Post sexual exposure prophylaxis of HIV

Refer to district hospital and follow NACO guidelines for the same.

* Sexually transmitted disease, 4th edition, King K Homes

Post sexual exposure prophylaxis against hepatitis B

If not vaccinated earlier, it is recommended. If vaccine is not available, refer to the centre where Hepatitis B vaccination facilities are available.

An evaluation of the person's personal safety should be made by a protective services agency or shelter, if available, and arrangements made for protection if needed.

Psychosocial support (both at time of crisis and long-term)

Psychosocial management includes counseling and supportive services, which should be available on-site or by referral. Women or children who have been sexually abused may need shelter and legal protection. Adolescents in particular may need crisis support, as they may not be able or willing to disclose the assault to parents or care takers.

Follow-up services for all of the above

It is essential to explain the importance of follow-up appointments and services during the first visit itself. The woman should be clearly told whom to contact if she has other questions or subsequent physical or emotional problems related to the incident.

MODULE NO. 13

PREVENTING STI/RTI AMONG FEMALE SEX WORKERS,
MEN HAVING SEX WITH MEN AND TRANSGENDER AND
INJECTING DRUG USERS

Sr. No.	Topic	Page No
1.	HRGs and their role in prevention and control of STI/RTI	144
2.	STI/RTI services and treatment strategies for HRGs	145

1. High Risk Group (HRG) population and their role in prevention and control of STI/RTI

Preventing transmission of STI/RTI among people, who have multiple partners, is the single most effective strategy to reduce the number of new infections within the general population.

Women and men, who exchange sex for money, services or favors on a regular basis are most at risk, exposed to and can transmit infections at a higher rate than others in the population. Like all sexually active women and men of reproductive age, these women and men have reproductive health needs and may come to PHC to avail family planning services. A provider needs skills to help these women and men who are at high risk, to welcome them non-judgmentally, and to treat them with the same care like their other clients. Because of their high potential to transmit infections to others, the most at risk population especially sex worker needs effective treatment whenever and wherever they present for care, as well as knowledge and skills to promote condom use with their regular partners and customers.

Who are the people whom we can say as High Risk Group?

High risk group population comprises the people who sells sex for money or favors (the female sex workers), men having sex with men (MSMs), and intravenous drug users (IDUs).

What all HRG have in common is that their work puts them at high risk for STI/RTI. As health workers, it is important to be able to identify these HRG individuals at risk and give them the care they need in a non- judgmental and compassionate way.

HRG and STI/RTI

Not everyone in the population has the same probability of becoming infected with STI/RTI or transmitting them to others. Female sex workers, MSMs, IDUs have the highest rates of transmission of HIV. The reasons for the high rates of infection and transmission for sex workers include their high number of sexual contacts, as well as co-factors such as the presence of other STI, concurrent substance abuse and/or poor health status and lack of access to health services.

It has been observed that in some communities, as many as 6 out of 10 sex workers are infected with HIV. Providing services to sex workers such as distributing free condoms, STI treatment and enabling them to adopt safer behavior can have the greatest impact on slowing STI transmission in the larger community.

Barriers to services

- Because of the mindset of community, there is a stigma for HRG population and therefore they are not always welcome by general population.
- Though women and transgenders who trade sex are often at the highest risk for STI/RTI, they are often the least likely to seek STI/RTI services.
- The female sex workers also has the same kind of barriers to care for themselves that affect all women
- HRG often find that services may be highly stigmatized. The providers may judge her harshly as immoral and may treat her badly.

Possible solutions

Integration or linkage of STI/RTI services with the RCH services where a sex worker comes for family planning may solve some of the problems of stigmatization, cost, and accessibility. Taking services to communities or workplaces of sex workers such as target interventions that visits workplaces of sex workers may help in reaching out to a large number of sex workers

2. STI/RTI services and treatment strategies for HRG

Providing care for HRG

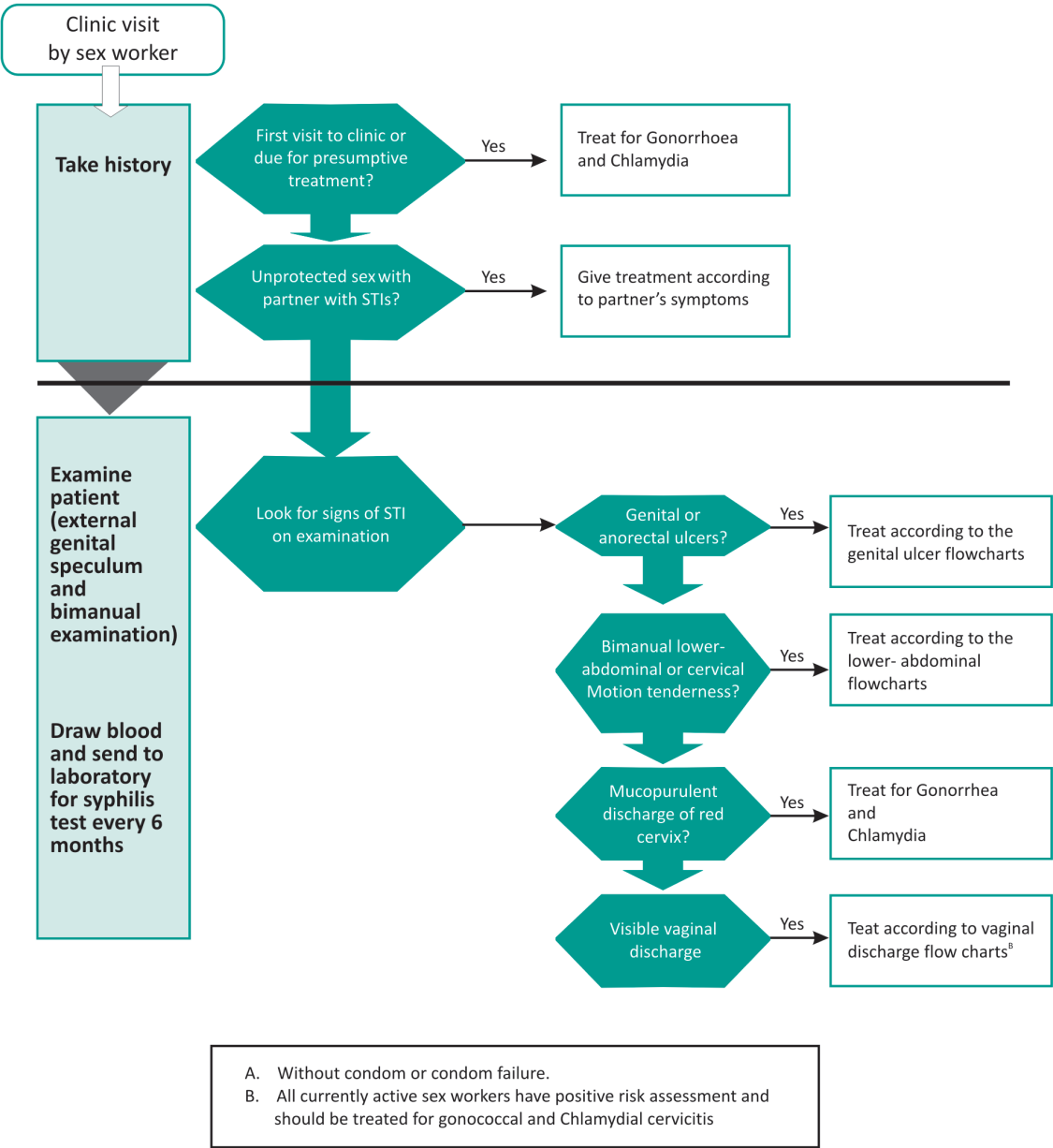
- You can make a big difference in the life of HRG by helping them get the care they needs and prevent transmission of STI to the wider population.
- Give the same respectful care to HRG as you gives to others.
- Learn which medications provide the most up-to-date, effective, and affordable treatment; make sure to keep a supply available.
- Find a regular and adequate supply of free or cheap condoms.
- Link up with organizations doing social marketing of condoms to make them available at clinics, shops, bars, cafes, and from outreach workers.

Presumptive treatment

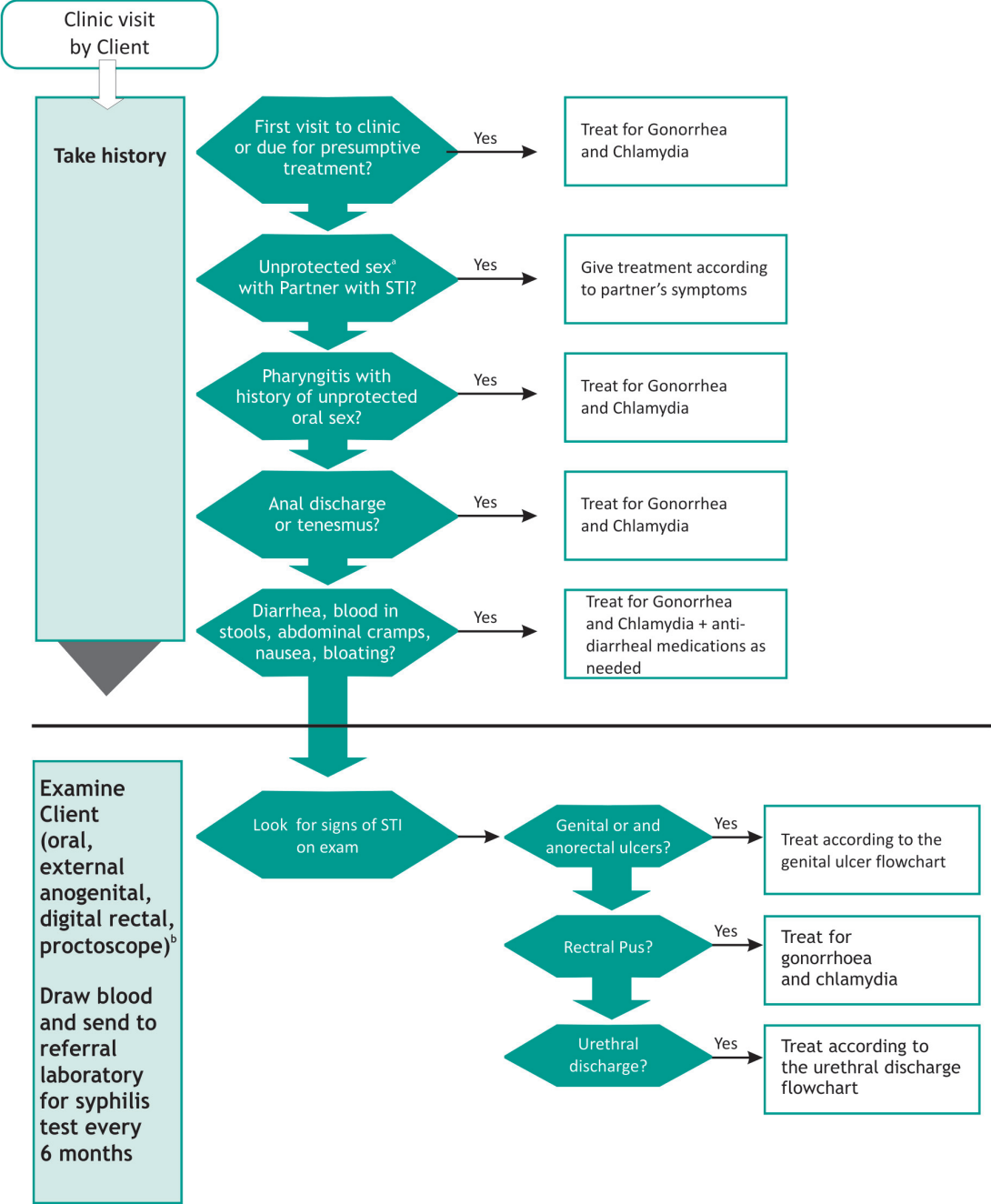
- The presumptive treatment is advised ONLY for female sex workers and Men having sex with men including transgenders.
- Presumptive treatment is NOT offered to IDUs.

- The advantage of presumptive treatment is that high-risk individuals who may not have symptoms are treated.
- Presumptive treatment (the provider presumes that FSWs and MSM & TGs has been exposed to infection because of their work and inability to use condoms with every customer) can be effective.
- Presumptive treatment, prevention education, and condoms if provided to FSW and MSM then rates of all STI will decline among them.
- While presumptive treatment strategy can have a significant effect on prevalence of STI/RTI both in FSW and MSM and their partners, it cannot stand on its own. Community interventions, which emphasize prevention, condom use in men, and the use of improved STI/RTI services, should also be part of an integrated strategy.
- Tab Azithromycin 1 gm and Tab Cefixime 400 mg are given under observation at clinic under the guidance of MO as Presumptive treatment to FSW and MSM, when they visit the STI clinic without any symptom or sign for first time and after six consecutive months from the last visit to the clinic.

Flowchart: Management of STI during routine visit by female sex workers



Flowchart: Flowchart for routine visit by male and transgender sex workers in clinics



MODULE NO. 14

PREVENTING STI/RTI IN ADOLESCENTS

Sr. No.	Topic	Page No
1.	STI/RTI among Adolescents and Youth	150
2.	Addressing STI/RTI among Adolescents and Youth	153

1. STI/RTI among Adolescents and Youth

WHO has defined adolescents as those between the age group of 11 to 19 whereas youth between the age group of 15-24.

Many PHCs do not offer services to unmarried adolescents. Services such as family planning for women under age 18 or for those who are unmarried are many a time denied. At the same time pregnancy, abortion, and STI rates in young women are high, accounting for a large part of maternal morbidity and mortality.

Adolescent girls are particularly vulnerable to STI since they are less likely to have access to health services and to recognize symptoms. Health services for adolescent boys are also extremely limited.

Lack of education about sexual health for both boys and girls leaves them ill equipped to make important choices to protect themselves against unwanted sex, pregnancy, and STI. The AIDS epidemic gives a new urgency to STI prevention and is also an opportunity to protect new generations from the devastating effects of AIDS by making information and services available.

The magnitude of STI/RTI among Adolescent and Youth

- Adolescents and youth in the age group 10-24 years contribute to about 30% of our population. According to Census 2001, there are 225 million adolescents comprising nearly one fifth (22%) of India's total population, out of which 12% belong to the 10-14 yrs age group & nearly 10% are in the 15-19 yrs age group.
- The data from various Indian studies reveal that adolescents indulge in pre-marital sex more frequently and at an early age.
- More than half of the currently married illiterate females are married below the legal age of marriage. Nearly 20% of the 1.5 million girls married under the age of 15 are already mothers. Nearly 27% of married female adolescents have reported unmet need for contraception.
- STI, including HIV, are most common among young people aged 15-24 years and more so in young women. Over 35% of all reported HIV infections in India occur among young people in the age group of 15-24 yrs indicating that young people are highly vulnerable. The majority of them are infected through unprotected sex. An estimated 1 in 20 youths contracts STI/RTI each year and one-third of all STI occur among 13–20-year-olds (110 million STI/year).
- Mortality due to pregnancy and its outcomes in married female adolescents of 15-19 yrs is higher than adult females who are in the reproductive age group. 35% of women hospitalized for septic abortion are under age 20.

These statistics document the extent of unprotected sexual activity among youth and the clear need to protect young women against both STI/RTI and pregnancy. We have to seek the opportunity to educate, prevent, and treat STI/RTI, when young women already come for abortion and care of pregnancy, in PHC setting.

Protection against infection and pregnancy involve the same strategies and services used for adults.

Young men can be involved in both family planning and STI/RTI prevention if their need for information and treatment is addressed.

Why Adolescent and Youth are at risk STI/RTI?

- The female genital tract is not mature and is more susceptible to infection (a biological risk for girls).
- Young men often have a need to prove sexual powers.
- Adolescent and youth lack in negotiation skills and females have submissive attitudes towards men.
- Young men may have their first sexual experiences with sex workers.
- Young women may have their first sexual experiences with older men.
- Youth lack accurate knowledge about the body, sexuality, sexual health and STI.
- There is a lack of political will to educate youth: no health/sexuality education, poor communication between youth and elders, lack of materials directed at youth on the subject.
- Youth lack control over their sexuality and are subject to early marriage, forced sex, and poverty. In other words sex in exchange for social security.
- Changing partners is more common among youth than among older men or women who may be in stable relationships.

Therefore there is an urgent need for improving the accessibility of adolescents to preventive and curative services including information and counseling.

Clinical presentation of STI/RTI in adolescents

The presenting symptoms of adolescents are very peculiar as very often they present with symptoms other than those of STI/RTI. Therefore risk assessment plays a crucial role. The increasing tendency of homosexual behavior as reported by some studies must also be kept in mind and ano-genital lesions must be looked for.

Girls	Boys
In general among adolescent females, an RTI rather than an STI, is the main cause of vaginal discharge e.g. endogenous vaginitis. Approximately 85% of gonococcal infection in females is asymptomatic. However, there may be vulval itching, minor discharge, urethritis or proctitis. In pre-pubescent girls, a purulent vulvo-vaginitis may occur.	While among adolescent males STI is the main cause of urethral discharge. Gonorrhoea among boys presents as proctitis, urethral discharge, symptomatic pyuria, penile edema, epididymitis and testicular swelling. Disseminated gonorrhoea presents with multiple systemic manifestations.
Similarly, Chlamydia trachomatis infection is also asymptomatic in the majority of cases. Symptoms that may occur in the adolescent are inter-menstrual bleeding, postcoital bleeding and an increase in vaginal secretions	While Chlamydia trachomatis infection in adolescent males presents as urethritis
Candida albicans is uncommon in adolescents prior to puberty. If present, the adolescent may have a discharge, vulval itching, dyspareunia, peri-anal soreness or a fissuring at the introitus. Attacks of candida vulvitis may be cyclical in nature and corresponds to menstruation.	While in adolescent males infection due to Candida albicans is causing urethritis uncommon
The signs of acquired syphilis in children present with small chancres or mucocutaneous moist lesions either on the vulva or anus. Presentation of syphilis is the same in adolescents and adults	While in adolescent males, signs of acquired syphilis is same as that of adult males
Bacterial vaginosis does not produce vulvitis and the adolescent will not complain of itching or soreness.	

2. Addressing STI/RTI among Adolescents and Youth

Barriers to information and services for youth

- Lack of services: little access to family planning or services for treatment or prevention of STI
- Lack of access to condoms
- Provider, parent, teacher, and community attitudes about youth and sexuality
- False belief that young people are not sexually active, and that information will increase sexual activity
- Lack of messages targeted to youth
- Lack of providers trained to deal with youth

Overview of the Adolescent Reproductive and Sexual Health Strategy (ARSH)

The Govt. of India has realized that the health situation of adolescent and youth will be central in determining India's health, mortality, morbidity and population growth scenario. Investment in adolescent reproductive and sexual health will yield dividends in terms of delaying age at marriage, reducing incidence of STI and reducing the proportion of HIV positive cases in 10-19 age group. This will also help India in realizing its demographic bonus, as healthy adolescents are an important resource for the economy.

The 10th five year plan recognizes adolescents as a distinct group for policy and programme attention. The national population policy 2000 identifies adolescents as an underserved group for which health specifically reproductive and sexual health interventions are to be designed. The national youth policy 2003 recognizes 13-19 yrs as a distinct age group, which is to be covered in programmes of all sectors including health, education, science and technology etc. In this regard the youth ministry has devised special programmes for adolescent health and empowerment.

Accordingly a national strategy for adolescent reproductive and sexual health (ARSH) has been developed and in the National Rural Health Mission (NRHM) ARSH strategy has been approved as a part of the Reproductive and Child Health Phase II (RCH II). Various States as a part of their State and District RCH II plans have adopted this national strategy. This strategy is now to be implemented in the districts in the primary health care setting.

ARSH strategy in National RCH II PIP?

The goals of the Govt. of India's RCH II are reduction in IMR, MMR and TFR. In order to achieve these goals the RCH lists out four technical strategies. One of the technical strategies is for adolescent health.

A strategy for ARSH has been approved as part of the national RCH II programme implementation plan (PIP). This strategy focuses on reorganising the existing public health system in order to meet the service needs of adolescent. Steps are to be taken to ensure improved service delivery to adolescent during routine checkups at sub centers clinics and to ensure service availability on fixed days and timings at the PHC and CHC levels. This is to being tune with the outreach activities.

A core package of services would include preventive, promotive, curative and counseling services. The framework of services in the RCH II ARSH strategy in the National PIP is presented below. This describes the intended beneficiaries of the adolescent friendly reproductive and sexual health services (target group) the health problems/issues to be addressed (service package) and the health facilities and service providers to be involved.

Such friendly services are to be made available for all adolescent married and unmarried girls and boys during the clinic sessions but not denied services during routine hours. Focus is to be given to vulnerable and marginalized sub groups. A plan of service provision as per level of care may be developed based on the RCH II service delivery plan.

ARSH strategy in State RCH II

The National RCH II ARSH Strategy has been adapted in several State RCH II PIPs. By and large, most states have incorporated a strategy for adolescent health. The variation in them across the states can be explained in terms of the scope of demand generation activities and service provision. Some states have stressed more on knowledge/awareness generation and environment building activities through involvement of NGOs and other departments such as Women and Child Development, Youth and Education. Other states have proposed adolescent clinics and counseling through NGOs. Most stated articulate a service delivery strategy for adolescent through the public health system at the PHC and CHC levels. Some have proposed linkages with the adolescent-related work already initiated at the tertiary level through district hospitals. While some states have proposed selective coverage of PHCs and CHCs in a phased manner, others have proposed full coverage of all districts for ARSH interventions. In the RCH II, district programme managers are expected to identify PHCs and CHCs based on certain key criteria. The RCH II programme proposes additional inputs for strengthening RCH services in 50 per cent PHCs as 24 –hour functional centers. These facilities will have additional nursing staff for organizing services. It is recommended to select only such facilities in the first phase of implementing the RCH II ARSH Strategy. The available physical infrastructure is to be kept in mind while selecting these facilities.

Youth friendly STI/RTI services

The key “friendly” characteristics of services for adolescents are at the levels of the user, provider, and health system. Health services must be:

- (i) Accessible - ready access to services is provided
- (ii) Acceptable - that is, healthcare meets the expectations of adolescents who use the services. e.g. Convenient and confidential services, special hours (after school, evenings, weekends, drop-ins) and comfortable for young men and young couples.

From the provider’s and manager’s perspective, services must be:

- (i) Appropriate-required care is provided and unnecessary and harmful care is avoided
- (ii) Comprehensive-care provision covers aspects from prevention through to counseling and treatment with emphasis on communication skills for young people.
- (iii) Effective-healthcare produces positive change in the health status of the adolescents. The health system must focus on efficiency in service delivery that is high quality care is provided at the lowest possible cost. Providers who want to work with youth, have special training, and are non-judgmental and provides privacy during examination.
- (iv) Equitable- that is, services are provided to all adolescents who need them, the poor, vulnerable, marginalized and difficult-to-reach groups/areas.

Services are to be made available for all adolescents, married and unmarried girls and boys. Focus is to be given to the vulnerable and marginalized sub-groups. The package of services is to include promotive, curative and referral services.

Facilities must be in a position to provide the following core package of services:

(i) Promotive services

- Counseling and provision for emergency contraceptive pills
- Counseling and provision for reversible contraceptives
- Information/advice on SRH issues

(ii) Preventive services

- Provision of condoms

(iii) Curative services

- Treatment of common STI/RTI
- Treatment and counseling for sexual concerns of male and female adolescents.
- Management of sexual abuse among girls.

(iv) Referral services

- Voluntary Counseling and Testing Center
- Prevention of Parent to Child Transmission.

(v) Outreach services

- Periodic health check -ups and community camps.
- Periodic health education activities.
- Co-curricular activities.

Outreach strategy could focus on School-based/Peer education programs, target out-of-school and married youth, use entertainment to gather youth and disseminate health messages (concerts, movies, theatre, etc.) and encourage clinic attendance and Organize or link with sports programs and Red Ribbon club.

Involvement of Adolescents in prevention of STI/RTI

Young people should have information about and be encouraged to:

- Delay onset of sexual activity. Abstain from sexual activity until married.
- Learn how to use condoms.
- Use condoms. These may be discontinued when pregnancy is desired.
- Limit the number of Partners. Avoid multiple partners and stick with one Partner.
- Avoid high-risk partners.
- Recognize symptoms of STI/RTI. If burning with urination and/or discharge from the penis, or there are genital sores, young men and their partners should not have sex, but both should come to the clinic for treatment.

Lessons learned from Youth Programs

We have learned some lessons from those who have started successful programs that target youth.

- Do need assessment.
- Involve communities.
- Talk to community leaders.
- Involve youth from the beginning. Ask them about their needs.
- Involve parents from the beginning if possible, although this can be tricky.
- Train peer educators.
- Target message and ways of reaching specific groups, such as in-school or out-of-school youth, married or unmarried youth.

Reasons to provide Clinic Services for Youth include

- High STI/RTI rates among youth.
- STI/RTI diagnosis and treatment are not available outside a clinic.
- Few contraceptive options are available to young women or men outside the clinic setting.
- Young women already come for care because of pregnancy and abortion.
- Prevention can be offered alongside care.

Strategies to attract Youth to Clinic Services

- Make services friendly towards youth.
- Providers who want to work with youth, have special training, and are non-judgmental.
- Convenient and confidential services.
- Special hours (after school, evenings, weekends, drop-ins).
- Comfortable for young men and young couples.
- Private exam and consultation rooms.
- Array of contraceptive choices.
- Emphasize barrier methods with emergency contraceptive pills (ECPs) for backup against pregnancy.
- Emphasis on communication skills for young people.

Outreach strategy

- School-based education programs.
- Peer education programs.
- Target out-of-school youth.
- Target married youth.
- Word-of-mouth about where to find clinic services.
- Use entertainment to gather youth and disseminate health messages (concerts, movies, theatre, etc.) and encourage clinic attendance.
- Organize or link with sports programs.

MODULE NO. 15

MALE PARTICIPATION IN PREVENTION AND CONTROL OF STI/RTI

Sr. No.	Topic	Page No
1.	Strategies for involving men in STI/RTI prevention	160
2.	Challenges of incorporating STI/RTI services for men	162

1. Strategies for involving men in STI/RTI prevention

Often men are the bridging group who acquire infection from and transmit STI/RTI to high-risk partners such as sex workers and who then carry it home to their regular partners. In this way, STI/RTI spread even to women who have only one partner. Reaching men with prevention messages and condoms and treating their STI/RTI early and correctly are very effective ways to prevent the spread of STI/RTI in their regular partners. A key strategy is getting men with STI/RTI to refer or bring their regular partners for treatment, thus reaching the many women who may appear to be low risk and have no symptoms.

Why should FP and STI/RTI services include men?

Men may have access to services for STI/RTI treatment through STI clinics and PHCs, but they are mostly less informed than women about basic issues of sexual health and disease prevention. It is clear from new research studies that men are eager for more information about their own reproductive health and that of their partners. Men and women alike suffer from the fear of shame and embarrassment attached to seeking treatment for STI/RTI and need sensitive treatment from providers.

FP and STI/RTI services should include men:

- To provide opportunities for increased access to information.
- To enable men to support their partners.
- To increase effectiveness of partner referral for STI/RTI treatment.
- To improve partner communication skills.
- To increase the use of condoms with casual partners.
- To increase the use of condoms with regular partner if any one of the partner is infected or has unprotected sex outside of it.

Two important reasons why men should be involved in STI/RTI prevention program:

1. To encourage men with STI/RTI to bring or refer their partners for treatment. Since STI/RTI are more often symptomatic in men than in women, partner management is an important way to identify asymptomatic women who need treatment
2. To reach men with information about prevention, especially use of condoms in casual and commercial sex encounters. This will reduce the chance that they will take STI/RTI home.

Ways to involve Men in awareness, prevention, and treatment

There are many ways to involve men in the awareness, prevention, and treatment of STI/RTI. The following are only a few examples:

- Public information campaign on STI/RTI directed to men receiving early treatment and informing their partners of the need for treatment.
- Condom promotion for men with casual partners in addition to primary partners if not practicing safer sex outside of the primary relationships.
- Posters in local bars, pan shops where men gather that address STI/RTI and the need for men to protect their families.
- Drug treatment packets/kits with information on STI/RTI for female partners.
- Partner referral cards for a man to give to his primary partner.
- Linking FP/MCH services with STI/RTI services for partner referral.
- Public information campaign on syphilis and HIV that addresses how men can protect both their wives and newborns by decreasing the number of casual partners and using condoms.
- Advertising ANC services that promote male partnership in pregnancy and birth.
- Trained peer educators in the workplace.

Men may be more receptive to STI prevention messages if they understand that STIs threaten their health and fertility, and may endanger the lives of their wives, girlfriends and children.

2. Challenges of Reaching Men and how to address these challenges

Challenges	How to address
Men may not feel comfortable using services mainly used by women.	- Establish men only clinic or have dedicated hours for men services - Ensure privacy and confidentiality
Men may feel shame or embarrassment about seeking information or treatment for STI/RTI.	- Create general public awareness - Provide better experiences to those attending the clinic so they recommend others to seek services - Provide adequate information to those attending the clinic which might help in spreading the word in the peers and community
There is a lack of confidentiality for men if their partners are with them.	- Have proper arrangements for privacy to men and women in the clinic - Assure then and maintain confidentiality - Try couple counseling rather than individuals
Treating men may take time and resources away from women.	- Assign adequate time to men as well as women - Make available enough resources and manpower for handling the load of STI/RTI clinic/RH clinics
Treating men requires new skills from providers.	Train providers to respond to STI/RTI management needs of both men as well as women
Treating men may require different facilities and more male providers	Establish men only clinic or have dedicated hours for men services

MODULE NO. 16

RECORDING AND REPORTING

Sr. No.	Topic	Page No
1.	Recording and Reporting Formats of Designated STI/RTI Clinic	164
2.	Recording and Reporting Format of Sub-district Health Facilities (PHC/CHC/Block PHC/Sub-divisional Hospital/Urban Health Centre)	189

1. Recording and Reporting Formats for Designated clinic

Good reporting practices help clinics monitor their services and permit meaningful data generation to enable regular evaluation of the programmes. Minimal reporting records that should be maintained by each of the designated STI/RTI clinic are given in table below:

Records and Reports of Designated STI/RTI clinic.

- 1 Patient Wise Card
- 2 STI/RTI Register
- 3 Counsellors Diary
- 4 Indent Form
- 5 Stock Register
- 6 Referral Form
- 7 STI/RTI Monthly Reporting Format

The details of filling of these formats is described

1. Patient Wise Card

1. STI/RTI Patient Wise Record											
NATIONAL AIDS CONTROL ORGANIZATION STI / RTI PATIENT WISE RECORD											
Provider Name Clinic Name Clinic Unique ID Number		Patient ID Number: Patient Op Number									
Date	Patient Detail	STI / RTI Risk Assessment	STI / RTI syndrome diagnosis		Lab Test Performed						
	Sex ☐ Male ☐ Female ☐ Transgender Age ☐ New Client ☐ Yes ☐ No Type of visit ☐ New STI/RTI ☐ Repeat STI/RTI Patient flow ☐ Referred ☐ Direct walk in	☐ Medical History taken ☐ Sexual History taken ☐ Physical examination conducted ☐ Speculum and/or Proctoscopic exam conducted ☐ Significant points in bullets	☐ UD ☐ GUD - Herpetic ☐ GUD - Non Herpetic ☐ Scrotal swelling ☐ Inguinal Bubo ☐ Genital scabies ☐ Anorectal discharge ☐ Genital molluscum Examination findings:	☐ Vaginal Cervical Discharge ☐ Genital pediculosis ☐ Genital warts ☐ Lower Abdominal Pain ☐ Asymptomatic (serological syphilis) ☐ Presumptive treatment ☐ Others (specify)-	RPR ☐ Reactive ☐ Titre	Gram Stain ☐ ICDC ☐ WBC ☐ None ☐ Nugent's score+Ve	KOH ☐ Whiff test +ve ☐ Pseudohyphae/Spores ☐ None	Wet Mount ☐ Motile Trichomonads ☐ Clue Cells ☐ None	HIV ☐ Reactive ☐ Non reactive		
Details of STI/RTI treatment given			Other services provided								
Kits (if available) ☐ Kit 1 (Grey) ☐ Kit 2 (Green) ☐ Kit 3 (White) ☐ Kit 4 (Blue) ☐ Kit 5 (Red) ☐ Kit 6 (Yellow) ☐ Kit 7 (Black) General Medicines ☐ Adrenaline ☐ Antihistamines ☐ Hydrocortisone ☐ Ibuprofen ☐ Metaclopramide ☐ Ranitidine			Drugs used (if KITS are not available) ☐ Acyclovir 400 mg ☐ Amoxicillin 500 mg ☐ Azithromycin 1 gm ☐ Benz Penicillin 2.4MU ☐ Benzyl benzozate 25% ☐ Cefixime 400 mg ☐ Ceftriaxone 250 mg & 1 gm ☐ Ciprofloxacin 500 mg ☐ Clotrimazole 500 mg ☐ Doxycycline 100mg ☐ Erythromycin 500 mg ☐ Fluconazole 150mg ☐ Metronidazole 400 mg ☐ Secnidazole 500 mg		Patient education ☐ Partner treatment ☐ Condom Usage ☐ Other risk reduction Partner treatment ☐ Prescription written ☐ Medication given Condoms ☐ Given free ☐ Sold / Social Marketed ☐ Prescribed ☐ Demonstrated					Referrals ☐ ICTC ☐ PPTCT ☐ Designated ☐ Microscopy centre ☐ Care and Support ☐ ART centre ☐ PLHA network ☐ Others (specify) ☐ IEC material given ☐ Append results if any other tests performed	

Guidelines for Filling the STI/RTI Patient Wise Card

(To be used by all STI/RTI service providers)

General Instructions

Write the name of the service provider, Name and unique ID number of clinic (list of unique ID numbers allotted to each STI/RTI clinic is available with M&E division of SACS)

1. SACS may print the name and unique ID number of STI/RTI clinic on cards before dispatching them to individual clinics.
2. Write the name of service provider.
3. Write the patient ID number.
 - a. Write the patient ID number starting from 00001 and write consecutive numbers from April to March.
 - b. Repeat the same for each financial year.
4. Write the patient general outpatient number (wherever applicable/available).

Who should fill the cards?

The STI/RTI patient wise card should be filled by STI/RTI service providers for each new STI/RTI episode treated. The cards should be stored securely. All the cards of individual clients should be kept stapled.

The monthly reporting format should be filled by using the consolidated data from these cards. The filled cards should be available at clinic during supervisory visits.

The STI/RTI service providers include.

- a) Providers at all designated STI/RTI and ObGyn clinics (health care facilities located at area/district hospitals, teaching hospitals attached to medical colleges etc).
- b) Providers with targeted interventions providing STI/RTI services for high risk groups.

Specific instructions

What should be written?

1. **Write the date of visit under date column**
2. **Check the patient details-**
 - a. Check the box for-Male or Female or Transgender accordingly.
 - b. Age-Write the completed years as told by patient.
 - c. Check **“yes”** if the patient is a New client i.e. attending that particular STI/RTI clinic for first time or with fresh episode.
 - d. Check **“No”** if the patient has visited that particular STI/RTI clinic previously.

Type of visit

- e. Check the type of visit **ONLY** after examination is completed.
- f. Check type of visit as **“New STI/RTI”** if the patient is attending with a fresh episode of STI/RTI.
 - Patients present with STI/RTI symptoms, and confirmed to have STI/RTI on physical and internal examination.
 - STI/RTI signs are elicited by internal examinations, and/or
 - STI/RTI etiology diagnosed using laboratory method, and/or
 - If a known herpes patients visits with recurrent infection, check this box
- g. Check type of visit as **“Repeat visit”** if the patient repeated the visit for the previously documented complaints. This includes STI/RTI follow up (when the visit happens within 14 days following treatment).

3. a. Check the **“Referred by”** if the patient is referred by some other facility (such as ICTC/ PPTCT/ART centre/other OPDs in the institute where the clinic is located/NGOs/STI clinic with targeted interventions/Peer Educator/Outreach worker etc).

- b. Check the **“Direct walk in”** if the patient attended the clinic directly.

4. STI/RTI risk assessment

- a) Check the box after taking detailed **“Medical history”** from the patient.
- b) Check the box after taking detailed **“Sexual history”** from the patient
- c) Check the box after conducting detailed **“Physical examination”** of the patient
- d) Check the box after conducting detailed **“Internal examination”** of the patient
- e) Write the key points of significance from history in the box provided.

5. STI/RTI syndrome diagnosis

- a. Check the appropriate box as per the diagnosis made.
 - b. While making the syndrome diagnosis, the standardized definitions given **ONLY** to be followed.
 - c. Should be filled in even if the diagnosis is made on clinical or etiological basis.
 - d. If the patients have more than one syndrome or condition, check all the appropriate syndromes and/or conditions diagnosed.
1. **Vaginal/Cervical Discharge (VCD):** Includes
 - a) Woman with symptomatic vaginal discharge
 - b) Asymptomatic patient with vaginal discharge seen on speculum examination.
 - c) Cervical discharge seen on speculum examination (All syndromic, etiological and clinical STI/RTI diagnosis relating to vaginal or cervical discharge should be included here).

2. **Genital ulcer disease-non-herpetic (GUD-NH):** Female or male or transgender with genital or ano-rectal ulceration and with NO blisters (vesicles). (All STI syndromic, clinical or etiological diagnosis relating to genital ulcers caused by Treponema Pallidum (syphilis), Haemophilus Ducreyi (Chancroid), Granuloma Inguinale and Lymphogranuloma Venereum (LGV) except herpes simplex virus type 2 should be included here).
3. **Genital ulcer disease-herpetic (GUD-H):** Female or male or transgender with genital or ano-rectal blisters (vesicles) with ulcers or recurrence primarily caused by herpes simplex virus type 2.

Note: If both ulcers and blisters are present, tick on both GUD and GUD herpetic or when the provider is not able to differentiate between the two.
4. **Lower abdominal pain (LAP):** Female with Lower Abdominal Pain or tenderness, or Cervical motion tenderness.
5. **Urethral discharge (UD):** Male or transgender with intact genitalia with Urethral Discharge with or without dysuria or other symptoms with a history of unprotected sexual intercourse in recent past.
6. **Ano-rectal discharge (ARD):** Male, female or transgender with symptoms of tenesmus or if ano-rectal discharge seen on examination.
7. **Inguinal bubo (IB):** Individuals with inguinal bubo and NO genital ulcer. (Syndromic or Clinical diagnosis of LGV should be included here).
8. **Painful scrotal swelling (PSS):** Male or transgender (with intact genitalia) with painful scrotal swelling (primarily caused by infection of Gonococci and Chlamydia).
9. **Genital warts:** Individuals with anal or genital warts.
10. **Genital scabies:** Tick if patient is diagnosed as having genital scabies.
11. **Genital Pediculosis:** Tick if patient is diagnosed as having genital pediculosis.
12. **Genital molluscum:** Check the box if the patient is suffering with molluscum lesions over the genitalia.
13. **Asymptomatic (Serological Syphilis)-**this box to be checked if the patient is found serological syphilis.
14. **Presumptive Treatment (PT)-**All asymptomatic sex workers (male and female) attending the clinic for the first time should be provided with presumptive treatment. Presumptive treatment is also to be provided in case the sex worker presents asymptotically after not attending any clinical service for six consecutive months or more.
15. **Other (specify):** Individuals attending with any other STI/RTI related condition.

5. Examination findings

Summarize the salient findings of physical including internal examination in the box provided.

6. Laboratory Tests Performed

RPR/VDRL test

- a) Check if Rapid Plasma Reagin (RPR)/VDRL test is conducted and found reactive.
- b) Write the highest titers reactive.

Gram stain

- a) Check the box for “ICDC” if urethral and endo cervical smears demonstrates >5 PMN/hpf and intracellular gram-negative diplococci inside polymorph nuclear cells.
- b) Check the box for “WBC” if urethral and endo cervical smears demonstrates >5 PMN/hpf and no intracellular gram-negative diplococci inside polymorph nuclear cells.
- c) Check the box for “None” if urethral smears demonstrates <5 PMN/hpf and no intracellular gram-negative diplococci inside polymorph nuclear cells.
- d) Check the box for “None” if endo cervical smears demonstrates <10 PMN/hpf and no intracellular gram-negative diplococci inside polymorph nuclear cells.
- e) Check the box for “Nugent’s score Positive”-if the score is between 7 and 10 of vaginal discharge smear (refer the National guidelines for managing reproductive tract infections including sexually transmitted infections, August 2007).

KOH

- a) Check the box for “Whiff test”-If a drop of 10% potassium hydroxide on vaginal secretion on a glass slide releases fishy odours of amines.
- b) Check the box for “Pseudohyphae”-If budding yeast/hyphae is seen under light microscope
- c) Check the box “None”-if negative for whiff test and pseudohyphae.

Wet mount

- a) Check the box for “Trichomonads”-if Motile trichomonads seen under light microscope (10x).
- b) Check the box for “Clue cells”-if Clue cells comprise more than 20% of all epithelial cells in any view under light microscope.

HIV

- a) Check the box for “Reactive”-if an HIV test is performed as per national HIV testing guidelines and declared as reactive
- b) Check the box for “Non Reactive”-if an HIV test is performed as per national HIV testing guidelines and declared as non reactive

Details of STI/RTI Treatment Given

This section has ‘four’ components

- Pre specified colour coded kits starting from No 1 to 7
- Check the box against the kit administered to the patient
- If more than one kit is given to same patient due to multiple syndromes then check the relevant boxes
- General medicines administered to the patient
- Check the relevant box, if any of these medicines were administered
- If drugs for anaphylaxis are checked, detail the entire management of anaphylaxis including the outcome on a separate sheet and append to the card.
- All drug allergies, idiosyncratic reactions to be marked with “red ink” on the card
- If kits are not in supply or in addition to kits loose drugs were prescribed/administered then check the relevant boxes. Treatment regimens should be in accordance to National Technical Guidelines for Managing RTI including STI, August 2007.
- Write any other drug administered or prescribed to patient which doesn’t fall in any of the above mentioned categories.

Other Services Provided

This section has four components and basically concerned with what additional value added services provided to patient.

Patient education: check the relevant box if individual patient is provided with STI counseling on:

- Partner/s treatment
- Condom usage and disposal
- Other risk reduction communication

Partner treatment: check the relevant box if individual patient is provided with

- Prescription written
- Medications given

Condoms: check the relevant box if individual patient is provided with

- Condom given free
- Sold (Social marketed)
- Prescribed
- Demonstrated (all clinics should have a penis model for demonstration purpose)

Referrals: Check all the relevant boxes

- **ICTC:** check the box if STI/RTI patient referred to the ICTC.
- **PPTCT:** check the box if a pregnant STI/RTI patient referred to PPTCT.
- **DMC:** check the box if STI/RTI patient who has suspected to be chest symptomatic referred to DMC.
- **Care and support centre:** check this box if a referral is done (List of care and support centres with contact details should be available at all clinics and displayed at waiting hall).
- **ART centre:** check this box if a referral is done (List of ART centres with contact details should be available at all clinics and displayed at waiting hall. All individuals who are tested reactive for HIV are to be referred for nearest ART centre, for registration and subsequent follow up. This ART registration number should be written over the card for future references).
- **PLHA networks:** check this box if a referral is done (List of PLHA net works with contact details should be available at all clinics and displayed at waiting hall).
- **Others (specify):** if a referral other than those mentioned above is done then specify the place/centre to which patient is referred.
- All ways provider should get the feedback of referral and document them in the card. As there is no name over the card, the information will remain confidential and this fact should be emphasized to PLHAs and HRG individuals.
- **IEC material given:** check this box if take home IEC material is provided to attendee (the clinic should keep a stock of simple hand bills on STI/RTIs for patient self education. SACS should ensure availability of such IEC material at all STI/RTI clinics).
- **Append with results if any other tests performed:** check this box if any other additional tests performed. Append the copies of test/s performed along with their results .

2. STI/RTI Register

2. STI / RTI Register																						
Master Register for Doctors at STI and Gyne & Obs Clinic																						
Name of the Hospital																						
Clinic Unique ID number																						
STI/RTI Syndromic Coding: 1=UD 2=GUD-Herpetic 3=GUD-Non Herpetic 4=Vaginal-cervical discharge 5=Inguinal Bubo 6=Gental Scabies 7=Ano-rectal Discharge 8=Genital Molluscum 9=Scrotal Swelling 10=Genital pediculosis 11= Genital Warts 12 =Lower Abdominal Pain 13 Asymptomatic 14=Presumptive 15=Other (specify)																						
Sr. No.	Date	Patient OPD Number	Patient ID Number	Name	Age	Sex	Referred (R) walk in (W) of Referred then specify		STI/RTI Syndrome diagnosis	Treatment Provide		Counseling Done1-Yes 2-No.	Condoms Number of pieces provided	Partner Management		Referred to 1-ICTC, 2-TB, 3-ART, 4-RPR/VDRL 8-Others	Lab investigations			Wet mount		
							Kit (if available) Specify kit number	Drugs Prescribed		Partner Notification 1-Yes, 2 No	Partner managed 1-Yes,2 No			RPR test	HIV test		KOH					
1																						
2																						
3																						
4																						
5																						
6																						
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21																						
22																						
23																						

3. Counselors Dairy

3. Counselors Patient Dairy											
S. No.	Date	STI-PID No.	New / Repeat	Age	Sex	Occupation	Education	Patient Complaints	Important points in sexual & personal history	Interventions by Counselors	Other Remarks
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											

4. Indent Form

4. Indent Form					
Name of the Hospital :					
Clinic Unique ID number:					
Sl No.	Name of the Drug	Balance on the day of indent	Amount to be indented (Date)	Amount received (Date)	Remark
1	Kit 1				
2	Kit 2				
3	Kit 3				
4	Kit 4				
5	Kit 5				
6	Kit 6				
7	Kit 7				
8	RPR Test kits				

- Note:**
- 1. The clinic must have supply of drug for at least three months.
 - 2. There should be a critical level of stock for each STI/RTI drugs & kits.
Whenever supply reaches less than one quarter of supply the drug should be indented.
 - 3. The Clinic should follow the policy of FEFO (First Expiry First Out).

Signature
Counsellor

Signature
STI Clinic Incharge

Signature
Issuing authority at SACS

5. Stock Register

[illegible]

6. STI/RTI Referral Form

STI/RTI Referral Form

(To be filled and handed to the client by STI/RTI Counselor/Nurse)

Referral to

ICTC/Chest & TB/Laboratory_____

The patient with the following details is being referred to your center.

Name:_____ Age_____ Sex:_____

STI/RTI-PID No:_____

Kindly do the needful

Referring Provider

Name:_____ Designation:_____

Contact Phone:_____ Date of referral:_____

(To be filled and retained at referral site so as to be collected by
STI/RTI counselor/Nurse weekly)

The above patient referred has been provided ICTC/TB/RPR/VDRL/_____
services and the patient has been tested/diagnosed/treated
for_____

The test/results of RPR/VDRL/is/are_____

Signature of the Medical Officer/Counselor/Lab In-charge

7. STI/RTI Monthly Report

Monthly STI/RTI

Unique ID. No. of STI/RTI Clinic /Gynae OPD /TI NGO																							
MONTHLY REPORT FORMAT FOR STI/RTI CLINICS																							
Name of STI/RTI Clinic/ Hospital to which the Gynecology OPD is Attached/ TI NGO																							
Sub Type								Category								Location							
Address :																							
District :								Block :								City :							
Reporting Period :				Month(MM) :								Year(YYYY) :											
Name of Officer In - charge :																							
Phone no. of Officer In - charge :																							

Section 1 : No. of Patients Availled STI/RTI services in this month																	
Type of Patients	Age Group & Sex												Total				
	<20			20-24			25-44			>44							
	Male	Female	TS/TG	Male	Female	TS/TG	Male	Female	TS/TG	Male	Female	TS/TG	Male	Female	TS/TG		
Clinic visit with STI/RTI complaint and were diagnosed with an STI/RTI																	
Clinic visit with STI/RTI complaint but were NOT diagnosed with an STI/RTI. • Clinic visit for Syphilis Screening (Excluding ANC) • For TI-NGOs-RMC, PT, Syphilis Screening (whichever applicable)																	
Follow up visit for the index STI/RTI complaint																	
Total No of visits																	

Section 2 : STI/RTI syndromic diagnosis																			
(Should be filled by all STI/RTI service providers for clinic visit for STI/RTI complaint only)																			
Age Group & Sex																			
Diagnosis												Male		Female		TS/TG		Total	
1. Vaginal/ Cervical Discharge(VCD)																			
2. Genital Ulcer (GUD) - non herpetic																			
3. Genital ulcer(GUD) – herpetic																			
4. Lower abdominal pain (LAP)																			
5. Urethral discharge (UD)																			
6. Ano-rectal discharge (ARD)																			
7. Inguinal Bubo (IB)																			
8. Painful scrotal swelling (SS)																			
9. Genital warts																			
10. Other STIs																			
11. Serologically + ve for syphilis																			
Total No of episodes																			
No of people living with HIV/AIDS (PLHAs) who attended with STI/RTI complain during the month																			

Section 3. Details of other services provided to patients attending STI/RTI clinics in this month																			
To be filled in by all STI/RTI Service Providers																			
Service												Male		Female		TS/TG		Total	
1. Number of patients counseled																			
2. Number of condoms provided																			
3. Number of RPR/VDRL tests conducted																			
4. Number of patients found reactive																			
5. Number of partner notification undertaken																			
6. Number of partners managed																			
7. Number of patients referred to ICTC																			
8. Number of patients found HIV-infected (of above)																			
9. Number of patients referred to other services																			

Section 4 : STI/RTI service for HRGs in the month (To be filled in by TI NGO)																			
												Male		Female		TS/TG		Total	
Number of new individuals visited the clinic																			
Number of Presumptive Treatments (PT) provided for gonococcus and Chlamydia																			
Number of regular STI check-ups (RMC) conducted (check-up including internal examination of HRGs once in a quarter)																			

Section 5 : ANC syphilis screening in this month	
Should be filled by all service providers with ANC service provision	Total
Number of ANC first visits in the month (Registration)	
Number of rapid plasma reagin RPR/VDRL tests performed	
Number of RPR/VDRL tests reactive (Qualitative)	
Number of RPR/VDRL tests reactive above >=1:8 (Quantitative)	
Number of pregnant women treated for syphilis	

Section 6 : Laboratory diagnosis of STI/RTI				
Laboratory diagnosis/Tests	Male	Female	TS/TG	Total
1. Total RPR/VDRL tests performed				
RPR tests reactive >= 1:8				
2. Total Gram stain performed				
Gonococcus + (gram negative intracellular diplococci +)				
Non-Gonococcus urethritis (NGU)-Pus cells +ve				
Non-Gonococcus cervicitis (NGC)-Pus cells +ve				
None				
Nugents score +ve				
3. Wet mount test performed				
Motile Trichomonads +ve				
Whiff test +ve				
Clues cells +				
None				
4. KOH test performed				
Candidiasis				
None				
5. Availability of consumables (Yes=1, No=2)				
Do you have STI pre-packed kits?				
Functional Computer				
AMC of Computer				

Section 7 : Drugs & Consumables								
Drugs & Consumables	Opening stock	Number received this month	Consumed	Damage/ Wastage	Closing stock	Stock Sufficient for approx months	Earliest Expiry Date (Month/Year)	Quantity
RPR tests								
Pre-packed STI Kit 1								
Pre-packed STI Kit 2								
Pre-packed STI Kit 3								
Pre-packed STI Kit 4								
Pre-packed STI Kit 5								
Pre-packed STI Kit 6								
Pre-packed STI Kit 7								
Condom Pieces								
Reagent for gram stain								
Reagents for wet mount and KOH test								
Others								

Section 8 : Details of Staff at the STI/RTI clinics					
Human resource details at STI/RTI and /or Gynaecology clinics (Should be filled by all STI/RTI clinics)					
Staff	Number Sanctioned	Number in place	Number of Person Trained during month		
			Induction	Refresher	Others
Medical Officer					
Staff Nurse					
Laboratory Technicians					
Counsellor					

NOTE: The medical officer in-charge, staff nurse and STI counselor at designated STI/RTI clinic should ensure maintenance of all records and generate the monthly report which should be submitted to SACS by the 5th of every month.

Guidelines for filling Monthly Report Format for STI/RTI Clinics (all public health facilities supported by NACO and TI NGOs)

Who should fill this?

This reporting format should be filled by all **STI/RTI service providers** and sent to the corresponding reporting authority by the 5th of next month through SIMS. The STI/RTI service providers include:

- Providers at all **designated STI/RTI clinics** (located in area/district hospitals, teaching hospitals attached to medical colleges etc)
- **Targeted Interventions** providing STI/RTI services for High Risk Behaviour Groups

What are the different sections of STI format?

The format is divided into eight sections as follows.

Section 1: Number of Patients availed STI/RTI services in this month

Section 2: STI/RTI syndrome and other STI/RTI diagnosed

Section 3: Details of other services provided to patients attending STI/RTI clinics in this month

Section 4: STI/RTI service for HRGs in this month

Section 5: ANC Syphilis screening in this month

Section 6: Laboratory diagnosis of STI/RTI

Section 7: Drugs & Consumables

Section 8: Details of Staff at the STI/RTI clinics

What should be reported?

- Section 1, 2, 3, 5, 7 and 8 should be reported by all NACO **designated STI/RTI clinics**
- Section 1, 2, 3, 4 and 7 should be filled by all **Targeted Interventions**
- Additional Section 6 should be filled up by NACO **designated STI/RTI clinics** also having laboratory services (Laboratory may be located in the STI/RTI clinic or through linkage with existing laboratory in the hospital).

General information

SI No.	Indicators	Explanation
1	Unique ID	Unique ID provided to STI/RTI Clinic/Gynaecology OPD/TI NGO by respective SACS
2	Name of the STI/RTI Clinic/Gynae OPD/TI NGO	Name of the institution where STI/RTI Clinic/ Gynaecology OPD is located Name of the TI NGO
3	Address of STI/Gynae	Address of STI clinic including state, city, district, Block/Mandal and pin code
4	Reporting period	Reporting month and year in the form of MM and YYYY. Example: the data for the month January, 2011 would be reported in February 2011. So the reporting month is 01 and year is 2011.
5	Name and phone number of the Officer in-charge	Name of the medical officer who is in charge of STI Clinic
6	Phone number of the Officer in-charge	Phone number of the officer who is in charge of STI Clinic

Section 1: No. of Patients availed STI/RTI services in this month

- Should be reported by **all STI/RTI service providers**
- **One individual should be entered once in a month in this section in any row**
- Fill the number of individuals who have availed STI/RTI services under appropriate age and sex category
- Fill in the total number of STI/RTI visits under the specific category as per description below

SI No.	Indicator	Definition/Explanation
1	Clinic visit with STI/RTI complaints and were diagnosed with STI/RTI	Fill the number of individuals visited with any STI/RTI complaints as per STI/RTI patient wise card and was treated for the same. This indicates fresh STI/RTI episodes.
2	Clinic visit with STI/RTI complaint but were NOT diagnosed with an STI/RTI Clinic visit for syphilis screening (Exclude ANC) For TI-NGOs-RMC, PT, Syphilis Screening (whichever applicable)	Fill the number of individuals visited for complaints of STI/RTI, but were not diagnosed with STI/RTI as per patient wise card. Include the patients who came for syphilis screening to Designated STI/RTI clinics. Do not include ANC attendees. Only for TI-NGOs, fill all those HRG (without diagnosed STI/RTI) attending the STI clinic for Regular Medical Check-up, Presumptive Treatment and Syphilis screening * *1. If any HRG attending for RMC or syphilis screening or PT is found to be having STI/RTI, they should be entered in row 1 only. 2. If any HRG availing more than 1 service (eg RMC + Syphilis screening, PT + syphilis screening, Symptomatic STI + Syphilis screening) should be entered only once in one row based on his/her having an STI/RTI or not.
3	Follow up visits for the STI/RTI complaint	Fill the number of patients who have come for a follow up visit (within 14 days of availing treatment) out of patients counted in row 1 (clinic visit with STI/RTI and were diagnosed with STI/RTI)
4	Age group and Sex	Fill the number of individual availed STI/RTI services under appropriate age (<20, 20-24, 25-44, >44) and sex category.
5	Total no. of visits	This is auto calculated in software. The total gives total attendance of individuals at STI/RTI clinic.

Section 2: STI/RTI Syndromic Diagnosis

- Should be reported by **all STI/RTI service providers**
- Should be filled for clinic visit with STI/RTI complaints and were diagnosed with STI/RTI only (Section 1 Row 1)
- Diagnosis could be reached on syndromic/clinical/etiological basis
- Fill up consolidated number of STI/RTI patients diagnosed with following syndromes

Sl No	Indicator	Definition/Explanation
1	Vaginal/Cervical Discharge (VCD)	a) Woman with symptomatic vaginal discharge b) Asymptomatic patient with vaginal discharge seen on speculum examination c) Cervical discharge seen on speculum examination (All syndromic, etiological and clinical STI/RTI diagnosis relating to vaginal or cervical discharge should be included here)
2	Genital Ulcer Disease (GUD)-Non Herpetic	Female or male or transgender with genital or ano-rectal ulceration and with NO blisters (vesicles). (All STI syndromic, clinical or etiological diagnosis relating to genial ulcers caused by Treponema Pallidum (syphilis), Haemophilus Ducreyi (Chancroid), Granuloma Inguinale and Lymphogranuloma Venereum (LGV) except herpes simplex virus type 2 should be included here)
3	Genital Ulcer Disease (GUD)-Herpetic	Female or male or transgender with genital or ano-rectal blisters (vesicles) with ulcers or recurrence primarily caused by herpes simplex virus type 2.
4	Lower Abdominal Pain (LAP)	Female with Lower Abdominal Pain or tenderness, or Cervical motion tenderness
5	Urethral Discharge (UD)	Male or transgender with intact genitalia with Urethral Discharge with or without dysuria or other symptoms
6	Ano-rectal Discharge (ARD)	Male, female or transgender with symptoms of tenesmus or if ano-rectal discharge seen on exam
7	Inguinal Bubo (IB)	Individuals with inguinal bubo and NO genital ulcer. (Syndromic or Clinical diagnosis of LGV should be included here)
8	Painful Scrotal Swelling (SS)	Male or transgender (with intact genitalia) with painful scrotal swelling (primarily caused by infection of Gonococci and Chlamydia)
9	Genital warts	Individuals with anal or genital warts.

SI No	Indicator	Definition/Explanation
10	Other STIs	Individuals attending with any other STI/RTI related condition (e.g. Genital Scabies, pubic lice, and Genital Molluscum Contagiosum etc).
11	Serologically +ve for syphilis	Individuals treated for serological reactive for Syphilis.
Total number of episodes		These counts the total number of episodes of STI/RTI diagnosis made during the month. This is auto calculated in the software.
People living with HIV attended with STI/RTI complaints		People living with HIV attended/treated for STI/RTI

Section 3: Details of Other Services provided to patients attending STI/RTI clinics in this month

- Should be reported by **all STI/RTI service providers**
- Should be filled with details of other services like counselling, condom distribution, referrals provided to STI/RTI clinic attendees as per Section 1.

SI No	Indicator	Definition/Explanation
1	Number of patients counseled	Fill total number of STI/RTI clinic attendees provided with STI/RTI counseling.
2	Number of condoms provided	Fill total number of condoms provided to all STI/RTI clinic attendees.
3	Number of RPR/VDRL tests conducted	Fill total number of RPR/VDRL tests conducted for STI/RTI clinic attendees.
4	Number of patients found reactive	Fill the number detected reactive for RPR/VDRL test of the above.
5	Number of partner notification undertaken	Fill the total number of partner notifications undertaken of index STI/RTI patients treated.
6	Number of partners managed	Fill the total number of partners of index STI/RTI patients attended the clinic and managed.
7	Number of patients referred to ICTC	Fill the number of STI/RTI clinic attendees referred to ICTC.
8	Number of patients found HIV-infected (of above)	Fill the number detected as HIV reactive, of the above.
9	Number of patients referred to other services	Fill in the number of STI/RTI clinic attendees referred for any other services like care and support, tuberculosis screening etc.

Section 4: STI/RTI Service for HRGs

- Should be filled by **TI-NGO** providing services to high risk behavior group (HRG).

Sl No.	Indicator	Definition/Explanation
1	Number of new individuals visited the clinic	Fill in total number of new High Risk Behaviour Group individuals visiting the clinic for the first time for any clinical services. This would include both symptomatic and asymptomatic HRGs. It has no relationship with what package of services is being availed. This number can be arrived by summing up “new clients” checked as “Yes” in patient wise card. Definition of “new” HRG individual is as per TI guidelines
2	Number of presumptive treatment (PT) provided for Gonococcus and Chlamydia	Fill in total number of HRG individuals (FSW, MSM including TS/TG) who attended the clinic for STI/RTI services without being symptomatic and were provided with treatment for Gonococcus and Chlamydia as per NACO STI/RTI technical guidelines August 2007.
3	Number of regular STI check-ups (RMC) conducted	Fill in the number of HRG individuals (FSW, MSM including TS/TG) who attended the clinic for STI/RTI services without being symptomatic and received RMC. RMC means medical check up including internal examination of HRG to be done once in a quarter, which may include speculum or proctoscope examination; and found to be not having STI/RTI. Exclude the numbers of HRG receiving presumptive treatment in this row.

Section 5: ANC Syphilis Screening in this Month

- Should be filled by all NACO *designated STI/RTI clinics*
- Data should be drawn from the records of ANC clinic in the hospital
- Should fill information for women making first visit for ANC only

SI No.	Indicator	Definition/Explanation
1	Number of ANC first visits in the month (Registration)	Write the number of pregnant women registered for first time with the ANC clinic during the month.
2	Number of RPR/VDRL tests performed	Write the number of registered pregnant women undergone RPR/VDRL test during the month*
3	Number of RPR/VDRL tests reactive (qualitative)	Write the number of pregnant women found reactive for RPR/VDRL test*, of the above
4	Number of RPR/VDRL tests reactive >= 1:8 (quantitative)	Write the number of pregnant women whose RPR/VDRL test* titre is >=1:8, of the above
5	Number of pregnant women treated for syphilis	Write the number of pregnant women diagnosed having syphilis undergone treatment

Section 6: Laboratory Diagnosis of STI/RTI

- Should be filled by all NACO *designated STI/RTI clinics*
- *Do not include ANC syphilis screening data in this section*

SI No.	Indicator	Definition/Explanation
1	Total RPR/VDRL test performed	Fill in the total number of RPR or VDRL qualitative tests conducted among men, women, and others during the reporting month (write the same number as recorded in row 3 under section 3)
	RPR test reactive >= 1:8	Fill in the number of RPR/VDRL tests reactive at or above 1:8 titres among men, women and others*, of the above
2	Total Gram stain performed	Fill in total number of gram stain performed among men (urethral smear) and women (endo-cervical smear and vaginal discharge smear)*
	Number of Smears +ve for Gonococcus	Fill in number of gram stained smears positive for gonococcus
	Criteria for urethral smear	>5 PMN/hpf and intracellular gram negative diplococci inside poly morphonuclear cells
	Criteria for endocervical smear	Numerous PMN/hpf and intracellular gram negative diplococci inside poly morphonuclear cells

SI No.	Indicator	Definition/Explanation
	Non Gonococcal Urethritis/cervicitis-Pus cells +	Fill in number of gram stained smears positive for non gonococcal urethritis/cervicitis
	<i>Criteria for urethral smear</i>	> 5 PMN/hpf and NO intracellular gram negative diplococci inside poly morphonuclear cells
	<i>Criteria for endocervical smears</i>	>10 PMN/hpf and NO gram negative diplococci inside poly morphonuclear cells
	None	Fill in number of gram stained smears negative for both
	<i>Criteria for urethral smear</i>	< 5PMN/hpf and NO intracellular gram negative diplococci inside poly morphonuclear cells
	<i>Criteria for endocervical smear</i>	<10 PMN/hpf and NO gram negative diplococci inside poly morphonuclear cells
	Number of smears +ve for Nugent's score	Fill in the number of smears +ve for Nugent's score. Nugent's score is +ve when the score is between 7 to 10
3	Wet mount tests performed	Fill in the total number of wet mounts performed among women
	Motile trichomonads +	Fill in the number of wet mounts demonstrated Motile trichomonads seen under light microscope (10x)
	Clues cells +	Fill in the number of wet mounts demonstrated Clue cells in more than 20% of all epithelial cells in any view under light microscope
	Whiff test +	Fill in the number of wet mounts released fishy odours of amines, when a drop of 10% potassium hydroxide is placed on vaginal secretion on a glass slide
	None	None of the above tests are positive
4	KOH test performed	Fill in total number of KOH tests performed among women
	Candidiasis+	Fill in the number of KOH slides demonstrated budding yeast/hyphae under light microscope
	None	Fill in the number of KOH slides not demonstrated budding yeast/hype under light microscope
5	Availability of consumables, functional computers and AMC of Computers	Check yes or no for availability of the STI/RTI colour coded drug kits, functional computers and its AMC.
<i>* The information on number of test conducted and/or results may or may not be available with facility providing clinical services. The providers are to ensure collection of the laboratory data from the concerned providers/departments/or facilities (microbiology/pathology/general lab).</i>		

Section 7: Drugs and Consumables

- Should be filled by all service providers at STI/RTI clinic
- Provide details of stock of RPR test, TPHA tests kits, Per-packed STI kit 1, kit 2, kit 3, kit 4, kit 5, kit 6 and kit 7, condom pieces, reagents for gram stain, wet mount and KOH test and others if any

SI No.	Indicator	Definition/Explanation
1	Opening Stock	This is auto calculated in software. This gives number of STI/RTI drug kits/reagent/RPR, TPHA test kits available on the first day of the month.
2	Number received in this month	Write the number of STI/RTI drug kits/reagent/RPR, TPHA test kits received during the month.
3	Number consumed	Write the number of STI/RTI drug kits/reagent/RPR, TPHA test kits utilised or distributed during the month.
4	Damage/Wastage	Write the number of STI/RTI drug kits/reagent/RPR, TPHA test kits wasted or damaged during the month.
5	Closing stock	This is auto calculated in software. This gives the number of STI/RTI drug kits/reagent/RPR, TPHA test kits available on the last day of the month.
6	Stock sufficient for approximate month	This is auto calculated in software. (Closing stock/drugs consumed plus damaged/wasted) Every clinic to ensure one quarter (3 months) drug/ testing kits/reagent supply for the clinic.
7	Earliest expiry date	Write the expiry date of the drug kit, condom or reagent in a lot of the closing stock having the earliest expiry date in MM/YEAR
8	Quantity	Write the quantity of the drug kit, condom and reagent kit having earliest expiry date

Section 8: Details of Staff at the STI/RTI clinics

- Should be filled by all STI/RTI clinics
- Contains human resource details at STI/RTI clinics

Sl No.	Indicator	Definition/Explanation
1	Medical Officer/s	Number of doctors posts sanctioned, Number in place Number of the doctors trained in STI as per National guidelines (Induction/Refresher/Other) during the month
2	Staff Nurse	Number of Staff Nurse posts sanctioned, Number in place Number of the staff nurse trained in STI as per National guidelines (Induction/Refresher/Other) during the month
3	Lab Technician	Number of Lab Technician posts sanctioned, Number in place Number of the Lab Technician trained in STI as per National guidelines (Induction/Refresher/Other) during the month
4	Counsellor	Number of Counsellor posts sanctioned, Number in place Number of the Counsellor trained in STI as per National guidelines (Induction/Refresher/Other) during the month

2. RECORDING AND REPORTING FORMATS AT SUB-DISTRICT HEALTH FACILITIES (PHC/CHC/Block PHC, Sub-divisional hospital, urban Health centre etc)

Minimal reporting records that should be maintained by each of the sub-district health facilities (PHC/CHC/Block PHC/Sub-divisional Hospital/urban Health centre) are given in below in table:

Records to be maintained at NRHM facility (PHC/CHC/Block PHC, Sub-divisional Hospital, Urban Health etc).

- 1 OPD Register
- 2 Drug Register
- 3 Laboratory Register
- 4 Referral Form
- 5 Monthly STI/RTI Monthly Reporting Format for NRHM

1. Patient OPD Register:

Patient Register for STI/RTI Services					
S. No.	Date	Name	Age	Sex	Diagnosis
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

The OPD register and other existing record maintained in PHC/CHC/Block PHC etc should be utilised for maintaining records pertaining to STI/RTI. The physician should indicate the syndromic diagnosis in the OPD register.

2. Drug Stock Register:

Drug Stock Record Format				
Drugs	Opening stock (1st of every month)	Number received this month	Consumed	Closing stock (last day of every month)
Prepacked STI Kit 1				
Prepacked STI Kit 2				
Prepacked STI Kit 3				
Prepacked STI Kit 4				
Prepacked STI Kit 5				
Prepacked STI Kit 6				
Prepacked STI Kit 7				

3. Laboratory Register:

Syphilis screening of pregnant women or STI/RTI patients							
S. No.	Date	Name	Age	Sex	Patient details (STI patient or ANC Mother)	Syphilis test: RPR/VDRL	Test results for syphilis
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

The existing drug maintenance register and laboratory register used in the PHC/CHC/Block PHC etc should be used for recording purpose. Only relevant column/page should be added to the pharmacy and laboratory records so as to collect data pertaining to drug stock and laboratory testing.

4. STI/RTI Referral Form

STI/RTI Referral Form

(To be filled and handed to the client by STI/RTI Counselor/Nurse)

Referral to

ICTC/Chest & TB/Laboratory_____

The patient with the following details is being referred to your center.

Name:_____ Age_____ Sex:_____

STI/RTI-PID No:_____

Kindly do the needful

Referring Provider

Name:_____ Designation:_____

Contact Phone:_____ Date of referral:_____

(To be filled and retained at referral site so as to be collected by
STI/RTI counselor/Nurse weekly)

The above patient referred has been provided ICTC/TB/RPR/VDRL/_____

services and the patient has been tested/diagnosed/treated

for_____

The test/results of RPR/VDRL/is/are_____

Signature of the Medical Officer/Counselor/Lab In-charge

5. Monthly STI/RTI Monthly Reporting Format for NRHM:

Unique ID. No. of District					
STI/RTI MONTHLY REPORTING FORMAT FROM NRHM FACILITIES IN DISTRICT					
Name of District /CHC/PHC/Others					
Number of NRHM facilities to report in the district					
Number of Units reported in this month					
Reporting Period :	Month (MM) :		Year (YYYY) :		
Name of Officer In - charge :					
Phone no. of Officer In – Charge :					

Section 1 : No. of Patients Aailed STI/RTI services in this month			
No. of patients diagnosed and treated for various STI/RTI	Total		
	Male	Female	Total

Section 2 : Syndromic diagnosis and investigation details			
(Should be filled by Officer in-charge)			
Diagnosis	Male	Female	Total
1.Vaginal/Cervical Discharge			
2.Genital Ulcer (GUD)-non Herpetic			
3.Genital Ulcer (GUD) – Herpetic			
4.Lower Abdominal Pain(LAP)			
5.Urethral Discharge (UD)			
6.Ano-rectal discharge (ARD)			
7.Inguinal Bubo (IB)			
8.Painful Scrotal Swelling (SS)			
9.Genital warts			
10.Other STIs			
11. Serologically +ve for syphilis			
Investigations			
12. Number of STI/RTI patients tested for syphilis (RPR/VDRL)			
13. Of Above, Number of STI/RTI patients found reactive for syphilis			
14. Number of STI/RTI patients referred for HIV testing			
15. Of above, Number of STI/RTI patients found HIV reactive			
16. Number of STI/RTI patient tested for wet mount			

Section 3. Details of syphilis screening of Pregnant women			
Service	Male	Female	Total
1. Number of Pregnant women screened for syphilis (VDRL/RPR test)			
2. Of above, Number of Pregnant women found reactive			

Section 4 : Status of Drugs & test kits	
Drugs & test kits	No. of kits Available
Prepacked STI Kit 1	
Prepacked STI Kit 2	
Prepacked STI Kit 3	
Prepacked STI Kit 4	
Prepacked STI Kit 5	
Prepacked STI Kit 6	
Prepacked STI Kit 8	
RPR/VDRL Tests Kit	

Guidelines for filling Monthly Reporting Format from NRHM facilities (all public health facilities not supported by NACO)

Who should fill this?

Hard copies of this reporting format should be filled and submitted to the corresponding reporting authority (District RCH officer or any other corresponding reporting authority) by the 5th of next month by all NRHM facilities NOT supported by NACO (PHC/CHC/Urban Health Posts and Other sub-district health facilities) under STI/RTI control and prevention program. These individual reports are to be consolidated at district level and submitted as one report to SACS and State Mission Director every month by the 7th of the month.

Note: All facilities supported by NACO need to report on the three page STI/RTI format only

What are the different sections of STI format?

The STI format is divided into 4 sections as follows:

Section 1: Number of Patients availed STI/RTI services in this month

Section 2: Syndromic diagnosis and investigation details

Section 3: Details of syphilis screening of pregnant women

Section 4: Status of Drugs & test kits

General Information

Sl. No.	Indicators	Explanation
1	Unique ID of District	Write the Unique ID of District which will be provided to District by respective SACS
2	Name of the District/CHC/PHC/Other facilities	Write the Name of the District or CHC or PHC or other facilities sending the report.
3	Number of NRHM facilities to report in the district*	Write the number of NRHM facilities to report in the district.
4	Number of Units reported in this month*	Write the number of NRHM facilities reported in this month, of the above
5	Reporting period	Reporting month and year in the form of MM and YYYY. Example: the data for the month January, 2010 would be reported in Feb 2010. So the reporting month is 01 and year is 2010.
6	Name of the Officer in-charge	Name of the medical officer who is in charge of STI Clinic
7	Phone number of the Officer in-charge	Phone number of the officer who is in charge of STI Clinic

* This information is only to be provided by the District.

Section 1: No. of Patients Aailed STI/RTI services in this month

- Fill the number of individuals who have aailed STI/RTI services under appropriate sex category

Sl. No.	Indicator	Definition/Explanation
1	No. of patients diagnosed and treated for various STI/RTI	Fill the number of individuals visited with any STI/RTI complaints and was treated for the same.

Section 2: Syndromic diagnosis and investigation details

- Diagnosis could be reached on syndromic/clinical/etiological basis

Sl. No.	Indicator	Definition/Explanation
	Diagnosis	Fill up consolidated number of STI/RTI patients diagnosed with following syndromes
1	VCD - Vaginal/Cervical Discharge	a) Woman with symptomatic vaginal discharge b) Asymptomatic patient with vaginal discharge seen on speculum examination c) Cervical discharge seen on speculum examination (All syndromic, etiological and clinical STI/RTI diagnosis relating to vaginal or cervical discharge should be included here)
2	GUD - Non Herpetic - Genital ulcer disease- Non Herpetic	Female or male or transgender with genital or ano- rectal ulceration and with NO blisters (vesicles). (All STI syndromic, clinical or etiological diagnosis relating to genial ulcers caused by Treponema Pallidum (syphilis), Haemophilus Ducreyi (Chancroid), Granuloma Inguinale and Lymphogranuloma Venereum (LGV) except herpes simplex virus type 2 should be included here)
3	GUD - Herpetic - Genital Ulcer Disease – Herpetic	Female or male or transgender with genital or ano- rectal blisters (vesicles) with ulcers or recurrence primarily caused by herpes simplex virus type 2.
4	LAP - Lower Abdominal Pain	Female with Lower Abdominal Pain or tenderness, or Cervical motion tenderness
5.	UD - Urethral Discharge	Male or transgender with intact genitalia with Urethral Discharge with or without dysuria or other symptoms
6	ARD - Ano-Rectal Discharge	Male, female or transgender with symptoms of tenesmus or if ano-rectal discharge seen on exam
7	IB - Inguinal Bubo	Individuals with inguinal bubo and NO genital ulcer. (Syndromic or Clinical diagnosis of LGV should be included here)
8	SS - Painful Scrotal Swelling	Male or transgender (with intact genitalia) with painful scrotal swelling (primarily caused by infection of Gonococci and Chlamydia)
9	Genital Warts	Individuals with anal or genital warts.
10	Other STI's	Individuals attending with any other STI/RTI related condition (e.g. Genital Scabies, pubic lice, and Genital Molluscum Contagiosum etc).

Sl. No.	Indicator	Definition/Explanation
11	Serologically Positive for Syphilis	Individuals treated for serological reactive for Syphilis.
	Investigation details	
12	Number of STI/RTI patients tested for syphilis (RPR/VDRL)	Fill total number of RPR/VDRL tests conducted
13	Of Above, Number of STI/RTI patients found reactive for syphilis	Fill the number found reactive for RPR/VDRL test
14	Number of STI/RTI patients referred for HIV testing	Fill the number of STI/RTI clinic attendees referred to ICTC
15	Of above, Number of STI/RTI patients found HIV-infected	Fill the number detected as HIV reactive, of the referred individuals
16	Number of STI/RTI patient tested for wet mount	Fill in the number of STI/RTI clinic attendees tested with wet mount

Section 3: Details of syphilis screening of Pregnant women

- Data should be drawn from the records of ANC clinic in the facility

Sl. No.	Indicator	Definition/Explanation
1	Number of Pregnant women screened for syphilis(VRD/LRPR)	Write the number of pregnant women undergone RPR/VDRL test for syphilis during the month
2	Of above, Number of Pregnant women found reactive	Write the number of pregnant women found reactive for RPR/VDRL test

Section 4: Status of Drugs & test kits

- Provide details of stock status of RPR/VDRL test kits and Pre-packed STI kit 1 to 7

Sl. No.	Indicator	Definition/Explanation
1	Drugs & test kits available	Fill in the numbers of RPR/VDRL test kits and Per-packed STI kit 1, kit 2, kit 3, kit 4, kit 5, kit 6 and kit 7 kits available

ANNEXURE - I

REFERENCES AND SOURCE

We gratefully acknowledge the use of material that has been adapted from the following sources:

Source	Publication	Year
AVSC International	Sexually Transmitted and Other Reproductive Tract Infections	2000
Pathfinder International	Comprehensive Reproductive Health and Family Planning Training Curriculum (Module 12)	2000
World Health Organisation	Guidelines for the Management of Sexually Transmitted Infections	2003
World Health Organisation	Sexually Transmitted and Other Reproductive Tract Infections – A Guide to essential Practice	2005
World Health Organisation	Draft Global Strategy for the Prevention and Control of Sexually Transmitted infections	2005
Engender Health	Sexually Transmitted Infections – Online minicourse	2006
Government of India	National Guidelines on Prevention, Management and Control of Reproductive Tract Infections including Sexually Transmitted Infections	2006

ANNEXURE - II

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ANNEXURE - III

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India's voice against AIDS

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Ministry of Health & Family Welfare, Government of India
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