

KINGDOM OF CAMBODIA
NATION RELIGION KING



Ministry of Health

NATIONAL GUIDELINES ON
**SEXUALLY TRANSMITTED
INFECTIONS AND REPRODUCTIVE
TRACT INFECTIONS CASE MANAGEMENT**

SEPTEMBER 2019



National Center For HIV/AIDS, Dermatology and STD

KINGDOM OF CAMBODIA
NATION RELIGION KING



Ministry of Health

NATIONAL GUIDELINES ON
**SEXUALLY TRANSMITTED
INFECTIONS AND REPRODUCTIVE
TRACT INFECTIONS CASE MANAGEMENT**
SEPTEMBER 2019



National Center For HIV/AIDS, Dermatology and STD

Preface

The prevalence of sexually transmitted infection is still high among high-risk population groups such as entertainment workers and men who have sex with men (MSM) even though the prevalence of HIV decreased to 0.6% in 2016 among the general population aged 15 to 49 years old. There are many factors that influence this issue including the management of sexually transmitted infection and reproductive tract infections (STIs/RTIs).

In order to improve the quality of STIs/RTIs care and treatment in Cambodia, the National Center for HIV/AIDS, Dermatology and STIs in close collaboration with other health institutions and non-governmental organizations (NGOs) have reviewed and revised the existing national guidelines on STI/RTI case management. It is updated to response to the current situation of STI/RTI care and treatment service based on laboratory approach. Moreover, some new topics are included in the revised national guidelines such as the Syndromic Diagnosis and Treatment of STI/RTI (Module 3a) and the Etiologic Diagnosis and Treatment of STI/RTI (Module 3b).

The ministry of health would like to acknowledge all members of STI/RTI technical working group for their valuable contribution to review and revise this guidelines and strongly believe that this tool will improve and broader the knowledge and skill of health care providers who are working in STI/RTI care and treatment and therefore improve the quality of health care services in Cambodia.

Phnom Penh, 01/12/2019



Professor Eng Huot
Secretary of State

Acknowledgement

The National Center for HIV/AIDS, Dermatology and STIs (NCHADS) would like to acknowledge all members of STIs/RTI technical working group from NCHADS, National Maternal and Child Health Center (NMCHC), Reproductive Health Association of Cambodia (RHAC), LINKAGES-FHI360, KHANA, Mercy Medical Center Cambodia (MMCC), MEC, Marie Stopes International Cambodia (MSIC), Chhouk Sar Association, US-CDC, PEPFAR and WHO for their valuable contribution to review and revise the national guidelines on STI/RTI case management as recommended by WHO and to be adapted to the current situation of STI/RTI care and treatment service based on laboratory approach in the existing health facilities.

This national guideline establishes clear standard and provide useful reference document for provision of STI/RTI prevention and care.



Phnom Penh, *22 October*, 2019



Dr. LY PENH SUN

Contents

Module 1: Basic of Sexually Transmitted Infections and Reproductive Tract Infections	19
1. What are RTIs?	21
2. STI Transmission Modes	23
2.1 Sexual transmission	23
2.2 Mother-to-child transmission.....	23
2.3 Blood transmission	23
3. What factors increase the risk of Transmission?	24
3.1 Biological factors	24
3.2 Behavioral factors.....	25
4. Protective Behavior	27
5. Which Population Groups Are Particularly Vulnerable?.....	28
6. Complications of STI	29
6.1 Women	29
6.2 Men.....	31
7. Epidemiology of STI	32
7.1 Globally	32
7.2 In Cambodia	33
8. The Link Between STI And HIV/AIDS.....	34
8.1 Which STIs seem to facilitate the transmission of HIV?	34
8.2 HIV makes infection with other STIs more likely	34
8.3 HIV and increased severity of STI and resistance to treatment.....	35
8.4 HIV epidemiology.....	36
9. How to Prevent STI	37
9.1 Delaying sexual activity	37
9.2 Decreasing the number of sex partners.....	37
9.3 Correct and consistent use of condoms	38
10. How to prevent iatrogenic infections	40
10.1 Safe performance of trans-cervical procedures	41
10.2 Reducing Risk of infections.....	41

11. How to prevent endogenous Infections	42
12. What can be done to control STI?	43
12.1 Primary prevention	43
12.2 Secondary prevention	44
13. Integration of STI services within primary care	45
14. Approaches to STI/RTI diagnosis	46
14.1 STI etiological diagnosis using laboratory	46
14.2 STI Clinical Diagnosis	46
14.3 Syndromic approach	47
15. Main components of STI service delivery	48
15.1 Effective management of STIs	48
15.2 Partner tracing and Treatment	49
Module 2: Clinical & Laboratory Examination Skill For STI/RTI Case Management	51
1. The Aims Of History-Taking And Examination are to	53
2. The Needs Of The Patient With STI	54
3. History Taking: Effective Face-To-Face Communication	55
4. Clinical Examination	63
5. Specimen Collection And Laboratory Tests	81
6. Risk assessment	84
7. How to Ask Question	85
Module 3A: Syndromic Diagnosis and Treatment of STI/RTI	87
1. Introduction	89
2. Syndromic Management Of Symptomatic Sexually Transmitted Infections	90
2.1 Urethral discharge syndrome	91
2.2 Genital ulcer disease	94
2.3 Vaginal discharge	95
2.4 Management of asymptomatic STIs in EW/MSM/TG	97
2.5 Lower Abdominal Pain	98
2.6 Proctitis, Enteritis and Proctocolitis	99
2.7 Scrotal swelling	101
2.8 Inguinal Bubo	103
2.9 Genital Warts	105
2.10 Neonatal conjunctivitis	106
2.11 Vaginal douching	108
Module 3B: Vaginal douching	111

1. Introduction	113
2. Gonococcal Infections	114
2.1 Clinical manifestations	114
2.2 Laboratory diagnosis	115
2.3 Treatment	116
3. Chlamidia Trachomatis Infections (Other Than Lymphogranuloma Venereum)	118
3.1 Clinical manifestations	118
3.2 Laboratory diagnosis	120
3.3 Treatment	120
4. Lymphogranuloma Venerum (LGV)	121
4.1 Clinical manifestations	121
4.2 Laboratory diagnosis	121
4.3 Treatment	122
5. Syphilis	123
5.1 Clinical manifestations	123
5.2 Laboratory manifestation	127
5.3 Treatment	130
5.4 Management of Sex Partners	132
5.5 Other Management Considerations	132
5.6 Follow Up	132
6. Chancroid	133
6.1 Clinical manifestations	133
6.2 Laboratory diagnosis	134
6.3 Treatment	135
7. Genital And Anorectal Herpes Infections	136
7.1 Clinical manifestations	136
7.2 Laboratory diagnosis	139
7.3 Treatment	139
7.4 Recurrent infections	140
7.5 Herpes in pregnancy	140
7.6 Neonatal Herpes	140
7.7 HIV	141
8. Genital Warts	142
8.1 Treatment for genital Warts	142
9. Trichomonas Vaginalis Infections	144

9.1 Clinical manifestations	144
9.2 Laboratory diagnosis	145
9.3 Treatment.....	146
10. Bacterial Vaginosis.....	147
10.1 Clinical manifestations	147
10.2 Laboratory diagnosis	148
10.3 Treatment.....	149
11. Vulvovaginal Candidiasis	150
11.1 Clinical manifestations	150
11.2 Laboratory diagnosis	151
11.3 Treatment.....	152
12. Scabies.....	154
12.1 Clinical manifestations	154
12.2 Laboratory diagnosis	154
12.3 Treatment.....	155
12.4 Follow-up.....	156
12.5 Management of sexual contact	156
13. Pubic Lice (Pediculosis Pubis)	157
13.1 Clinical features	157
13.2 Laboratory tests	157
13.3 Treatment.....	157
13.4 Follow-up.....	158
13.5 Management of sexual contacts.....	158
14. Molluscum Contagiosum.....	159
14.1 Clinical features	159
14.2 Laboratory tests.....	159
14.3 Treatment.....	159
14.4 Management of sexual contacts.....	159
15. Non-STI Genital Lesions.....	160
15.1 Inflammatory dermatoses of the genitals.	160
15.1.1 Psoriasis	160
15.1.2 Reiter's disease.....	161
15.1.3 Eczema.....	161
15.1.4 Fixed drug eruptions.....	162
15.1.5 Lichen planus	163
15.1.6 Lichen nitidus	163
15.1.7 Lichen sclerosis.....	164

15.1.8 Vitiligo	164
15.1.9 Hidradenitis suppurativa	165
15.1.10 Zoon's balanitis	165
15.1.11 Purple striae	165
15.2 Benign lesions	166
15.2.1 Sebaceous hyperplasia	166
15.2.2 Vestibular papillae	166
15.2.3 Pearly Penile Papula (PPP)	166
15.2.4 Epidermal cysts	167
15.2.5 Scrotal cysts	167
15.2.6 Angiokeratomas	168
15.3 Malignant lesions of the alignant lesions of the genitals	168
15.3.1 Squamous cell carcinoma (SCC)	168
15.3.2 Erythroplasia of Queyrat	169
15.4 Infections	169
15.4.1 Tinea cruris	169
15.4.2 Candidiasis	170
15.4.3 Tinea versicolor	170
15.4.4 Erythrasma	171
15.4.5 Folliculitis	171
Module 4: Educating and Counseling the Patient.....	173
1. Introduction.....	175
2. Key Points	176
2.1 Privacy and Confidentiality	177
2.2 Making Space for Privacy	177
2.3 General Skills for STI/RTI Education and Counseling	178
3. Health education and counselling	179
3.1 Health education	179
3.2 Health counseling	183
4. How to educate and counsel	191
5. Using condoms to stay cured	194
Module 5: Partner management.....	197
1. Introduction.....	199
1.1 The importance of partner management	199
1.2 The sexual partners who need to treat	199
1.3 It is easy to identify the source of a patient's infection in only two occasions	200
1.4 The impact on individuals.....	200

1.5	News of STI might have a serious effect on the relationship between patient and partner	200
1.6	Two principles should guide service providers in order to protect their STI patients.....	201
2.	Approaches To Partner Management.....	202
2.1	Patient referral.....	202
2.2	Provider referral.....	202
2.3	The advantages or disadvantages of each approach.....	202
3.	Patient Referral.....	204
3.1	Educating and counseling the patient: the issues.....	204
3.2	Educating and counseling the patient: your skills	204
3.3	Patient referral cards	204
3.4	Provider referral, if patient referral fails	205
3.5	If the patient refused to refer partners.....	206
3.6	If a partner fails to come for treatment.....	206
4.	Treating Partners	207
4.1	Partner Management	207
5.	Follow-Up Visits, Treatment Failure And Reinfection	208
	Module 6: Prevention & Care of STI/RTI for Vulnerable People	209
1.	Introduction.....	211
2.	Reducing Barriers To Use Of STI/RTI Services.....	212
3.	Raising Awareness And Promoting STI/RTI Services	213
4.	Reaching Other Groups In Reproductive Ages	214
4.1	Involving Men.....	214
4.2	Young People.....	215
4.3	key population and others with many sexual partners	216
5.	STI/RTI management in pregnant women and newborns.....	217
5.1	Initial Assessment Visit during Pregnancy.....	217
5.2	Follow-Up Antenatal Visit	218
5.3	Labor and Delivery	219

5.4	Prevention and Management of STI/RTIs in the Newborn.....	221
5.5	Postpartum Care	224
6.	Management Of Asymptomatic STIs/RTIs.....	225
6.1	STI/RTI Screening for Women.....	225
6.2	STI/RTI Screening for Men.....	234
7.	Sexual violence and STIs/RTIs	236
7.1	Sexual violence-some statistics	236
7.2	Medical and other care for survivors of sexual assault	237
7.3	Medical management	237
7.4	Emergency contraception	238
7.5	Post-exposure prophylaxis of STI	238
7.6	Post-exposure prophylaxis of HIV	238
7.7	Prophylactic immunization against hepatitis B.....	238
7.8	Tetanus toxoid.....	239
7.9	Referral to special services	239
8.	STI/RTI care and treatment for people living with HIV/AIDS (PLHIV).....	241
	Module 7: Monitoring and Reporting on STI/RTI Case Management.....	247
1.	Introduction.....	249
2.	Purposes	250
3.	Implementation Process	251
4.	Supervision Tool	252
5.	Assessment Of Documentation Of Medical And Laboratory Records Checklist For Monitoring And Supervision On Family Health Clinic(STI Clinic).....	253
6.	Quarterly Report Of STI/RTI Care & Treatment At Family Health Clinic (Based On Laboratory Approach)	263
7.	Quarterly Report Of Syphilis Screening For Pregnant Women	267
8.	Quarterly Report Of STI/RTI Laboratory	268
9.	Quarterly Report Of STI/RTI Care & Treatment At Health Center.....	270
	Reference	273

Abbreviation

AEM	Asian Epidemic Model
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal care
ARV/ART	Antiretroviral Therapy
BV	Bacterial Vaginosis
CT	Chlamydia Trachomatis
CMA/CMC	Case Management Assistant/ Case Management Coordinator
CNS	Central Nervous System
CS	Congenital Syphilis
CSF	Cerebrospinal Fluid
DFATP	Direct fluorescent antibody-Treponema Pallidum
ELISAs	Enzyme-linked immunosorbent assay
eMTCT	Elimination Mother-To-Child Transmission
EW	Female Entertainment Workers
FHC	Family Health Clinic
FHI	Family Health International
FTA-ABS	Fluorescent Treponemal Antibody Absorbed
FTC	Emtricitabine, Emtriva
GBV	Gender Based Violence
GC	Gonococcal
HBV	Hepatitis B virus
HCP	Health Care Provider
HEF	Health Equity Fund
HEI	HIV Exposed Infants
HIV	Human Immunodeficiency Virus
HPV	Human Papilloma Virus
HSIL	High-grade Squamous Intraepithelial Lesions
HSV	Herpes Simplex Virus
HTS-ART	HIV Testing Services-Antiretroviral Therapy
IBBS	Integrated Biological and Behavioural Surveillance
IgM or IgG	Immunoglobulin M or G
IUD	Intrauterine Device
KHANA	Khmer HIV/AIDS NGO Association
KPs	Key Populations
LRW	Low Risk Women
MCH	Maternal and Child Health
MEC	Medicine de L'Espoir Cambodge
MoH	Ministry of Health
MSM	Men who have sex with men

MEC	Medecine L'Espoire - Cambodge
MTCT	Mother-To-Child Transmission
NAAT	Nucleic acid amplification tests
NG	Neisseria gonorrhoeae
NCHADS	National Center for HIV/AIDS, Dermatology and STDs
NMCHC	National Maternal and Child Health Center
Pap	smear Papanicolaou smear
PCR	Polymerase Chain Reaction
PEP	Post-exposure prophylaxis
PEPFAR	President's Emergency Plan for AIDS Relief
PID	Pelvic Inflammatory Disease
PLHIV	People Living with HIV/AIDSs
PMTCT	Prevention of Mother-to-Child Transmission
PPT	Periodic Presumptive Treatment
PrEP	Pre-Exposure Prophylaxis
PW	Pregnant Women
PWID	People Who Inject Drug
RDTs	Rapid Diagnostic Tests
RHAC	Reproductive Health Association of Cambodia
LGV	Lymphogranuloma venereum
RPR	Rapid plasma reagin
RTI	Reproductive Tract Infection
SEI	Syphilis-Exposed Infan
SMH	Standard Medical History
SSS	STI Sentinel Surveillance
STI	Sexually Transmitted Infection
TAF/FTC	Tenofovir alafenamide/emtricitabine
TDF/3TC	Tenofovir disoproxil fumarate plus lamivudine
TDF/FTC	Tenofovir disoproxil fumarate
TG/IS	Transgender and intersex people
TPHA	Treponema Pallidum Haemagglutination Assay
TPPA	T. pallidum particle agglutination
TV	Trichomonas vaginalis
UNAIDS	United Nations Programme on HIV/AIDS
US-CDC	United State-Centers for Disease Control and Prevention
VAI	Visual inspection with acetic acid
VDRL	Venereal Disease Research Laboratory
VVC	Vulvo-Vaginal Candidiasis
WBC	White blood count
WHO	World Health Organization

List of Figures

Figure 1:	WHO estimates, New cases of curable sexually transmitted infections in 2012	32
Figure 2:	Adults and children estimated to be living with HIV globally as of end 2016	36
Figure 3:	Prevalence of national HIV estimated using AEM and Spectrum	36
Figure 4:	Urethral Discharge Syndrome Flowchart	92
Figure 5:	Persistent Urethral Discharge Syndrome Flowchart	93
Figure 6:	Genital Ulcer Syndromic Management Flowchart	94
Figure 7:	Vaginal Discharge Syndromic Management Flowchart	96
Figure 8:	Flowchart for Clinical Examination without Laboratory for EW/MSM/TG without STI Symptoms and periodic presumptive treatment	97
Figure 9:	Lower Abdominal Pain Syndromic Management Flowchart	98
Figure 10:	Management of Symptomatic Ano-rectal STIs Flowchart	101
Figure 11:	Scrotal Swelling Syndromic Management Flowchart	102
Figure 12:	Inguinal Bubo Syndromic Management Flowchart	104
Figure 13:	Genital Warts Syndromic Management Flowchart	105
Figure 14:	Neonatal Conjunctivitis Management Flowchart	107
Figure 15:	WHO interim recommended syphilis testing and treatment strategy for high syphilis prevalence settings (above 5%)	129
Figure 16:	Syphilis Algorithm for Pregnant Women	220
Figure 17:	Management of Syphilis-Exposed Infant (SEI) Algorithm	229

List of Tables

Table 1:	Types of STI/RTI	21
Table 2:	Complications that may result from STI	31
Table 3:	Estimate STI & HIV Prevalence among FEWs in Cambodia	33
Table 4:	Weighted STI prevalence by Province in Cambodia:	33
Table 5:	Preventing upper genital tract infection, infertility and ectopic pregnancy	40
Table 6:	Signs to look for when examining men	72
Table 7:	Signs to look for when doing external examination of women	74
Table 8:	Signs to look for when doing speculum examination	77
Table 9:	Signs to look for when doing bimanual examination	79
Table 10:	Symptoms and signs of RTIs in women	80
Table 11:	Common STI/RTI syndromes	83
Table 12:	Differentiating Bacterial Vaginosis, Candidiasis, and Trichomoniasis	153
Table 13:	Steps in patient education and counselling	177
Table 14:	How individual risk may influence reproductive health decisions and etc	186
Table 15:	Factors to consider in assessing risk	187
Table 16:	Factors to assess the patient's risk of further STI	188
Table 17:	Help women with condom negotiation skills	189
Table 18:	Administering adrenaline	231
Table 19:	Medical management Post-exposure prophylaxis of STI	239

MODULE 1

**BASIC OF SEXUALLY TRANSMITTED
INFECTIONS AND REPRODUCTIVE TRACT
INFECTIONS**

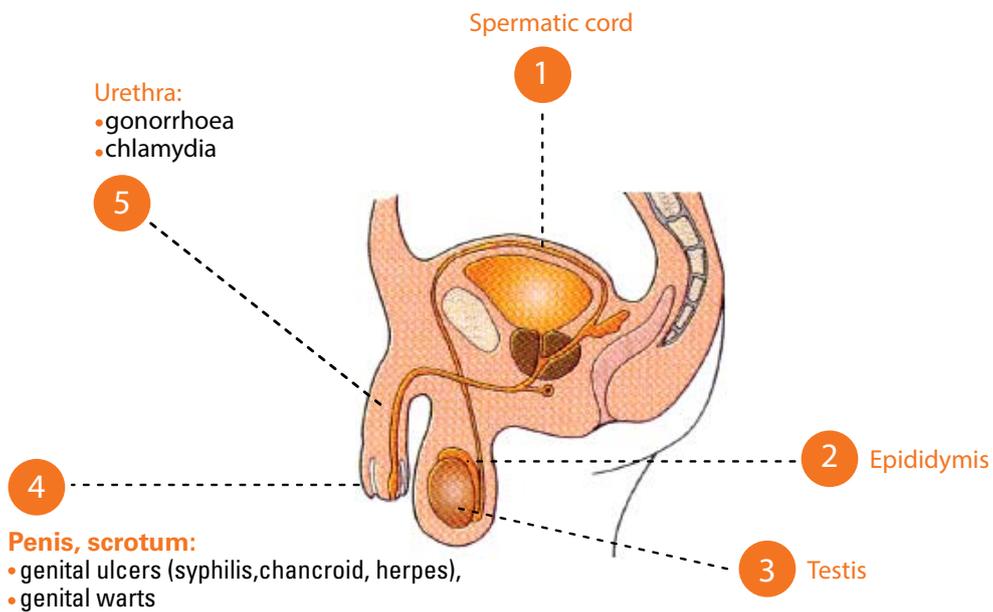
1. What are RTIs?

Reproductive Tract Infections (RTI) are infections of the genital tract. They affect both women and men. Some RTIs (such as syphilis and gonorrhoea) are sexually transmitted, but many are not. In women, overgrowth of endogenous microorganisms normally found in the vagina may cause RTI (yeast infection, bacterial vaginosis). Medical interventions may provoke iatrogenic infection in several ways—endogenous organisms from the vagina or sexually transmitted organisms in the cervix may be pushed during a transcervical procedure into the upper genital tract and cause serious infection of the uterus, fallopian tubes and other pelvic organs. Organisms from outside the body can also be introduced into the upper genital tract during medical procedures if infection control is poor. In men, sexually transmitted infections are much more common than endogenous or iatrogenic infections.

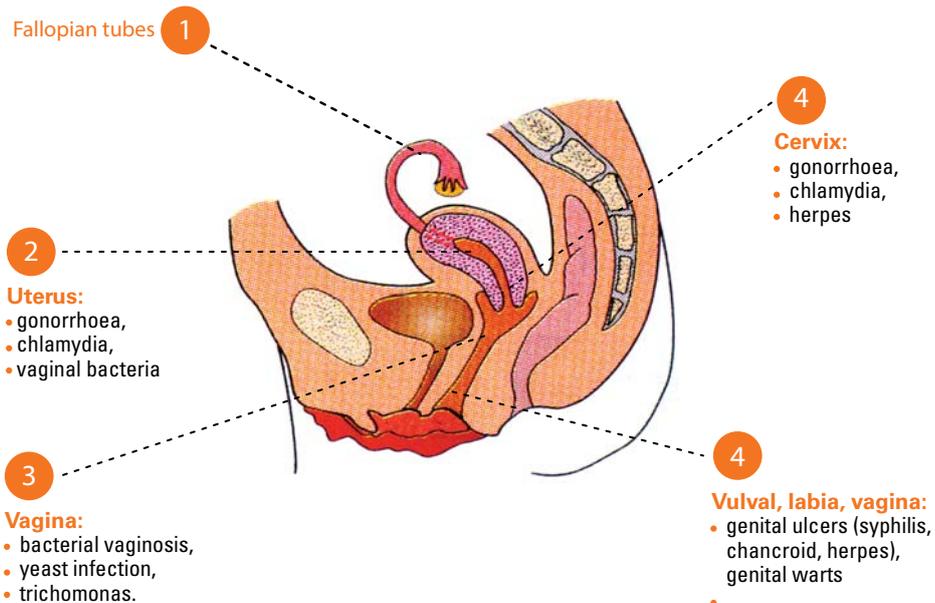
Table 1: Types of STI/RTI

Where they come from		How they spread	Common examples
Endogenous infections	Organisms normally found in vagina	Usually not spread from person to person, but overgrowth can lead to symptoms	Yeast infection, bacterial vaginosis
Sexually transmitted infections	Sexual partners with STI	Sexual contact with infected partner	Gonorrhoea, chlamydia, Syphilis, chancroid, Trichomoniasis, genital Herpes, genital warts, HIV
Iatrogenic infections	Inside or outside the body: Endogenous (vagina) STI (cervix or vagina) Contamination from outside	By medical procedures or following examination or intervention during pregnancy, childbirth, the postpartum period or in family planning (e.g., IUD insertion) and gynaecology settings. Infection may be pushed through the cervix into the upper genital tract and cause serious infection of the uterus, fallopian tubes and other pelvic organs. Contaminated needles or other instruments, e.g. uterine sounds, may transmit infection if infection control is poor.	Pelvic inflammatory disease (PID) following abortion or other transcervical procedure. Also, many infectious complications of pregnancy and postpartum period.

MALE REPRODUCTIVE TRACT



FEMALE REPRODUCTIVE TRACT



2. STI Transmission Modes

2.1 SEXUAL TRANSMISSION

The most common mode of transmission of STI is through unprotected penetrative sexual intercourse (vaginal or anal).

OTHER, MODES OF TRANSMISSION INCLUDE:



2.2 MOTHER TO CHILD TRANSMISSION



2.3 BLOOD TRANSMISSION

Unsafe (unsterile) use of needles or injections or other contact with blood or blood-products (e.g. syphilis, HIV and hepatitis).

NB: It is important to remember that the human immunodeficiency virus (HIV) is transmitted in the same ways as any other STIs.



3. What Factors Increase the risk of Transmission?

Not all acts of unprotected sexual intercourse result in the transmission of an STI from an infected person to a partner. Whether or not a person will be infected depends on many factors, both biological and behavioral.

3.1 BIOLOGICAL FACTORS

Certain biological factors influence the transmission of STI. They are age, gender, immune status of the host and the virulence of the organism.

3.1.1 AGE

The vaginal mucosa and cervical tissue in young women is immature and makes them more vulnerable to STI than older women. This is due to cervical ectopy, a normal condition for young women, when cervical surface cells more readily allow infections to occur. Young women are especially at risk in cultures where they marry or become sexually active during early adolescence. On average, women become infected at a younger age than men.

3.1.2 GENDER

Infections enter the body most easily through a mucosal surface such as the lining of the vagina. Since the mucosal surface that comes into contact with the infective agent is much greater in women than in men, women can be more easily infected than men.

3.1.3 IMMUNE STATUS

The immune status of the host and virulence of the infective agent affect transmission of STI. As we will detail later in this module, certain STIs increase the risk of transmission of HIV – itself a sexually transmitted infection. HIV, in its turn, facilitates the transmission of some STIs and worsens the complications of STI by weakening the immune system.

3.2 BEHAVIORAL FACTORS

Many behavioral factors may affect the chance of getting an STI. Such behaviors are known as 'risky'. Risky behaviors include:

3.2.1 PERSONAL SEXUAL BEHAVIORS

- Recent or frequent change of sexual partner, having more than one sexual partner or having sex with sex workers or their clients makes it more likely that a person will come into contact with someone who has an STI
- Having unprotected penetrative sexual intercourse in a situation where either partner has an infection
- Having previous STI in the last year:
- People who have had an STI in the last year are at risk of getting infected again if they have not been able to change their sexual behavior.

3.2.2 SOCIAL FACTORS

A number of social factors link both gender and behavioral issues and may affect a person's risk of getting an 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 more likely to tolerate men's risky behavior of multiple sexual partners, thus putting them at risk of infections
- Sexual violence tends to be directed more towards women by men, making it difficult for women to discuss STI with their male counterparts
- In some societies the girl-child tends to be married off to an adult male at a very young age, thus exposing the girl to infections
- In some societies a permissive attitude is taken towards men allowing them to have more than one sexual partner.

3.2.3 OTHER PERSONAL BEHAVIORS ASSOCIATED WITH RISK

- Skin-piercing; this refers to a wide range of practices including the use of unsterile needles to give injections or tattoos, scarification or body piercing and circumcision using shared knives
- Use of alcohol or other drugs before or during sex; alcohol or drug use may negatively affect condom use
- Alcohol may diminish the perception of risk, resulting in not using a condom; or if a condom is used it may not be used correctly.

3.2.4 THE BEHAVIOR OF THE PARTNER(S)

- Sex with others
- Has an STI
- Is HIV-positive
- Injects drugs
- Male partner has sex with other men.

A partner with one or more of these behaviors is more exposed to STIs, and in turn is more likely to transmit an STI.



4. Protective Behavior

Protective behavior reduces the risk of becoming infected with an STD. Condom use reduces the risk of STD infection by preventing contact with vaginal fluids, semen or blood. Used properly, condoms are up to 95% effective at preventing the transmission of STDs. Sexual practices such as penetrative vaginal and anal intercourse are high risk, so practices which avoid the exchange of bodily fluids, such as mutual masturbation, are of considerably lower risk.

5. Which Population Groups Are Particularly Vulnerable?

In most countries some groups of people are particularly vulnerable to STI. This may be because they are exposed to infected partners more frequently, or because they are more susceptible to getting infected each time they are exposed. Such groups include:

- Sexually active teenager;
- Entertainment workers and their clients;
- Men or women who have multiple sexual partners;
- Men having sex with men/transgender persons;
- Men or women whose jobs separate them from their regular sex partners for long periods of time, such as long-distance drivers, soldiers, and migrant workers. For various reasons, these people may hesitate to go to health facilities for treatment. Special effort may be necessary to reach them and make services acceptable to them.

6. Complications of STI

Sexually transmitted infections are of public health concern not only because of their high prevalence worldwide, but also because of their potential to cause serious and permanent complications in infected people who are not treated in a timely and effective way. In addition they are known to facilitate HIV transmission. A UNAIDS Technical Update in May 1998 states that:

- Both symptomatic and asymptomatic infections can lead to the development of serious complications.
- The most serious complications and sequelae (long-term consequences) of untreated STI tend to be in women and newborn babies.
- These can include cervical cancer, pelvic inflammatory disease (salpingitis), chronic pelvic pain, fetal wastage, ectopic pregnancy and related maternal mortality.
- Chlamydial infections and gonorrhoea are important causes of infertility, particularly in women, with far-reaching social consequences.
- Chlamydial infection is an important cause of pneumonia in infants.
- Neonatal gonococcal infections of the eyes can lead to blindness.
- Congenital syphilis is an important and significant cause of infant morbidity and mortality.
- In adults, syphilis can cause serious cardiac, neurological and other consequences, which can ultimately be fatal.

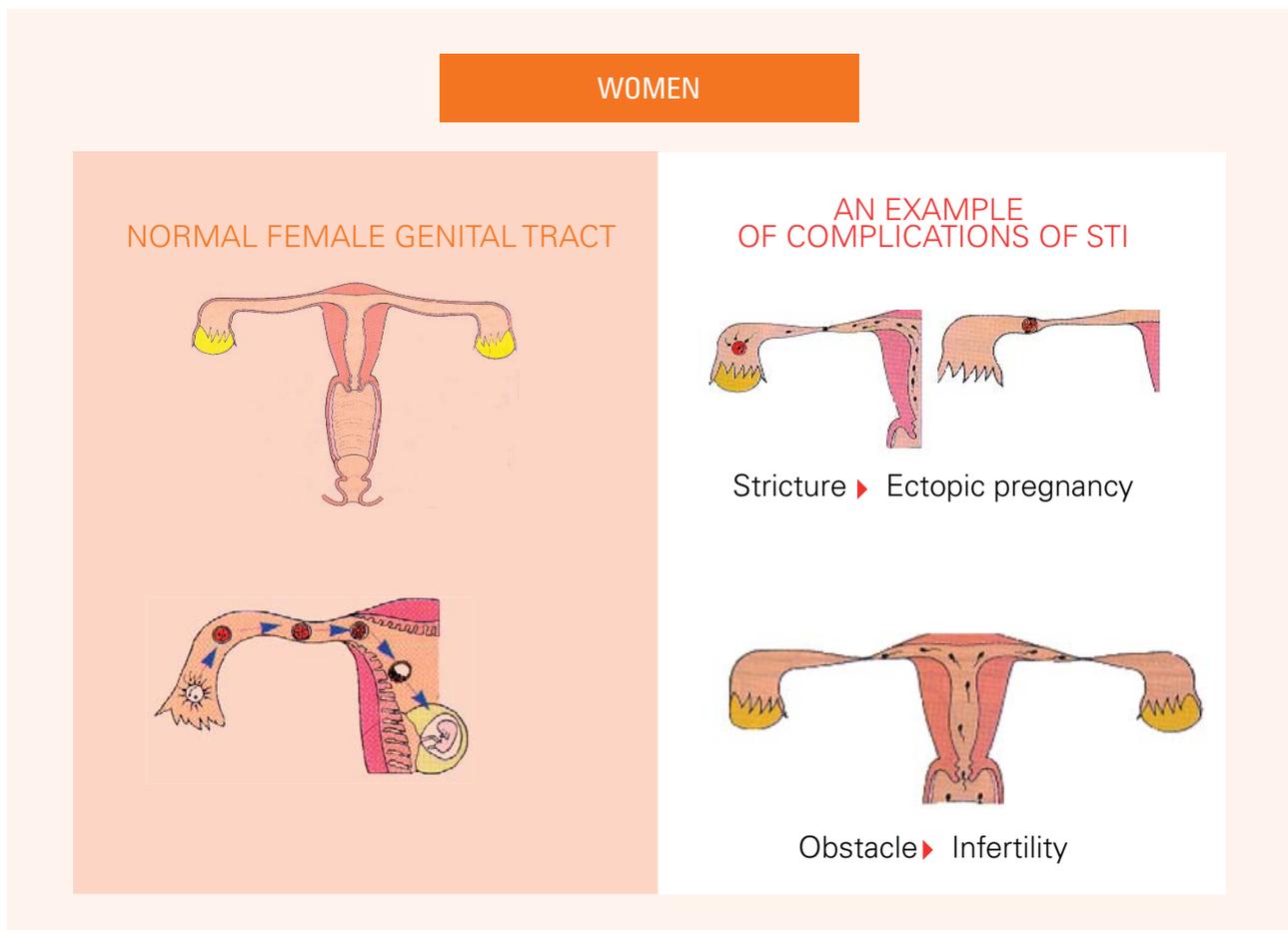
6.1 WOMEN

All the following complications can be avoided if the correct treatment is provided before they develop.

- **Pelvic inflammatory disease (PID)** is inflammation of the uterus, fallopian tubes and ovaries. Sometimes PID spreads throughout the lower abdomen. The main causes of pelvic inflammatory disease in women are gonorrhoea and chlamydia. The pain from PID is often the first symptom that women notice.¹ If the fallopian tubes are already damaged when the women starts to feel pain, this damage is irreversible.

¹ Sexually transmitted diseases as major causes of ectopic pregnancy: results from a large case-control study in France. Author: Coste et al. (August 1994)

- **Miscarriage and Ectopic Pregnancy**, some STIs can cause permanent damage to the female reproductive organs . PID permanently scars and narrows the fallopian tubes, which makes it difficult for fertilized eggs to pass from the ovaries into the womb. It increases the risk of ectopic pregnancy- a condition that can be fatal to women. If the pregnancy implants in the fallopian tube, the tube can rupture, causing extensive hemorrhage. Around 40 per cent of ectopic pregnancies can be attributed to infectious factors, including STIs . Ectopic pregnancies cause an estimated 1% to 5% of all maternal deaths. The bacteria from some sexually transmitted infections such as chlamydia can cause the foetus to die in the uterus. A primary infection of genital herpes contracted during pregnancy can also cause miscarriage.
- **Complication to new born** Gonorrhoea and chlamydia can also cause eye infections and pneumonia in the newborn. A syphilis infection during pregnancy can spread through the placenta and infect the fetus. Up to 40% of syphilitic pregnancies end in spontaneous abortion, stillbirth, or perinatal death. This is particularly serious when the maternal syphilis infection is untreated during the first 20 weeks of pregnancy.



6.2 MEN

Gonorrhoea and chlamydia can lead to serious complications in men. An infection can spread from the urethra (where it is known as urethritis) to the epididymis (where it is known as epididymitis). This can cause urethral stricture and infertility.

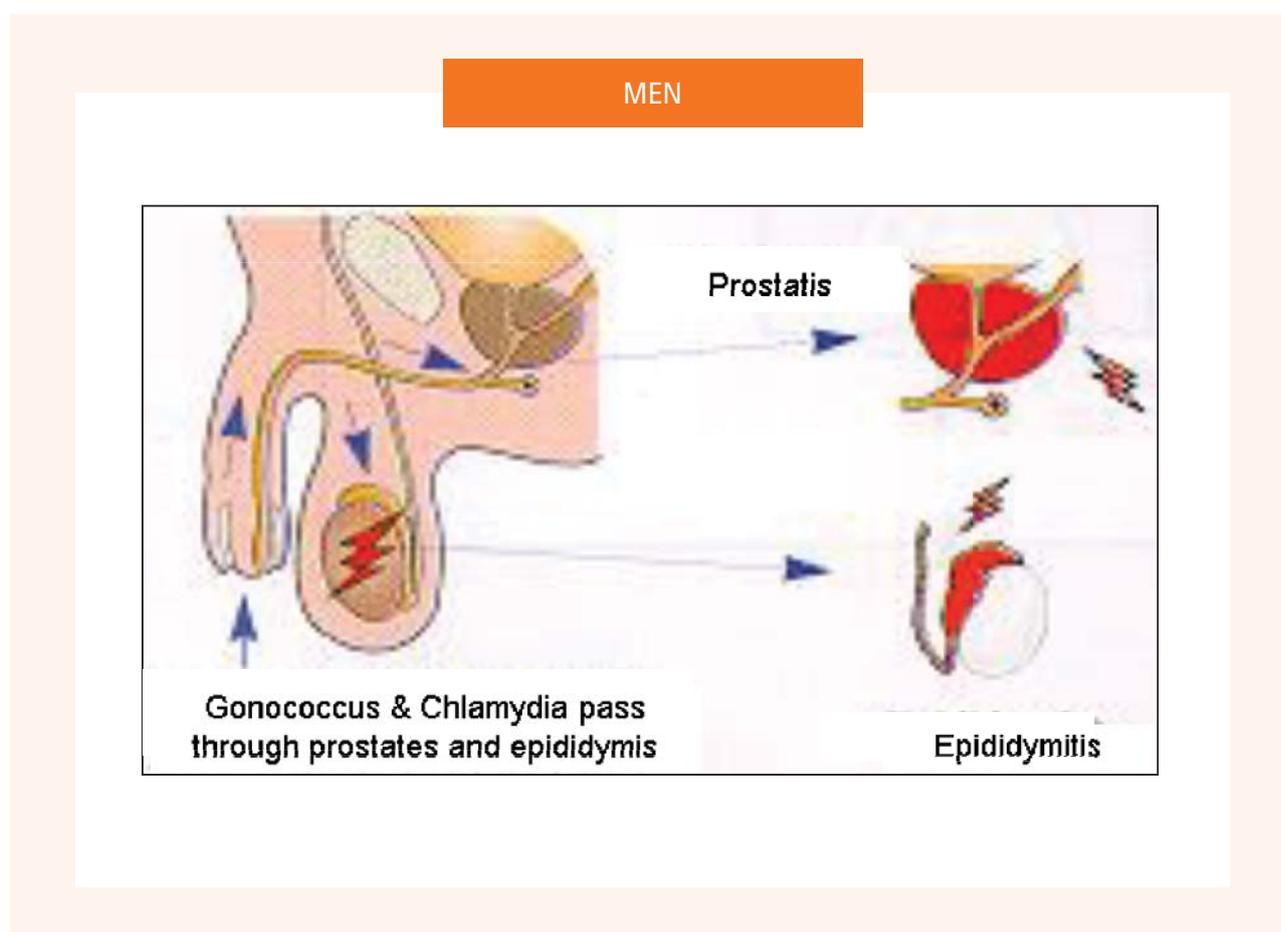


Table 2: Complications that may result from STI

Cause	Complication
Gonococcal and chlamydial infection	Infertility in men and women Epididymitis Ectopic pregnancy due to tubal damage
Gonorrhoea	Blindness in infants
Gonococcal, chlamydial and anaerobic bacterial infections	Pelvic and generalized peritonitis
Acquired syphilis	Permanent brain and heart disease
Congenital syphilis	Extensive organ and tissue destruction in children
Human papilloma virus	Genital cancer

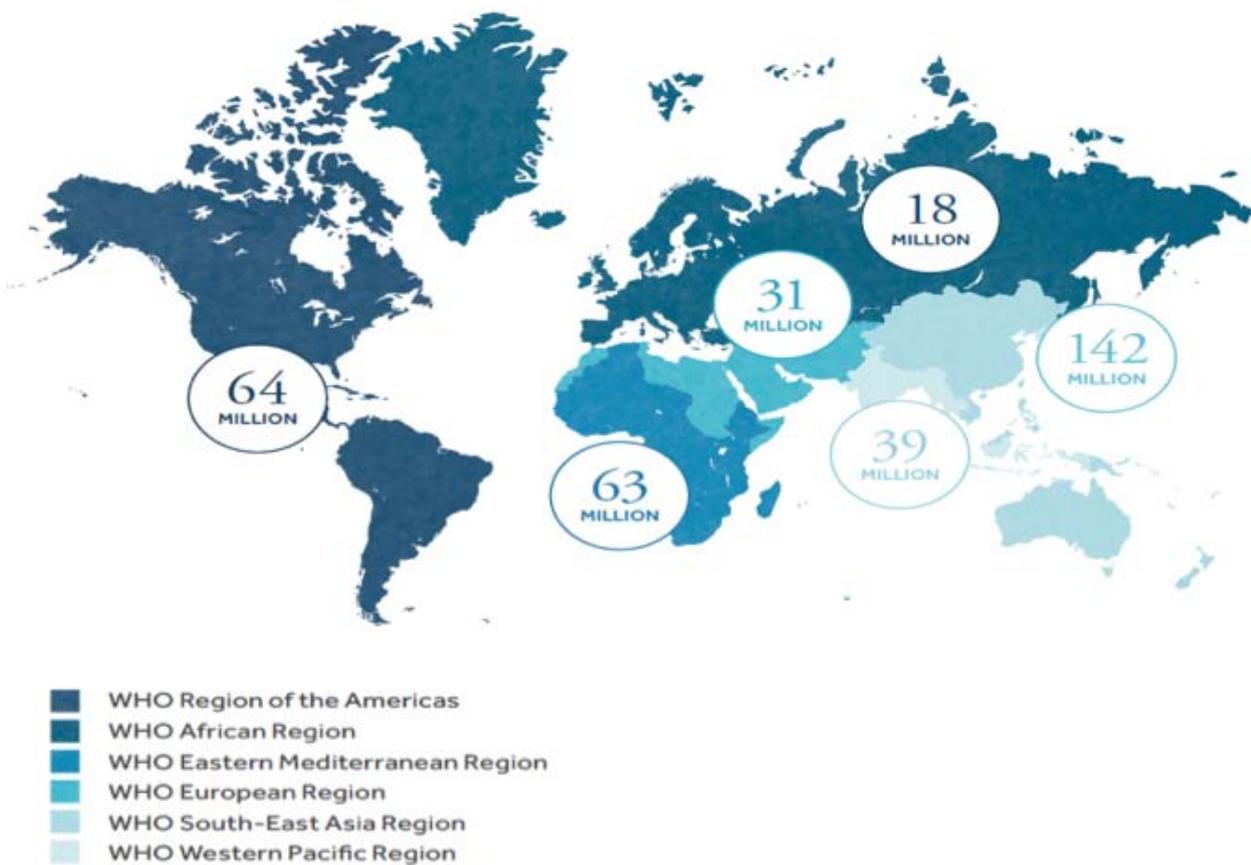
7. Epidemiology of STI

7.1 GLOBALLY

WHO estimates: 357 million new cases of curable sexually transmitted infections in 2012²

Figure 1: WHO estimates, new cases of curable sexually transmitted infections in 2012³

Curable STIs chlamydia, gonorrhoea, syphilis, trichomoniasis



² Source: Newman LM, et al. Global estimates of the prevalence and incidence of four curable sexually transmitted infections in 2012, PLoSOne 2015.

³ Source: Newman LM, et al. Global estimates of the prevalence and incidence of four curable sexually transmitted infections in 2012, PLoSOne 2015.

7.2 IN CAMBODIA

Table 3: Estimate STI & HIV Prevalence among Female Entertainment Workers in Cambodia * (Integrated Biological and Behavioral Survey for Sexually Transmitted Infections and Risk Behaviors among Female Entertainment Workers, MoH 2011)

	Chlamydia	Gonorrhea	Active Syphilis	Chlamydia and/or Gonorrhea	HIV	Genital Ulcers
%	18.9	5.32	0.42	21.3	2.62	4.67
Total # positive	532	178	25	613	91	136

*values represent weighted percentages

Table 4: Weighted STI prevalence by Province in Cambodia: (Integrated Biological and Behavioral Survey for Sexually Transmitted Infections and Risk Behaviors among Female Entertainment Workers MoH 2011)

Province	CT or GC weighted % and 95% CL			HIV weighted % and 95% CL		
	%	95% CL		%	95% CL	
OMC	31.2	16.4	45.9	6.3	1.0	11.7
PVH	43.8	33.8	53.7	5.3	1.0	9.7
KCN	31.6	26.7	36.4	4.7	2.2	7.1
KCH	22.6	17.3	27.9	4.1	0.1	8.1
PST	26.2	21.3	31.2	4.0	1.5	6.5
KHK	20.8	12.4	29.3	3.7	0.2	7.2
SHV	24.2	13.9	34.5	3.6	0.8	6.5
TKO	29.3	19.8	38.7	3.4	0.7	6.0
BMC	27.5	24.7	30.4	3.0	0.0	6.3
BTB	13.3	7.1	19.5	2.8	0.0	6.1
PNP	19.5	11.8	27.3	2.6	0.6	4.5
PLN	18.6	9.7	27.5	2.3	0.0	5.2
KSP	31.5	22.8	40.1	2.1	0.0	4.2
KDL	24.8	19.3	30.3	2.0	0.2	3.9
SRP	19.0	7.1	31.0	1.4	0.0	3.3
KTH	24.0	18.7	29.3	0.7	0.0	2.0
PRV	19.6	8.1	31.1	0.0	0.0	0.0
Total	21.3	17.3	25.2	2.6	1.6	3.6

8. The link between STI and HIV/AIDS

We mentioned earlier in this module that certain STIs facilitate the spread of HIV. In fact, the inter-relationship between STI and HIV is more complex, in that:

- Certain STIs facilitate the transmission of HIV
- HIV can make people more susceptible to the acquisition of STIs
- HIV increases the severity of some STIs and their resistance to treatment.

8.1 WHICH STIs SEEM TO FACILITATE THE TRANSMISSION OF HIV?

A person with open sores in the genital area is much more likely both to contract and to transmit HIV. Chancroid and syphilis are the main bacterial causes of sores: if promptly diagnosed and treated, these links can be reduced. Genital herpes also facilitates HIV transmission: "There is evidence that genital herpes, an incurable viral infection in which patients have recurrent genital ulcers, may play a more important part than previously thought. In high-income countries, genital herpes – infection with the herpes simplex virus-2 (HSV-2) – is the leading cause of genital ulcers, though rates are low. HSV-2 is now assuming that position in sub-Saharan Africa too. An ulcer in the genital area provides an 'open door' through which HIV can easily pass. Unfortunately, HSV-2 is lifelong and incurable. The best way to deal with the exponentially rising risks of HIV and HSV-2 infection is to increase efforts to prevent them both, particularly by increasing condom use." Report on the Global HIV/AIDS Epidemic, (UNAIDS, Geneva, June 2000, p. 71-2)

Chlamydia, gonorrhoea and trichomoniasis can also facilitate the transmission of HIV. This may be for one or both of two reasons:

- These non-ulcerative diseases stimulate the body's immune system to increase the number of white blood cells, which are both targets and sources of HIV
- Genital inflammation associated with these STIs can cause microscopic cuts in genital tissues, creating potential sites where HIV can enter the body.

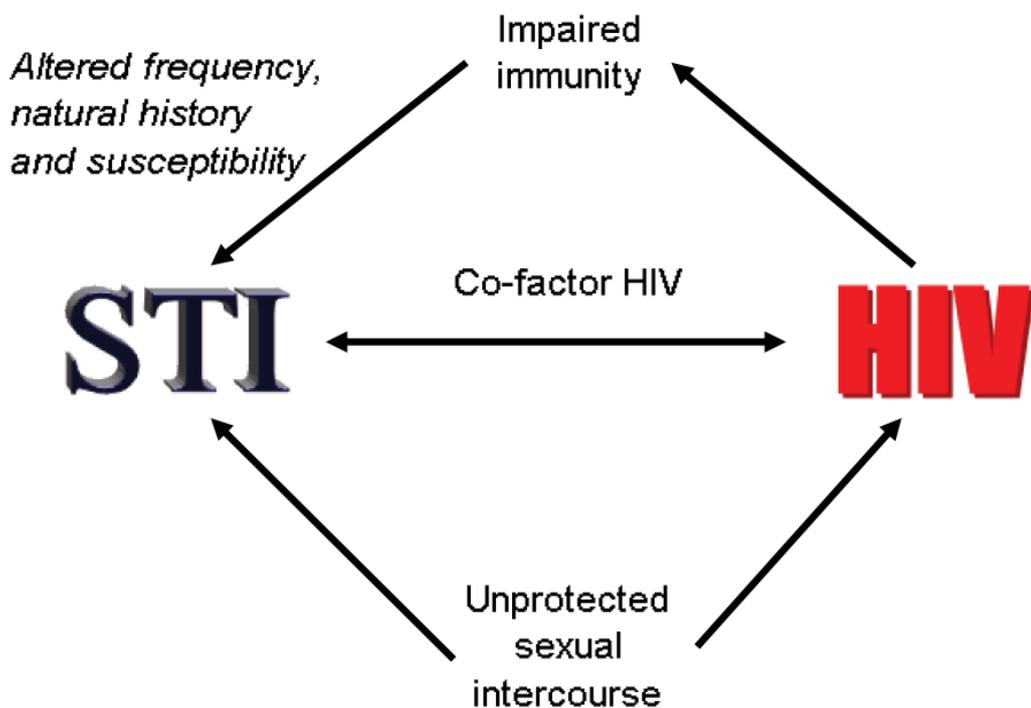
8.2 HIV MAKES INFECTION WITH OTHER STIs MORE LIKELY

It is also true that people infected with HIV are more vulnerable to getting multiple infections. This is because changes in their bodies make them more vulnerable to infection in general.

8.3 HIV AND INCREASED SEVERITY OF STI AND RESISTANCE TO TREATMENT

“An additional relationship between HIV and other STI is the alteration of the natural history of an STI in an individual with coexistent immuno-deficiency associated with HIV. The severity of the manifestations may be increased, infectiveness prolonged and increased, and the response to conventional regimens reduced.”

The interrelationship between STI and HIV-infection (Sexually Transmitted Diseases: Policies and Principles for Prevention and care, UNAIDS/WHO 1999).



The extra and obvious link between STI and HIV is behavioral: unprotected sexual behavior exposes people to both HIV and other STIs. Equally, the consistent use of condoms can PREVENT both kinds of infection.

8.4 HIV EPIDEMIOLOGY

Figure 2: Adults and children estimated to be living with HIV globally as of end 2016

Global estimates by WHO region

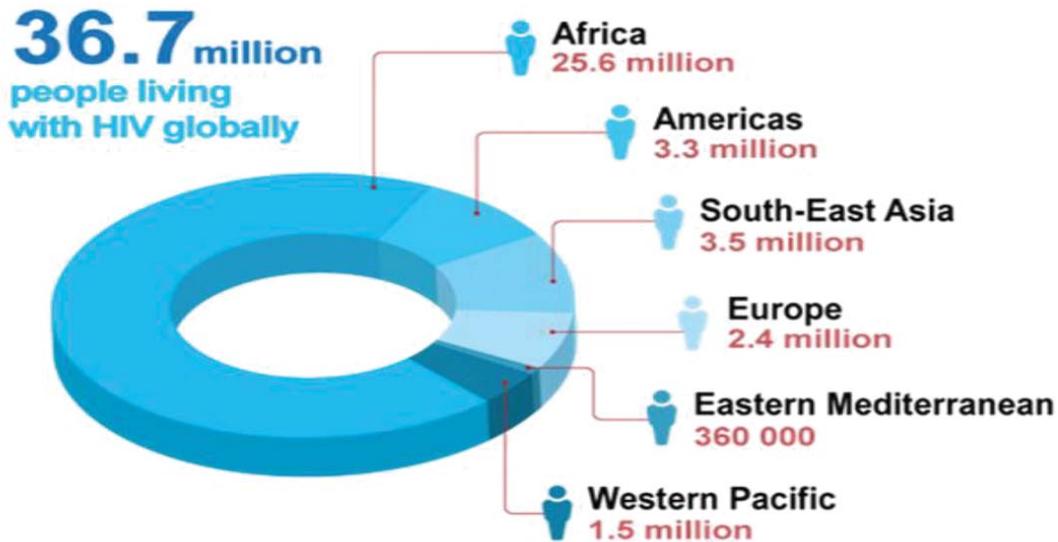
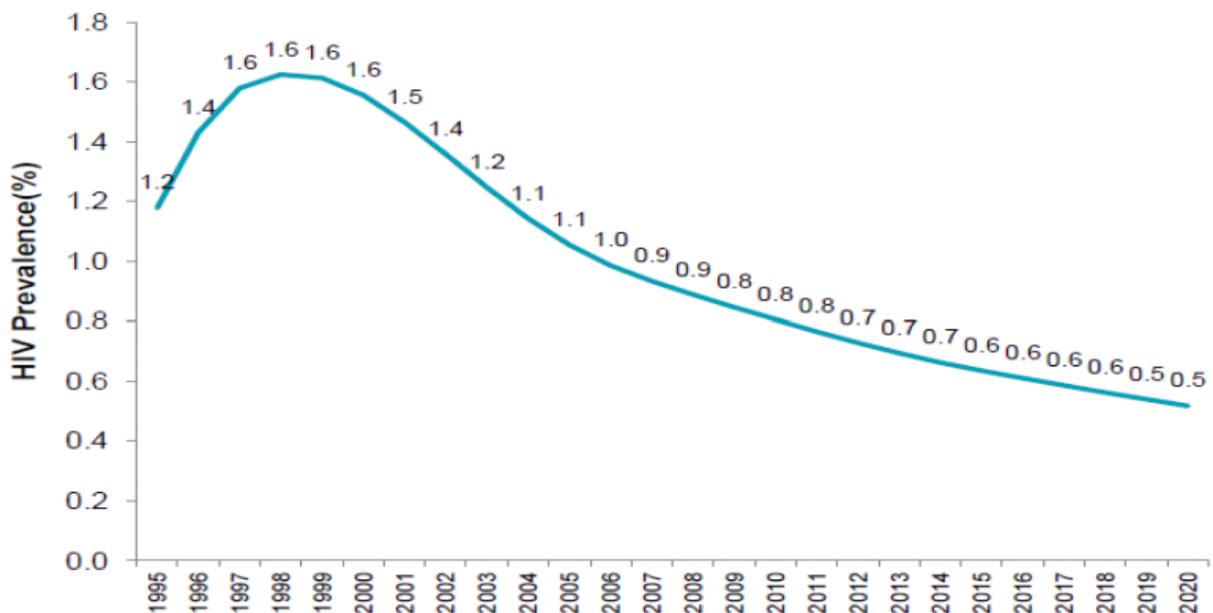


Figure 3: Prevalence of national HIV estimated using AEM and Spectrum

HIV Prevalence among adult population 15-49 in Cambodia from 1995-2017



9. How to Prevent STI

The best approach to preventing STI is to avoid exposure. At this first level of prevention, the likelihood of being exposed to STI can be reduced by:

- Delaying sexual activity (for adolescents);
- Decreasing the number of sex partners;
- Using condoms correctly and consistently.



ABSTINENCE



BE FAITHFULL



CONDOM USE

STI prevention involves early detection and effective treatment. This not only reduces the probability of complications for the individual but also prevents new infections in the community. The sooner an STI is cured, the less chance it will be transmitted to other people.

9.1 DELAYING SEXUAL ACTIVITY

Adolescents can avoid STI and unwanted pregnancy (including HIV), by delaying sexual activity until they are older. Support for delaying sex is perhaps most important for young girls, who may face severe social and health consequences if they become pregnant or develop an STI. The bodies of adolescent girls are particularly vulnerable to cervical infections that can lead to pelvic inflammatory disease, infertility and ectopic pregnancy. Adolescents should know that they can get support and confidential information on methods—including condom use—for preventing pregnancy and STI when they decide to become sexually active.

9.2 DECREASING THE NUMBER OF SEX PARTNERS

Limiting the number of sex partners can help reduce exposure to STI. For example, people in mutually monogamous relationships (where both partners have no other sex partners) have no risk of STI if both are free of infection. Many monogamous women with only one lifetime sex partner, however, develop an STI—their risk of infection comes from their partner’s behavior and not their own. Sexual abstinence is another way to avoid risk of STI (although other RTIs are still possible).

Many people need strategies other than monogamy or abstinence at some point in their lives. Monogamous relationships do not provide protection from STI when they follow one another in rapid succession (“serial monogamy”). Couples who are separated from each other for periods of time may also require other strategies. Men and women whose jobs involve travel-migrant workers, vendors, truck drivers, soldiers-are more likely to have multiple partners and to return home with an STI. Whatever the circumstances, both women and men with multiple partners or whose partners have multiple partners-need reliable strategy for protection from STI.

9.3 CORRECT AND CONSISTENT USE OF CONDOMS

Condoms are the most reliable method available for situations where people want to protect themselves or their partner from any risk of STI. Used correctly, they form a barrier that keeps out even the smallest bacteria and viruses.

9.3.1 MALE CONDOM

Male condom made of latex are widely available, inexpensive and highly effective. Because they are easy to carry, protection can be available at any time. To use a condom correctly:

- Put on the condom before any penetrative intercourse
- Withdraw the penis right after ejaculation (while the penis is still erect) to avoid the condom slipping off inside the vagina.
- Put on a new condom for each new act of intercourse.

STI can still occur despite condom use, however. Genital ulcers or warts can be transmitted through contact with parts of the body not covered by the condom. More commonly, though, people get an STI because they misuse condoms, or use them inconsistently.

Male Condom



When handled or stored incorrectly—in wallets or in a hot place, for example—or if used with oil-based lubricants, condoms may fail. Condom breakage is usually due to incorrect use, not to defects in the device. Most importantly, condoms can only protect against STI when they are used consistently and correctly. When used correctly during every act of intercourse, condoms can greatly reduce the risks of both pregnancy and STI, including HIV infection. Chapter 4 includes advice on counseling patients on how to negotiate condom use with partners.

9.3.2 FEMALE CONDOM

It is becoming more widely available and have the advantage for women that their use is more in their control than use of male condoms. One type of female condom is currently on the market, under various names. It is made of polyurethane plastic, which is sturdier than latex. Only one size is made and fitting by a health care provider is not required. Unlike latex male condoms, which are weakened by oil-based lubricants, the female condom may be used with any type of lubricant without its strength being affected. It is pre-lubricated, but users may add more lubricant.

Female condoms may offer a similar level of protection as male condoms, but they are more expensive. Some studies have shown that the female condom is acceptable to both women and their male partners. Despite its advantages, the female condom has some problems. The device protrudes from the vagina and thus requires the acceptance of the male partner. Also, it cannot be used at the same time as the male condom, which means it cannot provide backup protection if the male condom breaks or slips. Research into other female-controlled methods is under way. Microbicides (chemicals that kill RTI organisms) are being tested for their safety and effectiveness in protecting against STI and HIV, as are other barrier methods such as the diaphragm. None of these methods has yet been shown to provide protection equal to the male condom, however.

Female condom



10. How to Prevent Iatrogenic Infections

As discussed in Chapter 1, many STI/RTI complications occur when sexually transmitted, endogenous or other organisms reach the upper genital tract. The most effective way to prevent STI/RTI complications, such as infertility and ectopic pregnancy, **is to prevent upper genital tract infections** from occurring (Table 1).

This involves:

- STI prevention and management
- Good antenatal care and safe delivery practices
- Safe performance of trans-cervical procedures
- Good post-abortion care and management of complications

Good post-abortion care and management of complications

Interventions that reduce the spread of STIs/RTIs or prevent existing infection reaching the uterus are key to preventing complications. During most of the menstrual cycle, cervical mucus forms a thick barrier that is difficult for germs to penetrate. STIs such as gonorrhoea or chlamydia in the cervix may, however, spread to the uterus during menstruation or may be pushed in during trans-cervical procedures. Non-sexually-transmitted organisms from the vagina or from outside the body may also cause pelvic inflammatory disease if they are pushed into the uterus.

Table 5: Preventing upper genital tract infection, infertility and ectopic pregnancy

Intervention	Methods to prevent infections and complications
STI prevention	Counsel on: <ul style="list-style-type: none"> • Delaying sexual activity • Reducing numbers of partners • Using condoms correctly and consistently
STI management	Early detection and treatment of STI
Safe delivery practices	Use aseptic technique Manage postpartum infection effectively
Safe trans-cervical procedures	Use aseptic technique Rule out infection prior to procedure
Post-abortion care	Use aseptic technique Manage post-abortion infection effectively

10.1 SAFE PERFORMANCE OF TRANS-CERVICAL PROCEDURES

Infection can reach the uterus through medical procedures that pass instruments through the cervix (trans-cervical procedures). Manual vacuum aspiration, dilatation and curettage, insertion of an intrauterine device (IUD) and endometrial biopsy are examples of such procedures. The risk of infection following a trans-cervical procedure varies greatly depending on factors such as background STI prevalence, resource and capacity level, and conditions under which procedures are performed. In settings where prevalence of cervical infection is low, the risk of introducing infection to the upper genital tract is minimal. However, women who harbor pathogens such as *N. gonorrhoeae* or *C. trachomatis* in their cervix are at increased risk of upper genital tract infection after a Trans-cervical procedure compared with uninfected women. Upper genital tract infection following trans-cervical procedures can be reduced by:

- Using appropriate infection prevention procedures and aseptic techniques
- Treating any existing cervical infection.

10.2 REDUCING RISK OF INFECTIONS

10.2.1 CLINICAL PRACTICES

Appropriate infection prevention procedures and aseptic techniques provide protection against transmission of infection has seen below.

10.2.2 INFECTION PREVENTION TECHNIQUES FOR TRANSCERVICAL PROCEDURES

- Wash hands.
- Wear gloves, both for the procedure and when handling contaminated waste materials or used instruments.
- Decontaminate, clean and high-level disinfect all instruments (e.g. specula, tenacula, forceps, and uterine sound). High-level disinfection can be done by boiling instruments for 20 minutes in a container with a lid.
- Clean the cervix and vagina with antiseptic solution.
- Use “no touch” technique. This means avoiding contamination of the uterine sound or other instruments by inadvertently touching the vaginal wall or speculum blades.

11. How to Prevent Endogenous Infections

Yeast infection and bacterial vaginosis are common endogenous infections that can be easily treated but often recur. Health care providers should be aware that:

- Pregnant women and women using oral contraceptives may get frequent yeast infections because of changes in vaginal acidity (pH);
- Certain medical conditions-e.g. diabetes-may increase the risk of yeast infections as may long-term use of steroids. Less commonly, recurrent yeast infections may be a sign of a more serious illness that reduces immunity (such as long-term chronic illness or HIV infection). These should be considered only if there are other symptoms; yeast infection alone is common and usually easily prevented or treated. Health care providers can offer advice about some simple ways to prevent endogenous infection.
- Douching can disrupt the normal flora of the vagina and cause overgrowth of other microorganisms (bacterial vaginosis). Use of detergents, disinfectants, and vaginal cleaning or drying agents should be avoided. Cleaning the external genital area with soap and water is sufficient for hygiene.
- Antibiotics can also disrupt the normal vaginal flora and permit overgrowth of yeast. Women taking antibiotics-especially long courses of broad-spectrum antibiotics-may also need treatment for yeast infection.

12. What can be done to control STI?

All STIs, including HIV, are preventable. Prevention can be primary or secondary:

- Primary prevention aims to prevent people being infected with STIs or HIV
- Secondary prevention is about the provision of treatment and care for infected people in order to avoid further transmission of infection to others.

12.1 PRIMARY PREVENTION

This is about adopting safer sexual behavior and engaging only in safer sexual acts.

12.1.1 SAFER SEXUAL BEHAVIOR IMPLIES:

- Abstinence from sexual activity altogether
- Delaying the age of sexual debut
- Life-long mutual monogamy.

12.1.2 SAFER SEXUAL ACTIVITY IMPLIES:

- Engaging only in non-penetrative sex acts: mutual masturbation and rubbing of body parts
- Engaging in penetrative sex acts only if condoms (male or female) are used. Penetrative sex acts include vaginal, oral and anal sex.

12.1.3 MEDICALLY-ASSISTED PREVENTION

- Pre-exposure prophylaxis (PrEP): Daily uptake of ART (TDF/FTC or TDF/3TC) to prevent HIV-infection among HIV-negative people with substantial risk of contamination including key population and sero-discordant couples.

12.2 SECONDARY PREVENTION

This may be achieved by:

- Promoting STI care-seeking behavior, through
- Public education campaigns-Providing non-stigmatizing and non-discriminatory health facilities
- Providing non-stigmatizing and non-discriminatory health facilities
- Providing quality STI care
- Ensuring a continuous supply of highly effective drugs
- Ensuring a continuous supply of condoms
- Rapid and effective treatment of people with STIs:
- Comprehensive case management of STI syndromes
- Implement presumptive treatment for people with substantial risk of STI infection likeentertainment workers (male and female)
- Training of service providers in case management
- Improve case finding:
 - Symptom screening and examining minimally symptomatic women attending clinics for maternal and child health and family planning
 - Partner notification and treatment
 - Education, investigation and treatment of targeted population groups who may have placed themselves at risk of infection, such as entertainment workers, MSM, Tran-gender, drug users long distance truck drivers, uniformed services, migrants and young people, both in and out of

13. Integration of STI Services within Primary Care

In order to improve access, STI treatment should be available at all health facilities throughout the country. It is possible to integrate STI care within primary health care – health center, primary care clinics, maternal, child health and family planning clinics – through the syndromic management of STI. This means that service providers are trained to recognize STIs syndromic and offer their patients adapted comprehensive care.

STI Comprehensive Care Implies:

- To make a correct STI syndrome diagnosis
- To provide correct antimicrobial therapy for the STI syndrome
- To educate on the nature of the infection, safer sexual behavior, safe sex acts and risk reduction in order to prevent or reduce future risk taking behavior
- To educate on treatment compliance
- To demonstrate the correct use of condoms and provision of condoms
- To advise on how the patient's partners may be treated and to issue a
- Partner Referral card for the patient to pass on to his/her partner(s).

14. Approaches to STI/RTI Diagnosis

school and other identified at-risk populations

Health care providers generally use one of the following approaches to diagnose STI/RTI:

- **Clinical diagnosis:** using clinical experience to identify the symptoms typical for a specific STI
- **Etiological diagnosis:** using laboratory tests to identify the causative agent
- **Syndromic approach:** To identify STI syndrome(s) and systematically treat all infections potentially responsible without laboratory confirmation.

14.1 STI ETIOLOGICAL DIAGNOSIS USING LABORATORY

Laboratory testing requires skilled personnel and consistent support and supplies, which are often not available.

However, etiological diagnosis presents several important limitations:

- Testing facilities are not usually available at the primary health care center, where many people with an STI first seek care.
- Laboratory diagnosis can only confirm diagnosis if patients with suspected STI are referred from primary health care centers to Family Health Clinic.
- Treatment does not begin until the results are available, which usually requires patients to revisit the health center. Infected individuals continue to transmit the infection to others and may be unwilling to return for follow-up.
- The performance of STI tests have limitations and beside syphilis serology, STI test of other STIs cannot detect all infected cases even when clinical symptoms are present (limited sensitivity)

14.2 STI CLINICAL DIAGNOSIS

Using clinical diagnosis, the clinician tries to identify and treat STIs based on the clinical symptoms. This approach also has severe limitations because:

- Different STIs cause similar symptoms making clinical specific diagnosis impossible.
- Mixed infections are common and the clinician may diagnose and consider only one of them. If all infections are not treated, this may lead to the development of severe complications and the continued STI transmission.

- STI are often asymptomatic and will be missed if not considered systematically

For all these reasons explaining the important limitations of both the etiologic and clinical approach, a more global and systematic approach called syndromic approach is recommended.

14.3 SYNDROMIC APPROACH

The syndromic case management has many important advantages in treating patients adequately and in the control of STI epidemic as it is:

- Problem-oriented (it responds to the patient's symptoms)
- Highly sensitive and does not miss mixed infections
- Treats the patient at the first visit avoiding lost-to-follow-up and reducing transmission

In addition, the syndromic approach:

- Can be implemented at primary health care level making STI care more accessible
- Uses flow-charts that guide the health worker through logical steps
- Provides more opportunity and time for education and counselling.

15. Main Components of STI Service Delivery

15.1 EFFECTIVE MANAGEMENT OF STIs

In order to reduce the spread of STI infection, practical management strategies must take into account the many aspects of controlling STIs.

15.1.1 EARLY DIAGNOSIS

Early diagnosis and treatment helps to:

- Reduce STI transmission from currently infected people to others; and
- Reduce the chances of developing serious complications from the infection.

To achieve this, all patients with STIs need to be treated effectively during their FIRST visit to a health facility.

- Ideally, this means that STI services should be available at all health facilities.
- In order for STI diagnosis and treatment activities to be most effective, health facilities need adequate supplies of the necessary drugs.
- Known sexual partners should be treated for STIs even if they are symptom-free, so patients need to be encouraged (and assisted, if appropriate) to inform sexual partners.

15.1.2 EDUCATION OF PATIENT AND PARTNER(S)

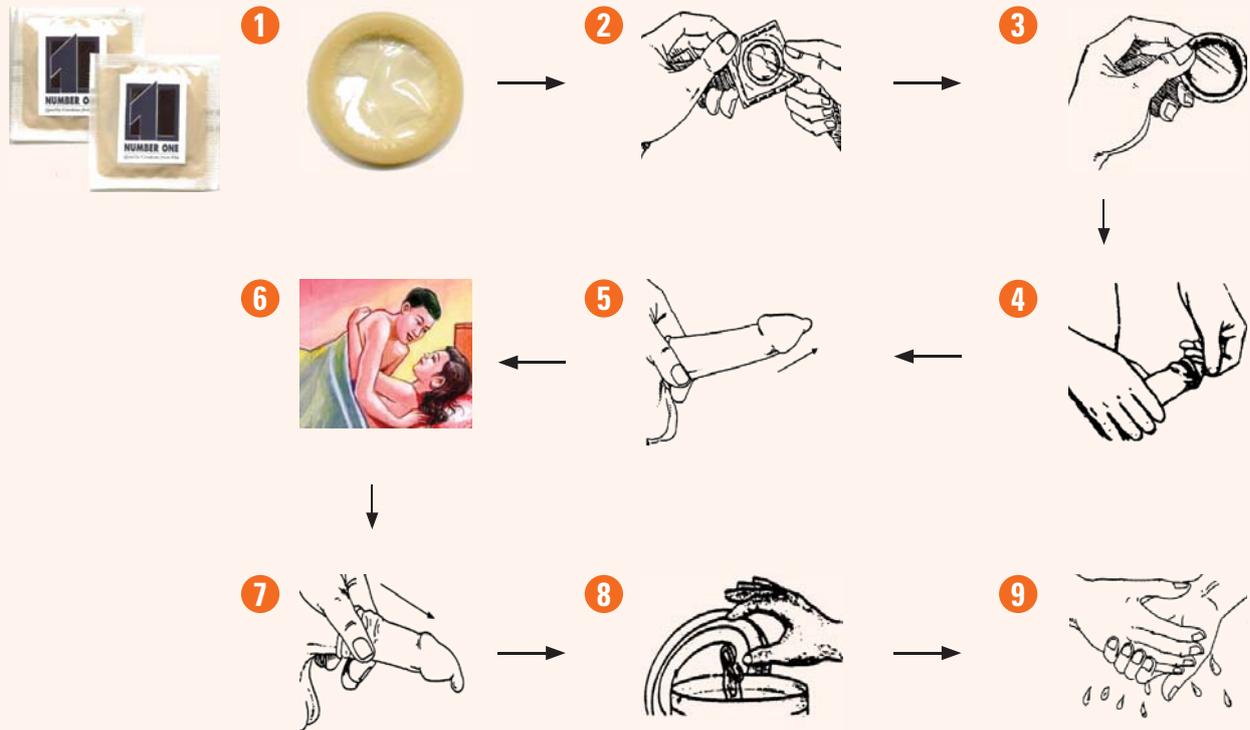
It is important to encourage people to adopt safer sex practices, and to help those who are at risk because of their partner's behavior.

The aims of education for STI patients are to:

- Identify risks and promote risk-behavior change
- Avoid infecting others; and
- Remain free of infection in the future.
- Promote condom use and family planning

15.1.3 PROMOTION OF CONDOM USE

If used correctly and consistently, condoms can help prevent the spread of STDs and HIV.



15.2 PARTNER TRACING AND TREATMENT

It is important to treat the sexual partners of STI patients to prevent the continued spread of infection, or reinfection.

However, identifying and treating partner(s) is difficult for many reasons, including:

- The patient feels uncomfortable to disclose or is unable to inform their sexual partner(s) about an STI infection and the need to be treated;
- Sexual partner(s) do not accept treatment or are unwilling to go to the health centre for treatment;
- The identification of sexual partner(s) is too difficult because of confidentiality and reluctance from the patients or because the patient cannot identify their sexual partner(s), for instance, if the patient is a sex worker.

MODULE 2

**CLINICAL & LABORATORY EXAMINATION SKILL
FOR STI/RTI CASE MANAGEMENT**

1. The Aims of History-Taking and Examination are to:

- Make an accurate and efficient STI/RTI diagnosis
- Define the patient's risk of transmitting or contracting STIs
- Find out about partners who may have been infected

2. The Needs of the Patient with STI

The patient may be concerned or embarrassed, so it is important that the service provider and the environment set him or her at ease.

An environment to ensure confidentiality and privacy:

Confidentiality and privacy are crucial especially for key populations (KPs): the visit should take place somewhere where others cannot see or hear

Provision of STI services: General Guiding principles⁴ (including gender-based violence, or GBV, and service provision to special groups)

- Patients need to feel that the service health care provider (HCP) understands, listens and respects them. To do this, HCP need to develop a relation with the patient and be non-judgmental. These are even more important when dealing with KPs.
- Above all, do no harm! Each and every healthcare professional is duty bound to not only avoid harm to the client but also to act in the best interests of the client.
- STI services must be offered without discrimination and with all respect. This is very important for survivors from GBV to feel at ease to share details of the abuse.
- Healthcare providers must maintain a professional attitude and not allow their personal beliefs or emotions to affect the manner in which services are offered to affect the doctor-patient relationship.
- Healthcare providers must be mindful of the barriers to accessing healthcare that marginalized groups face and must work to create a supportive atmosphere for them once they reach the health facility.
- Healthcare providers should reassure survivors from GBV that their information will be kept confidential.

Note: In case of rape or gender based violence (GBV), refer to the GBV guidelines of the Ministry of Health (supported by UNFPA).

⁴ Note: In case of rape or gender based violence (GBV), refer to the GBV guidelines of the Ministry of Health (supported by UNFPA).

3. History Taking: Effective Face-To-Face Communication

Due to the fact that so much of the information you need is personal and sensitive, the patient may feel embarrassed or ashamed because of the stigma associated with STI/RTI. Their sexual orientation and the behaviors that put them at risk are often barriers to clearly talk about their condition.

Many people are often nervous while attending an STI service, even more if they have genital symptoms - for example, an ulcer or unusual discharge. Thus, people might feel nervous, embarrassed, anxious, ashamed or even horrified. The strength of such feelings might depend on the patient's awareness of STDs or their beliefs about the cause of their symptoms, on their gender, age or social status, or even on whether or not they are familiar with the provider.

One common consequence is that people rarely present first the symptoms causing them the most concern. For example, a patient with a genital ulcer or discharge will often at first complain of a headache or sore throat. Discovering the real symptoms depends on the skills, attitude and encouragement of the provider.

The first step is to establish a good and comfortable relation with the patient. Once this is achieved, communication skills will allow the provider to obtain all the information they need.

Establish a good and comfortable relation with the patient:

To make patients feel more comfortable during the history taking and examination, HCP should be interested and sympathetic, not distracted or judgmental and:



WELCOME
YOUR PATIENT



ENCOURAGE YOUR
PATIENT TO TALK



LOOK AT YOUR
PATIENT



LISTEN TO YOUR
PATIENT

Communication skills:

Communication skills are particularly important for HCP who treat patients with STI/RTI to establishing a relation with the patient so that they feel comfortable talking about their problem and obtaining as much relevant information as possible. Communication skills can be verbal or non-verbal:

- **Verbal skills:** the way you talk to the patient and ask questions
- **Non-verbal skills:** the way you behave towards the patient

Verbal communication skills

During history taking, questions need to be asked not only about the patient's symptoms and medical history, but also about his/her sexual history. You need to gather this information in a short time, so how can you best do this?

- Greet the patient
- Avoid common problems in verbal communication
- Ask 'open' and 'closed' question effectively
- Prepare your response to patient emotions
- Consider special precautions when interacting with key populations (KPs), (See details in Clinical Examination Sections)

A. Greet the Patient

The first step is to greet the patient to make the patient welcome through:

- Being friendly
- Using a welcoming tone of voice, smile
- Introducing yourself
- Offering the patient a seat
- Making eye contact if culturally appropriate
- Encouraging the patient to talk by asking questions
- Nodding when patient talks or say "mmm" or "tell me more"
- Being respectful and understanding

B. Anticipate common problems in verbal communication

Several problems in verbal communication can occur making STI/RTI case management less effective.⁵ It is important to be aware of these problems to avoid them as much as possible:

- Always be polite
- Use word that the patient can understand easily (avoid technical medical terms)
- Make your questions clear
- Ask one question at a time
- Avoid leading question (question phrased in such a way that it suggests a “right” answer)
- Avoid moral judgments (makes patients less responsive and education for behavior change more difficult).
- Ask the patient’s permission to talk about sensitive topics (like STI/RTI medical history or sexual behavior) to build trust about you handling private information
- Knowing whether your client is a KP and if so, which sub-population specifically (e.g. EW, MSM, TG and People who inject Drug or PWID) is important to his/her treatment management; avoid direct questions asking them to classify themselves as belonging to a particular group. This information can be elicited with more indirect questions during the interview.

C. Asking Open and Closed Questions

Using ‘open’ and ‘closed’ questions effectively during the interview needs a number of extra verbal skills that will help you gather information effectively in a short time and deal with the patient’s emotions.

- **Open questions:** Open questions enable patients to explain something in their own words, and to say everything they think is important. This means that it is possible to gather much more information from one open question than from several closed ones. Also, because patients often have trouble talking about their own sexuality, open questions can help them to feel more in control and comfortable.

Examples: “what is troubling you?”, “what kind of medicines are you taking at the moment?”

- **Closed questions:** Closed questions ask the patient to answer a precise question in one word or short phrase, often with ‘yes’ or ‘no’ based on the service provider’s words. Closed questions are normally better kept for later in the interview when you have won patient’s confidence and are checking particular details.

Examples: “Is the swelling painful?”, “Is your period late?”

⁵ Drug use in this case is heroin

To illustrate the difference between open and closed questions, note in the examples below how much information the service provider collects in each one:

Example 1: An interview with closed questions

Patient: "I have a pain in my tummy."
Service provider: "I'm sorry to hear that. Where is the pain?"
Patient: "Here."
Service provider: "Is the pain constant?"
Patient: "No."
Service provider: "Does it feel tender?"
Patient: "Yes."
Service provider: "When did the pain begin?"
Patient: "Last week."

Example 2: An interview with open questions

Patient: "I have a pain in my tummy."
Service provider: "I'm sorry to hear that. Tell me about this pain."
Patient: "Well, it started a week ago. At first I just felt tender down here, but sometimes it begins to hurt a lot. It hurts when I sit down or stand up – it isn't like my monthly pain at all."
Service provider: "What else is troubling you?"
Patient: "Well, there is one other thing. There's a funny kind of water that I don't usually get. It doesn't hurt but it's embarrassing."

In the second example, the provider gathers more information by using open questions. Experts in interviewing STI/RTI patients also suggest that providers may need to ask "Anything else?" several times. This is because some patients are so embarrassed that they sometimes describe other unrelated symptoms, such as a headache, before they are comfortable enough to describe an STD-related symptom. Other patients are not sure which symptoms are related to STD and which are not. Giving them a chance to describe a range of complaints can frequently reveal useful information.

Figure of Gathering Information during History-Taking



How can you use the two types of questions? Patients often have trouble revealing information about their own sexuality, so open questions are helpful at the beginning to help patients feel more comfortable. Generally, you will gather much more information from an open question than from a closed one. There is also some danger of missing important information if you use closed questions early in the interview. Once you have used open questions to understand the patient's problem as he or she sees it, closed questions may be very helpful to draw out specific details that you need to know.

D. Other Verbal Communication Skills

Other additional verbal skills can be extremely useful when interviewing STIs patients. They can help you to deal supportively with the patient's emotions as well as to gather information effectively. They include:

- **Facilitating:** Encourage the patient to continue talking using words, sounds or gestures including nodding the head and raising the eyebrows as the patient is talking.
- **Directing:** Helps patients to sort out ideas, to give information in a sequence and share their concerns and worries more easily. This is especially useful when the patient is confused, doesn't know where to begin, is talking quickly or mixing up issues.
- **Summarizing:** Allows you to confirm what the patient has mentioned by paraphrasing the patient and ask if your summary is correct.
- **Showing empathy:** Perhaps the most important skill when dealing with patient's feelings, showing you understand him using words, comments, sounds or gestures. If you notice that a patient is tense or anxious, for example, you can express your empathy by commenting on what you have noticed. By showing empathy, you allow the patient to express his or her fears, and establish more open communication between the two of you. Like facilitation, it also encourages the patient to continue speaking.
- **Reassurance:** is a useful way to show that you accept the patient's feelings and that the problem need not last forever. You indicate with words, sounds or gestures that the patient's anxiety can be addressed.
- **Expressing partnership:** confirms a commitment to help the patient with the provider or with the team of people in the health centre.

Most experienced providers use one or more of these interviewing skills some of the time.

Non-Verbal communication skills

Non-verbal skills tell you how to behave with the patient and the physical surroundings to be supportive and help the patient relax at the start of the interview. They include providing privacy, listening carefully and adapting your posture:

A. Provide privacy and confidentiality

The key to effective non-verbal communication is to treat patients with respect by offering privacy and confidentiality. Usually this means you make arrangements to use a quiet place for the interview, somewhere where you won't be disturbed. If the interview is not possible inside an office, it can be helpful to use barriers such as unattached walls, screens or curtains.

B. Listen carefully to the patient

Patients are more responsive when providers show that they are listening. In many cultures including our culture, you can show your interest in what the patient is saying by leaning forward slightly towards him or her; you can also nod your head or comment occasionally to encourage them. Don't move about, write or interrupt while the patient is talking.

C. Posture

It can be very helpful to match the patient's posture - sit if the patient is sitting and stand when the patient stands. You should think about how near you can be to a patient while still respecting his/her privacy. Physical proximity between people varies from culture to culture. You should position yourself as close to the patient as is culturally acceptable. It is better for the health care provider to be next to a table or desk rather than behind one.

These points are simple and yet they can make the difference between gaining or losing a patient's trust and confidence.

Gathering STI/RTI Information

Different kinds of information need to be gathered during STI visits and will depend upon your ability to effectively collect complete patient history and make accurate STI diagnoses. Such information helps identify behavioral risks of transmitting or contracting STIs and is the starting point for partner referral and treatment.

The Information needed concerns

- General details about the patient (demographics)
- Description of present illness
- Family Planning
- Medical history
- Sexual history including risk assessment
- Hygiene practices

Below is a guide to remember the types of questions to ask aligned with the syndromic flow-charts described in Chapter 4 and could be adjusted to include other information if needed.



GUIDE FOR HISTORY-TAKING

A. General details:

- Age, address, employment, level of education...

B. Present illness:

- Presenting complaints and symptoms described by the client that may indicate the presence of an STI and their duration, including:



In female patients:

- Vaginal discharge, Lower abdominal pain, Painful intercourse, Lesion, Dysuria, Fever, Skin rash, Aenopathy, Itching, Other specify...
- No symptoms



In male patients:

- Urethral discharge, Genital ulcer, Genital warts, Scrotal pain/swelling, Dysuria, Fever, Skin rash, Adenopathy, Anal discharge, Other specify...
- No symptoms

C. Family Planning history for all women

- Family planning should be discussed with all STI/RTI clients including:
 - Using contraceptives such as injection, pill, condom, implant, IUD
 - Number of pregnancy, number of living children
 - Number of abortions, induced or spontaneous
 - Last menstruation period

D. Medical history

- **Previous STI:** Type, dates, test result, treatment response...
- Other known illness (HIV, TB, diabetes...) and current medications, drug allergies.

E. Sexual history

- Exploring risk behaviors to find out about factors that may affect the client's sexual health, including:



For men:

- How many sexual partners in the last year
- Condom use at the last sex
- Casual partner in the past three months
- STIs in the past
- Drugs used and route of administration

More questions if the client is MSM or TG:

- Do you have sex with men, women or both?
- Do you commonly have anal or oral sex?



For women:

- Does the patient know how to use a condom?
- How many regular clients/boyfriends in last 3 months?
- The type of sexual behavior commonly practiced with clients and or boyfriend (eg. vaginal, oral or anal sex?)
- Whether the patient used a condom, last time had sex with regular partner, client or boyfriend
- Ask about the type of addictive drug used by the patient (if any)

F. Hygiene practices

- **Douching:** How often and what is used? (MSM often practice anal douching before sex.)
- **Other genital cleansing:** Internally, Perfumes, Soaps
- Opportunity to educate and advise against douching

4. Clinical Examination

The purpose of a clinical examination is to confirm STI symptoms described by the patient by checking for signs of STI. This section explains what to do when examining male and female patients; and special precautions when examining EW, MSM and TG.

Examining the most private parts of a person's body requires tact, sensitivity and respect on the part of the service provider. Patients may be embarrassed or uncomfortable. In this section, we summarize the steps for conducting a clinical examination in an efficient and professional manner. We suggest some ways to help the patient understand the importance of the examination and overcome his or her embarrassment.

This section will help you to:

- Behave professionally with the patient before and during the examination
- Reassure the patient who is reluctant to be examined and gain his/her confidence and co-operation
- Conduct an efficient examination of both male and female patients
- Gain confidence when examining KPs especially EW, MSM and TG

A. Professional behavior during a Clinical Examination

- Ensure privacy at all times
- Explain what you are going to do, and why it is important
- Approach the examination in a confident way, never showing uncertainty or embarrassment
- Never be rough or conduct an examination against someone's will
- Use all the communication skills you have
- Be aware of behavior and attitude of Key Population, interact with non-judgmental, non-discrimination and be friendly.

Patients may be shy and even reluctant to have their genitals examined, especially true for women. Professional providers should assure some degree of privacy during the examination, explain what will happen during the examination and why it is important and give the impression to be confident and capable yet still sensitive to the patient's needs and worries. Ideally, patients could also choose to be examined by a provider of the same gender. Some providers may be embarrassed or worried about the examination themselves, particularly when they are first learning this procedure. It is important to avoid showing patients any feelings of uncertainty or embarrassment because this can also interfere with obtaining information.

Unfortunately, sometimes providers are rough during an examination because they feel rushed to finish. This is counter-productive because it interferes with building a good relationship with the patient, which is important for STD case management. Even though an examination is important in order to arrive at a diagnosis, we must never force someone to be examined. In-depth knowledge and understanding of risk behaviors may help when communicating with KPs (See details in the Clinical Examination Sections for specific KP).

B. Good Examination Practice

Essential Elements	Hint
1- Allay the patient's fears	Explain what will be done and encourage disclosure of any discomfort
2- Privacy	Provide a curtain across the window or around the examination bed and close the door
3- Examination bed	Position the patient appropriate for a complete inspection of the ano-genital area
4- Good lighting	Small lesions are best seen with a patient examination light
5- Infection control	Wash hands with soap and water before and after examination; wear gloves
6- Health care provider	Health care provider to assist with preparation for the exam and as an assurance to the patient that the exam is standard medical practice is a good idea
7- Good preparation	Have equipment (e.g. slides, swabs and spatula and anosscopes) nearby
8- Communication	Ask whether the patient is uncomfortable; provide assurance; explain when the discomfort will end and be relieved
9- General examination	Examine the skin, mouth, lymph nodes, chest, cardiovascular system, abdomen
10- Speculum examination	Patient descriptions of signs can be unreliable; perform speculum where indicated; most important part of the exam is the visual inspection of the cervical & vaginal area
11- Anogenital examination	Patient descriptions of signs can be unreliable; perform anoscopy where indicated; most important part of the exam is the visual inspection of the anogenital region

C. Examination Regions

Region	Exposure Needed	Body Position
Hands/ arms Head & neck Mouth	Clothes loosened	Sitting
Abdomen	Clothes loosened, abdomen exposed	Supine
Genitals Anus/ rectum	Gown with undergarment off, abdomen to knees exposed.	Dorsal lithotomy (stirrups)

D. Examining Patients

Patients should be examined in the same conditions of privacy as during history-taking and feel comfortable that no one will walk into the room while they are undressing or lying on the examination table. When examining patients of the opposite sex, it is usually advisable to have present an assistant of the same sex as the patient. All examinations should begin with a general assessment, including vital signs and inspection of the skin, to detect signs of systemic disease. It is beyond the scope of these guidelines to cover all aspects of the physical examination.

Before you start:

- Ensure that the examination will be conducted in privacy
- Ask the woman to pass urine prior to the exam
- Wash your hands well with clean water and soap
- Ask the patient to loosen her clothing. Use a sheet or clothing to cover her/him
- Have her lie on her back, with her heels close to her bottom and her knees up
- Explain to the patient each step of the exam and what to expect
- Touch a “non genital” area of the body first
- Make eye contact. Watch for sign of discomfort (facial expressions, not relaxed, guarding)
- Avoid lengthy discussions when patient is in the exam position
- Move exam light off genital areas as soon as possible
- Exam painful areas last

General inspection and skin exam:

- Inspect face, scalp, trunk, and legs
- Inspect exposed skin, hands, palms, and forearms
- Inspect soles of feet
- Look for lesions, rashes, discoloration

Oral exam:

- Inspect mouth, including lips, tongue, tonsils, hard and soft palate, and gum lines
- Note presence of oral infections, e.g., thrush, hairy leukoplakia, lesions, mucous patches, discoloration, oral HSV, etc.
- Obtain specimen for gonorrhoea testing if indicated by history of oral sex
- Swab tonsillar areas and posterior pharynx

Palpate axillary, cervical, epitrochlear, and sublingual lymph nodes

Kidney exam if indicated

Abdominal exam if indicated

4.1 PHYSICAL EXAMINATION FOR MEN

Given special precautions are needed for other two sub-groups, MSM and TG, this section also provides additional considerations for these two sub-groups.

Based on UNAIDS list of acronym, MSM is an abbreviation used for 'men who have sex with men' or 'males who have sex with males'. The term 'men who have sex with men' describes males who have sex with males, regardless of whether or not they have sex with women or have a personal or social gay or bisexual identity. This concept is useful because it also includes men who self-identify as heterosexual but have sex with other men. However, abbreviations should be avoided whenever possible. Writing out the term is preferred.

The same document defines a transgender person as a gender identity that is different from his or her sex at birth. Transgender people may be male to female, or called transgender women (female appearance) or female to male (male appearance), transgender men. It is preferable to describe them as 'he' or 'she' according to their preferred gender identity, i.e. the gender that they are presenting, not their sex at birth. In Cambodia, transgender women are at high risk of HIV and STIs and are an important target groups for HIV/AIDS prevention, testing, and treatment services.

4.1.1 KEY PRINCIPLES

The description in section below (GENITAL EXAM) provides highlights in general for the practitioners to follow when examining men in general. However, it is important to understand specific precautions when examining other sub-populations belonging to this group which include men who have sex with men (MSM) and transgender person (TG). This is suggested because these sub-populations are stigmatized and do not feel comfortable to seek services they need.

Key principles for examining MSM include:

- It is never appropriate to deny treatment to any person because of their sexual orientation.
- Because same-sex behavior is stigmatized in Cambodia, MSM may not trust healthcare providers enough to share their personal history with them. To overcome this, healthcare providers should not be judgmental regarding a person's sexual orientation. This includes refraining from any verbal expressions of shock, disgust or disagreement.
- Services should be provided in a sensitive manner and survivors should never be pressured to talk, but allowed to let their story unfold at their own pace.
- Confidentiality regarding a client's sexual orientation should be strictly maintained. One should not discuss or mention it to the other staff members unless needed for treatment reasons.
- Old injuries, or the fact that a person regularly has anal sex, should be recorded in the medical history only when relevant to current medical issues.
- A MSM can be a victim/survivor of gender-based violence, also called rape. He is there to receive necessary sexual assault services which are his/her rights and should not be subjected to advice, prayers or 'cures' for his or her sexual orientation.
- It is quite possible that a client's sexual orientation played a key role in their sexual assault. You should record the survivor's account of the assault as part of the history-taking, including any perceived reasons for the assault. If the survivor is hiding his sexual orientation from family and friends, this may be the only time that the survivor can safely discuss the role their sexual orientation might have played in their assault.
- As with transgender and intersex individuals, bisexual and gay victims are also at high risk for encountering prejudice and ridicule as a result of reporting sexual assault.
- Referring bisexual or gay individuals to external agencies for services, ensure that those services are actually welcoming to all sexual orientations.

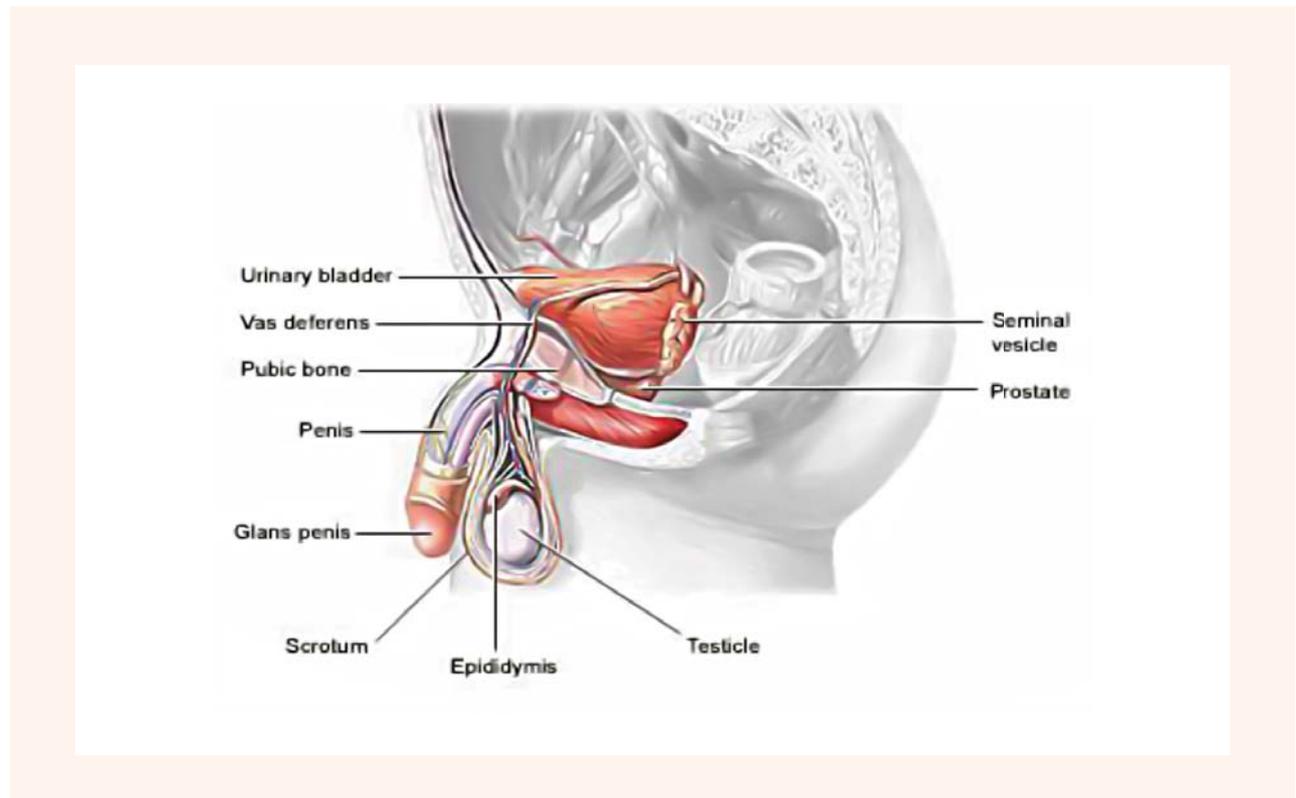
Key principles for examining TG include:

Transgender and intersex people (TG/IS) face multiple layers of discrimination, stigma, abuse and violence. They are unlikely to seek police assistance and may face further discrimination and prosecution if they do. Because of this, it is essential that sexual violence faced by TG/IS people is recognized as such by health professionals who may provide assistance to a survivor of sexual violence. It is important to stress that TG and IS persons will not experience further abuse in the health facilities. Health professionals need to (1) be aware of the variations in biology and gender identity and (2) not regard or treat transgender or intersex individuals as medically or psychologically abnormal or unhealthy. Key principles include:

- Because of stigma and discrimination, transgender victims may be reluctant to report the crime or consent to the exam for fear of being exposed to inappropriate questions or abuse. If the victim does consent to an exam, be especially careful to explain what you want to do and why before each step, and respect their right to decline any part of the exam.
- Intake forms and other documents that ask about gender or sex should have options such as 'male/female/others.'
- Healthcare providers should respect a survivor's stated gender identity and use the appropriate names and term for that stated identity, remembering that gender identity may not match anatomy, including genitals.

- Where possible, allow transgender individuals to request to be served by a healthcare provider of whichever sex they are most comfortable with.
- Transgender individuals may be at varying stages of gender transition where they try to more closely align their internal sense of their gender with their outward appearance. Some might dress, use names and term of another gender. Others undergo physical transitions in which they modify their bodies through medical interventions. Similarly, intersex individuals may exhibit variations including non-typical genital appearance. The inadvertent discovery during examination or history taking that a person is transgender or intersex must not be treated with ridicule, hostility, surprise, shock or dismay. Since many transgender people have previously experienced abuse, discrimination or poor treatment in healthcare settings, their willingness to seek medical care post assault may already be low. If they encounter any negative (or even perceived negative) response, they may leave and not receive needed medical care.
- Transgender individuals may have increased shame toward their body. Many experience gender dysphoria, clinically significant distress caused when a person's biological sex is not the same as the one with which they identify. This may include hatred of the parts of their body that don't 'fit' their identity. Reflect the victim's language when possible, and if you use medical language with transgender victims, make sure to inform them of why you are making this choice and that you are not disrespecting their preferred language.
- Genital anatomical variations of transgender and intersex people must be included in the examination pro-forma. However, it is important to let a transgender patient know that you are not disrespecting their gender by using a particular form but because you want to best record their injuries and the assault.
- All information regarding intersex variations or transgender status of the survivor is confidential and not to be revealed without the survivor's consent.
- For many transgender or intersex survivors, their gender identity likely plays a key role in their sexual assault. You should record the survivor's account of the assault as part of the history-taking, including any perceived reasons for the assault. Providing a safe space to discuss this will assist the survivor in their recovery.
- It is important to be aware of the possible health consequences of sexual violence. For instance, transgender male individuals who still have ovaries and a uterus can become pregnant even when they are using testosterone and/or have not been menstruating. Similarly, intersex women with non-typical genital appearance may still be at risk of pregnancy. Health professionals must be aware of these variations and must anticipate health consequences accordingly.
- Before referring transgender or intersex individuals to external agencies for services, ensure that those services are actually welcoming to transgender and intersex people. If not, they may be further victimized when they seek services.

4.1.2 GENITAL EXAMINATION



- Instruct patient to stand and lower pants/underpants to knees to expose genitalia and inguinal area
- Palpate inguinal lymph nodes (presence, fluctuance, swelling and tenderness)
- Inspect pubic hair/skin for scabies, lice, nits and lesions
- Palpate scrotal contents by gently compressing each testis and epididymis and spermatic cord between your thumb and first two fingers:
 - a. Note tenderness, shape, masses, hernias, swelling, nodules
 - b. Identify spermatic cord with its vas deferens and epididymis; note tenderness, swelling, or mass.

Normal testicular findings:

- Normal variation-one testicle may be larger than the other and left testicle may lie lower than right.
- Normally oval shaped
- Firm, smooth, and rubbery

Abnormal testicular finding

- Identify lumps or bumps on testicle.

Epididymis (next to testicle)

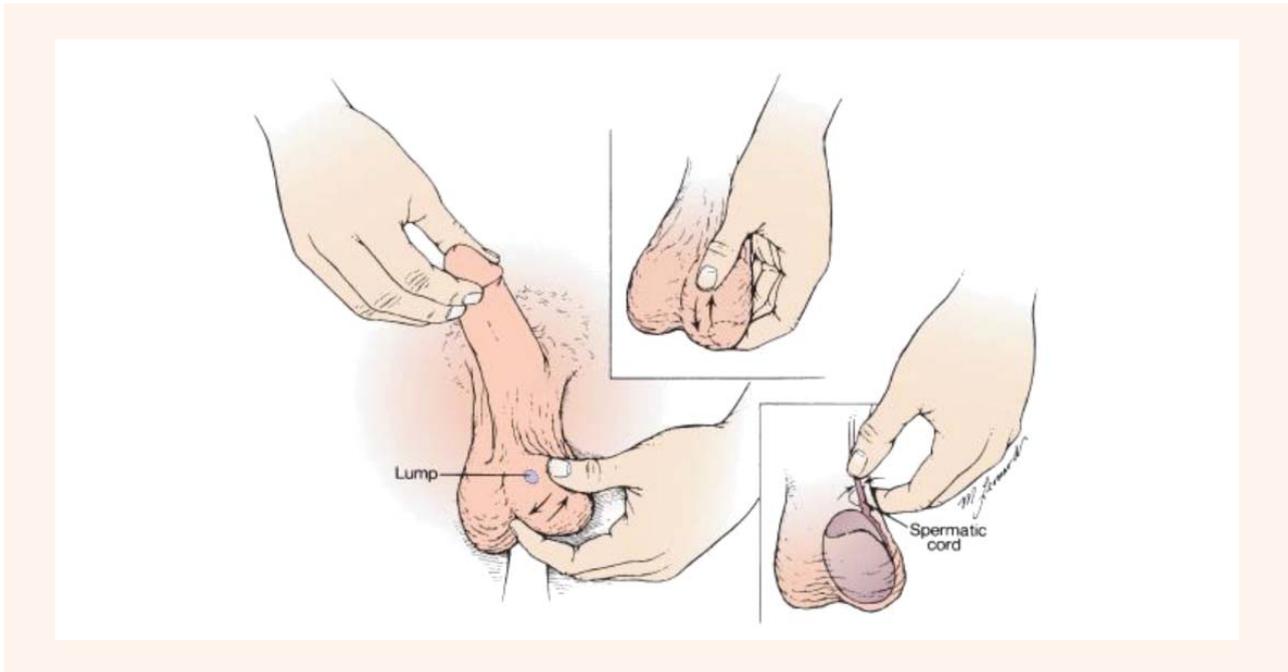
- Soft and mobile.
- May be mildly tender.

Vas deferens (spermatic cord)

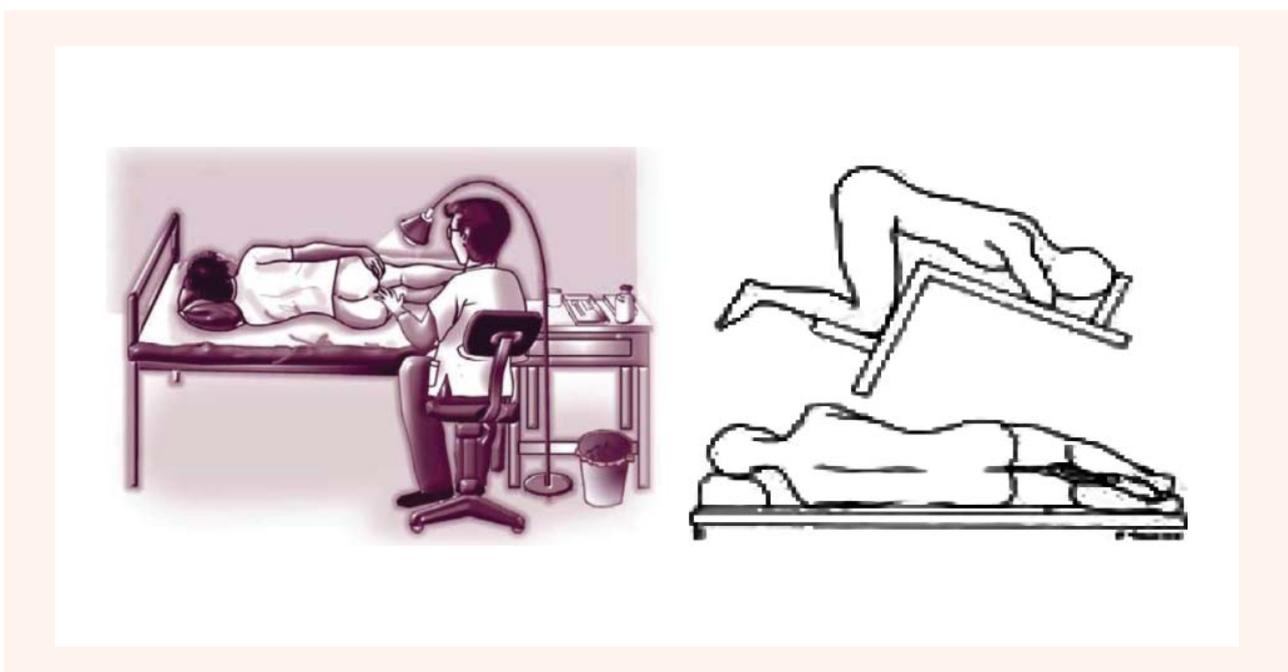
- Contiguous with epididymis.
- Should be smooth and mobile.

Examine penis:

- Inspect skin.
- Retract or ask patient to retract the foreskin, if present.
- Inspect glans for ulcers, raised lesions, or signs of inflammation.
- Compress glans gently between your thumb and index finger to open the urethral meatus.
- If no discharge is visible, strip or milk the shaft of the penis from the base to the glans.
- Inspect meatus for stenosis, lesions, urethral position.



Examine anus and perineum



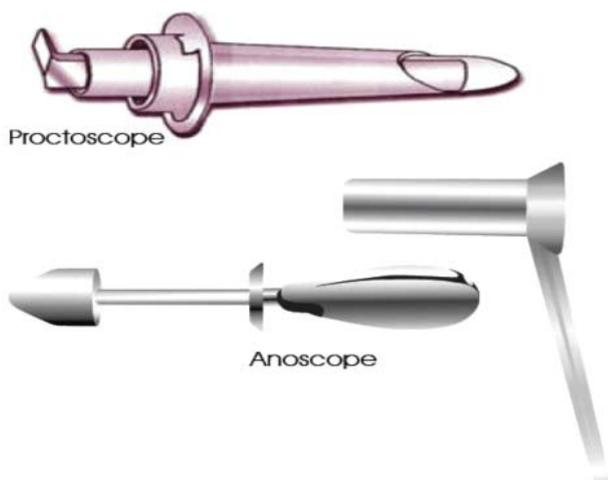
Digital rectal exam

- Ask the client to turn onto the left side (left lateral position) to bend both knees and flex the hips to 45°.
- Ask the client to place their right hand on their right buttock and to draw it upwards. This gives full exposure of the peri-anal area and allows you to have both hands free for inspection and examination. (You may wish to kneel down or sit on a chair to save you from bending your back.)
- Inspect the buttocks, perineum and peri-anal area. Note any lumps, ulcers, rashes, scars or discharge.
- Perform proctoscopy where appropriate (see following page).
- Wash hands with soap and water.
- Ask the client to get dressed.



Proctoscope/anoscope Examination

- Conduct proctoscopy or anoscope (male or female) if a client has any anorectal signs or symptoms or has had recent unprotected receptive anal intercourse
- Ask the client to lie in the left lateral position. Smear lubricating jelly onto the anal verge and the length of the proctoscope/anoscope.
- Rest the proctoscope/anoscope at the anal verge until the sphincter relaxes, then insert slowly while applying gentle constant pressure. Allow the proctoscope to follow line of least resistance rather than pushing. Generally, aim towards the navel.
- Elevation and relaxation of the buttocks aids insertion, as does asking the client to "bear down" as if opening the bowels.
- Remove the introducer once the proctoscope/anoscope has reached its limit.
- Observe, using the examination light: color and texture of rectal mucosa; presence of discharge; presence of ulceration; bleeding; lesions.
- Slowly remove the proctoscope/anoscope, checking for hemorrhoids and/or other lesions on withdrawal.
- Perform, if indicated, with gloved right index finger, examination of prostate and lower rectum.
- Remove and dispose of gloves, then wash hands with soap and water.



Rectal gonorrhea

Table 6: Signs to look for when examining men

Signs	Management
Urethral discharge	Urethral discharge
Ulcers, sores or blisters	Genital ulcer
Swelling or lumps in the groin (inguinal lymphadenopathy) and swelling of testicles.	Inguinal bubo,

4.2 PHYSICAL EXAMINATION FOR WOMEN

Given the fact that female entertainment workers (EWs), known in other countries as sex workers, constitute the main target population (in terms of STI and HIV/AIDS services) amongst Cambodian women, this section also provides additional considerations for this population.

Based on UNAIDS list of acronym, the term 'sex worker' is intended to be non-judgemental and focuses on the working conditions under which sexual services are sold. Sex workers include consenting female, male, and transgender individuals and young people over the age of 18 who receive money or goods in exchange for sexual services, either regularly or occasionally. Acceptable alternative formulations for the term 'sex worker' are 'women/men/people who sell sex'. Clients of sex workers may be called 'men/ women/people who buy sex'.

4.2.1 KEY PRINCIPLES

The description in sections below provides highlights in general for the practitioners to follow when examining women in general. However, it is important to understand specific precautions when examining at risk key populations, which include EWs. This is because EWs, both those who work in entertainment establishments and those who work on the street are stigmatized and do not feel comfortable to get out and seek services they need. They should be well received at the healthcare system when they come for treatment.

Key principles for examining EWs include:

- An entertainment worker has a right to receive healthcare services and should never be denied treatment.
- Just because a person is an EW, do not make assumptions about the person's health. Assumptions like “EWs are all HIV positive or all have STIs” lead to further stigma and discrimination if the broader community believes that EWs spread disease.
- EWs workers may face discrimination, negligence, mistreatment, and ridicule. Therefore, they may not trust healthcare workers, and so they may not provide them with details of their personal history. Healthcare providers should not be judgmental regarding a person's engagement in sex work. This includes refraining from any verbal expressions of shock, disgust, or disagreement. As with all clients, healthcare providers’ language and tone should be respectful and professional at all times.
- Never say or do anything to blame the EW who is a victim/survivor from her physical or sexual assault. All kinds of people and not just EWs experience gender-based violence. It is never their fault. Survivors who are EWs are here to receive necessary sexual assault services which are her/his right.
- Healthcare providers should continuously reassure survivors that their information will not be shared with the police or local authority unless they want to file charges against the perpetrator.
- Only information of the current episode of violence that the survivor is reporting must be documented. Any information of past sexual encounters is irrelevant to the current incident of sexual violence. Entertainment worker survivors should not be questioned on their sexual history and such information should not be noted.
- EWs who experience sexual assault including rape should receive relevant medical services including emergency contraception and PEP for HIV prevention.
- It is quite possible that a client of an EW may have played a role in the sexual assault. You should record the survivor's account of the assault as part of the history-taking without questioning or pressuring her to talk about her/his sex work if she does not want to. The survivor may be hiding his/her sex work from family and friends. This may be the only time that the survivor can safely discuss the role their work that might have played in their vulnerability to assault. The survivor should be assured that it was not their fault that they were sexually assaulted.
- All EWs are at high risk for encountering prejudice and ridicule as a result of reporting sexual assault.
- Before referring EWs to external agencies for services, ensure that those services are actually welcoming to all EWs.

There are three components to the female genital examination, depending on available equipment and supplies:

1. External genital examination
2. Speculum examination
3. Bimanual examination

A. External genital examination

- Palpate inguinal lymph nodes for presence, fluctuance, swelling or tenderness
- Inspect pubic hair/skin for crabs, nits, lesions, scabies
- Inspect external genitalia for discharge, erythema, masses, lesions and tenderness
- Include labia majora and minora, clitoris, urethral orifice, introitus and perineum
- Inspect and palpate Bartholin's glands by applying gentle pressure bilaterally between thumb and forefinger along labia minora and introitus
- Milk urethra (insert finger into vagina and gently compress urethra up against symphysis pubis) and observe for discharge from Skene's (paraurethral) glands
- Collect specimens (Gram stain of discharge, HSV culture, darkfield or DFATP from lesion) as indicated. Be sure to change gloves between potentially infected sites to avoid cross contamination
- Inspect the anus and perianal areas: note inflammation, lesions, rashes or excoriation
- Prior to contamination with lubricant, obtain gonorrhea and/or Chlamydia rectal cultures (if indicated by ano-receptive sex) by inserting cotton swab into the anus about 2 cm. Be sure to change gloves between potentially infected sites to avoid cross contamination.

Table 7: Signs to look for when doing external examination of women

Signs	Management
Discharge and redness of the vulva are common signs of vaginitis. When the discharge is white and curd-like, yeast infection is likely.	Vaginal discharge
Ulcers, sores or blisters.	Genital ulcer
Swelling or lumps in the groin (inguinal lymphadenopathy).	Inguinal bubo



Urethritis

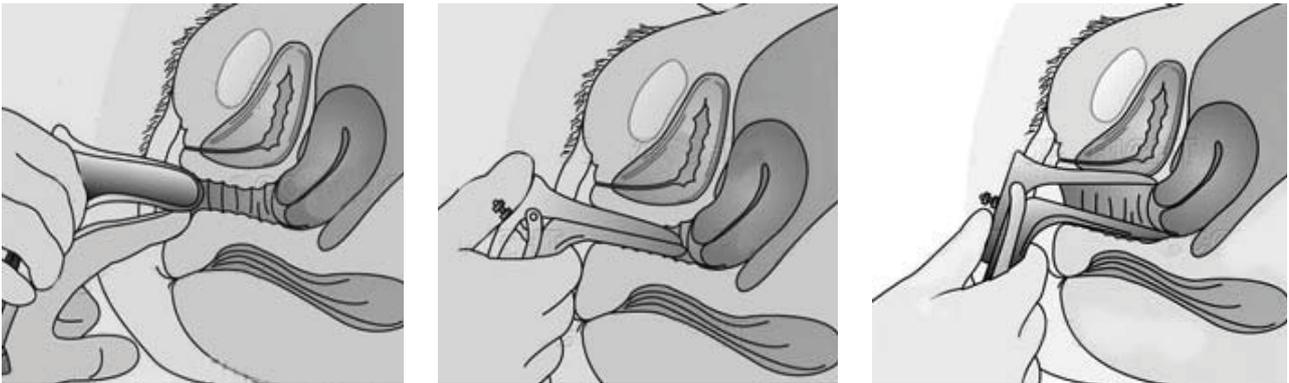


Gonococcal pus in the Bartholin's duct

B. Speculum examination



Speculum insertion:



There are three components to the female genital examination, depending on available equipment and supplies:

1. Insert index finger into vagina to identify firm, rounded surface of the cervix. (Not always done or necessary.)
2. Select appropriate size and shape of speculum (Pederson: narrow blades; usually better for virgins and elderly women. Graves: preferable for sexually active women). Selection is based on provider preference and experience. Plastic disposable specula are available in different sizes. Lubricate with warm water if necessary. Never use lubricant jelly, as it will interfere with diagnostic specimens
3. Place two fingers at introitus and press down on perineal body. With other hand, introduce closed speculum past your fingers at oblique angle.
4. When speculum has entered the vagina, remove fingers from introitus. Rotate the blades into horizontal position. Maintain pressure posteriorly and insert speculum to its full length.

Inspect the cervix:

- Open blades and maneuver the speculum, if necessary, so that cervix comes into full view.
- Secure the speculum with the blades open.
- Inspect cervix and os. Note color, position, characteristics of its surface, (ulcerations, nodules, polyps, nabothian cysts), masses, bleeding or discharge, ectopy, friability, strawberry cervix.



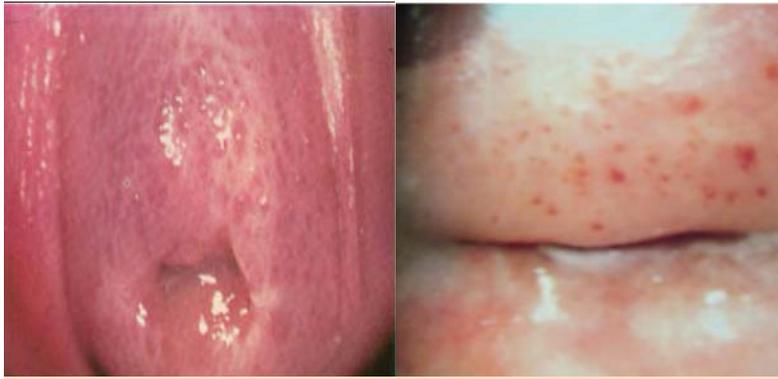
Normal Cervix



Normal Cervix with ectopy



Cervical Discharge and ectopy



“strawberry-like” appearance of the cervix due to *T. vaginalis* infection



Cervical erosions due to *Chlamydia trachomatis*

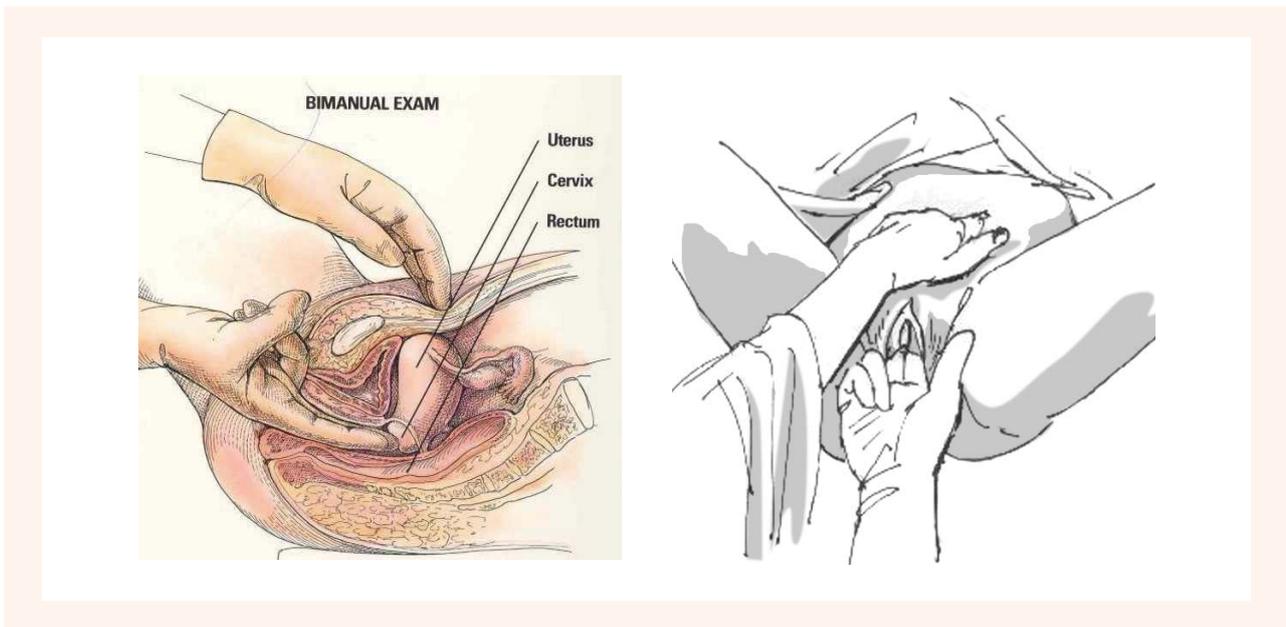
Inspect vagina:

- Note vaginal secretions (amount, color, odor).
- Withdraw the speculum slowly while observing the vagina. As speculum clears the cervix, release the thumb screw and maintain open position of speculum with thumb.
- Maintain blades in open position to observe vaginal mucosa. Note inflammation, ulcers, or masses as speculum is withdrawn.
- Close the blades as speculum emerges from the introitus to avoid stretching or pinching mucosa.

Table 8: Signs to look for when doing speculum examination

Signs	Management
vaginal discharge and redness of the vaginal walls are common signs of vaginitis. When the discharge is white and curd-like, yeast infection is likely.	Vaginal discharge (for pregnant women flowchart 9)
Ulcers, sores or blisters.	Genital ulcer
If the cervix bleeds easily when touched or the discharge appears mucopurulent with discoloration, cervical infection is likely.	Treatment table 2
If you are examining the woman after birth, induced abortion or miscarriage, look for bleeding from the vagina or tissue fragments and check whether the cervix is normal.	Complication of abortion
Tumors or other abnormal-looking tissue on the cervix.	Refer for Pap smear or cytology.

B. Bimanual examination



- Test for cervical motion tenderness. Put the pointing 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 muscles relax, put the middle finger in too. Turn the palm of your hand up.
- Feel the opening of her womb (cervix) to see if it is firm and round. Then put one finger on either side of the cervix and move the cervix gently while watching the woman's facial expression. It should move easily without causing pain. If it does cause pain (you may see her grimace), this sign is called cervical motion tenderness, and she may have an infection of the womb, tubes or ovaries. If her cervix feels soft, she may be pregnant.
- Feel the womb by gently pushing on her lower abdomen with your outside hand. This moves the inside parts (womb, tubes and ovaries) closer to your inside hand. The womb may be tipped forward or backward. If you do not feel it in front of the cervix, gently lift the cervix and feel around it for the body of the womb. If you feel it under the cervix, it is pointed back.
- When you find the womb, feel for its size and shape. Do this by moving your inside fingers to the sides of the cervix, and then "walk" your outside fingers around the womb. It should feel firm, smooth and smaller than a lemon.
- If the womb feels soft and large, she is probably pregnant.
- If it feels lumpy and hard, she may have a fibroid or other growth.
- If it hurts when you touch it, she may have an infection inside.
- If it does not move freely, she could have scars from an old infection.
- Feel the tubes and ovaries. If these are normal, they will be hard to feel. 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 and needs medical help right away.
- Move your finger and feel along the inside of the vagina. Make sure there are no unusual lumps, tears or sores.

- Have the woman cough or push down as if she were passing stool. Watch to see if something bulges out of the vagina. If it does, she could have a fallen womb or fallen bladder (prolapse).
- When you are finished, clean and disinfect your glove if it will be reused. Wash your hands well with soap and water.

Table 9: Signs to look for when doing bimanual examination

Signs	Management
Lower abdominal tenderness when pressing down over the uterus with the outside hand.	Use the lower abdominal pain flowchart if any tenderness is detected on abdominal or bimanual examination.
Cervical motion tenderness (often evident from facial expression) when the cervix is moved from side to side with the fingers of the gloved hand in the vagina.	
Uterine or adnexal tenderness when pressing the outside and inside hands together over the uterus (centre) and adnexae (each side of uterus).	
Any abnormal growth or hardness to the touch.	Refer for Pap smear or cytology.

C. Recto-Vaginal examination

- Not a routine part of the STD exam, but can be done, if desired, to palpate a retroverted uterus.
- Change to clean glove and place index finger into vagina and middle finger into rectum.
- Use the abdominal hand to perform a bimanual assessment. Masses and mid or posterior uterus may be better appreciated with this technique.
- Anoscopic exam should be considered for patients with anorectal symptoms and a recent history of engaging in anal sex to visualize lesions and obtain specimens for Gram stain and gonococcal cultures.
- Rectal specimens should be collected prior to contamination with lubricant.

Table 10: Symptoms and signs of RTIs in women

Syndrome	Symptoms	Signs
Vaginitis	Vaginal discharge that is abnormal in colour, odour, amount or consistency. Itching or irritation of the vulva or vagina	Vulvovaginal redness Vaginal discharge seen on external or speculum examination.
Cervicitis	Usually none. Sometimes burning on urination or spotting of blood after intercourse	Mucopurulent cervical discharge Cervical bleeding to touch
Lower abdominal pain	Lower abdominal pain Pain on intercourse	Lower abdominal tenderness on abdominal examination Cervical motion tenderness on bimanual examination Uterine or adnexal tenderness on bimanual examination
Genital ulcer Inguinal bubo	Genital ulcers, sores or blisters in the groin area	Swelling, lumps or ulcers

5. Specimen Collection and Laboratory Tests

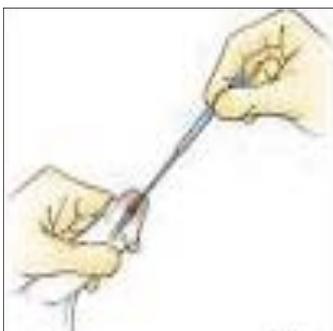
5.1 FOR MEN

Male urethral sampling

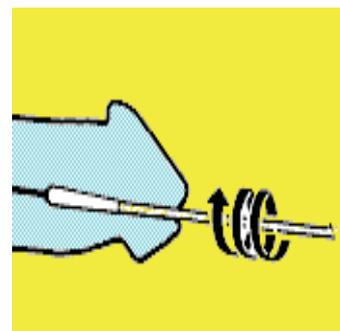
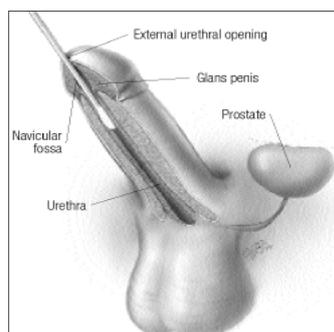
- Patient should not urinate for 2 hours prior to specimen collection.
- Method:
 1. Massage the urethra from proximal to distal to present any discharge
 2. Using a cotton swab, discharge present at the meatus is smeared on a slide and air dried and then placed on an appropriate transport medium
 3. In the absence of a discharge a thin dacron tipped plastic or metal swab is moistened with normal saline and placed 2 to 3 cm inside the urethra and gently rotated once or twice and removed
 4. If no slide is made the lab with prepare one from the swab placed in the transport medium
 5. An air dried smear made at the time of specimen collection is of superior quality.

First catch urine

- Method:
 1. Should not pass urine for at least 2 hours before the sample collection
 2. First 10 ml of urine is collected
 3. Voiding within 30 minutes prior to sample collection should be considered in interpreting results
 4. A few drops of the sample can be directly examined for trichomonas and
 5. the rest centrifuged and a smear from pellet Gram stained for n. gonorrhoea and white cells
 6. Tests for chlamydia trachomatis NAAT, n. gonorrhoea NAAT, mycoplasma genitalium NAAT and trichomonas vaginalis NAAT as indicated.



Insert swab into urethra 2cm



Hold for 10-30 second

Rectal smear

- Use an anoscope to collect the specimen and sample areas containing pus.
- Asymptomatic patients: pass moistened swab 1-2cm through anal sphincter, angle towards rectal wall, and slowly withdraw.
- Symptomatic patient: perform anoscopy to inspect anal canal and collect specimen.

5.2 FOR WOMEN

Before collecting specimens, the physician writes down the code number on two slides. The code number is as same as the previous ones that have been used for the SMH of the same patient. This process must be careful to avoid false code number.

In vagina:

- Collect vaginal fluid from the posterior fornix using two cotton swabs and avoiding cervical secretions
- One swab will be rolled on a microscope slide for Gram stain and air-dried for microscopic examination to look for bacteria through Nugent score assessment
- Another swab will be used for wet preparation on a second microscopic slide.

In endocervix:

- Collect endocervical fluid by using a swab:
 - Insert small cotton swab 1-2cm into endocervical canal. The swab is rolled in the endocervix for 10 seconds after cleaning of cervix,
 - The swab is rolled on a microscope slide for Gram stain/Methylene blue for microscopic examination for white blood count (WBC). The result of lab examination has to be written down in the SMH
 - Remove excess mucus from cervical os
 - Insert swab 1-2cm into endocervical canal



5.3 FOR SYPHILIS SEROLOGY

- In the laboratory room, as a routine procedure for first time visitors,
- Collection of 5cc of venous blood in a dry sterile test tube with stopper.
- For Key Population (MSM, TG and EW) shall receive Rapid Diagnosis dual HIV and Syphilis test and if reactive shall be referred to VCCT for confirmation.

5.4 FOR HIV TESTING

- Refer STI clinic eligible client to VCCT (including KP and people at risk) if not tested within the previous 3 months.
- All PLHIV should be routinely screened for STI syndromes at every visit at ART clinic (see table below).

Table 11: Common STI/RTI syndromes

Syndrome	STI/RTI name	Organism(s)	Type	Sexually transmitted	Curable
Genital Ulcer	Syphilis	Treponema Pallidum	Bacterial	Yes	Yes
	Chancroid	Haemophilus ducreyi	Bacterial	Yes	Yes
	Herpes	Herpes simplex	Viral	Yes	No
	Granuloma inguinal	Klebseilla granulomatis	bacterial	Yes	Yes
	Lymphogranuloma venereum	Chlamydia trachomatis	Bacterial	Yes	Yes
Vaginal discharge	Bacterial vaginosis	Multiple	Bacterial	Yes	Yes
	Yeast infection	Candida albicans	Fungal	No	Yes
	Trichomoniasis	Trichomonas vaginalis	Protozoa	No	Yes
	Gonorrhoea	Neisseria	Bacterial	Yes	Yes
	Chlamydia	Chlamydia trachomatis	Bacterial	Yes	Yes
Pelvic Inflammatory Disease	Bacterial anaerobia Gonorrhoea Chlamydia	Multiple Neisseria Chlamydia trachomatis	Bacterial	Yes	Yes
Genital warts	Human papilloma virus (HPV)	Human papilloma virus (HPV)	Virus	Yes	No
Urethral discharge	Gonorrhoea Chlamydia	Neisseria Chlamydia trachomatis	Bacterial	Yes	Yes

6. Risk Assessment

Risk assessment is a specific set of questions to ask female patients who complain of vaginal discharge. The questions were devised to help service providers decide on the etiology; they should be adapted for local social and behavioral situations. Module 3 will discuss the possible questions.

For cervicitis, risk the assessment is important to assess which women presenting with vaginal discharge are most likely to have cervicitis and vaginitis as opposed to those with vaginitis alone. It is also an important tool to screen women with asymptomatic STI in the absence of laboratory diagnosis capability.

RISK ASSESSMENT FOR ALL WOMEN(EWS/LRW):

Explore risk assessment for cervicitis for all women(EWs /LRW)are based on:

- Exchange sex for gift or money without using condom all the times
- Having sex with boyfriend (s) without using condom all the times
- Drink Alcohol 7days per week
- Newly identified HIV-positive within the next 3 months follow-up
- Partner is HIV-positive, OR, partner having STI

The risk assessment is positive if the answer is 'yes' to one or more questions

7. How To Ask Question: A Case Study

You need to consider how you will ask questions to obtain information. It would be easy to convert the information into closed questions but that means asking a lot of questions, as shown in the case-study below. On the other hand, this case-study includes examples of how one or two open questions might encourage the patient to provide most of the information you need. Note when the service provider uses open and closed questions as well as facilitation, direction and any of the other verbal skills.

Service provider: "I need to ask you a few very personal questions now... about your sexuality. I know this is difficult to talk about, but I assure you no one else will know."

Patient: "Why does information about my sexuality matter to you?"

Service provider: "That's a good question. It's partly to help me make sure I'm giving you the right treatment, and partly to help us know how many people might have the same infection. Is that OK?"

Patient: "... Yes... all right."

Service provider: "Have you been sexually active over the last three months or so?"

Patient: "Well, yes, I suppose so."

Service provider: "Tell me about that."

Patient: "What do you want to know?"

Service provider: "Oh, how often, that sort of thing."

Patient: "Well... I've got two boyfriends... Well, there's another friend I sleep with sometimes but he's usually away..."

Service provider: "When did you last sleep with the friend who's away a lot?"

Patient: "I can't remember... Sometime last month I suppose."

Service provider: "And what about your other boyfriends?"

Patient: "Well, Ro is my proper boyfriend. We spent the night together two nights ago. Well... we often do."

Service provider: "What about your other boyfriends?"

Patient: "Ro doesn't know about the others."

Service provider: "That's all right. Let us come back to this issue later. You're being very brave about all this."

Patient: "Well... I see him every Tuesday. Usually... but I didn't see him last Tuesday because I was with my parents."

Service provider: "Do you know if any of your boyfriends has a discharge at the moment?"

Patient: "No... I mean, I'm not sure... I don't know."

Service provider: "That's OK. Any other boyfriends in the last three months?"

Patient: "No."

Service provider: "That's fine. You've done very well, so now I can tell you what this discharge is..."

MODULE 3A

**SYNDROMIC DIAGNOSIS AND TREATMENT
OF STI/RTI**

1. Introduction

Syndromic STI management provides high quality STI care by treating people with one or more STIs with the most effective drugs at their first point of contact with the health services.

The emphasis is a rapid treatment and increasing people's access to sexual and reproductive health care. The syndromic approach is well suited to primary health care services in resource poor settings because it does not rely upon expensive or inaccessible laboratory tests for diagnosis.

2. Syndromic Management of Symptomatic Sexually Transmitted Infections

Health workers are trained to diagnose (by taking a history and conducting an examination) and treat on basis of the identification of syndrome. An STI syndrome is the grouping of symptoms noted by the patient and clinical signs found on examination by health worker.

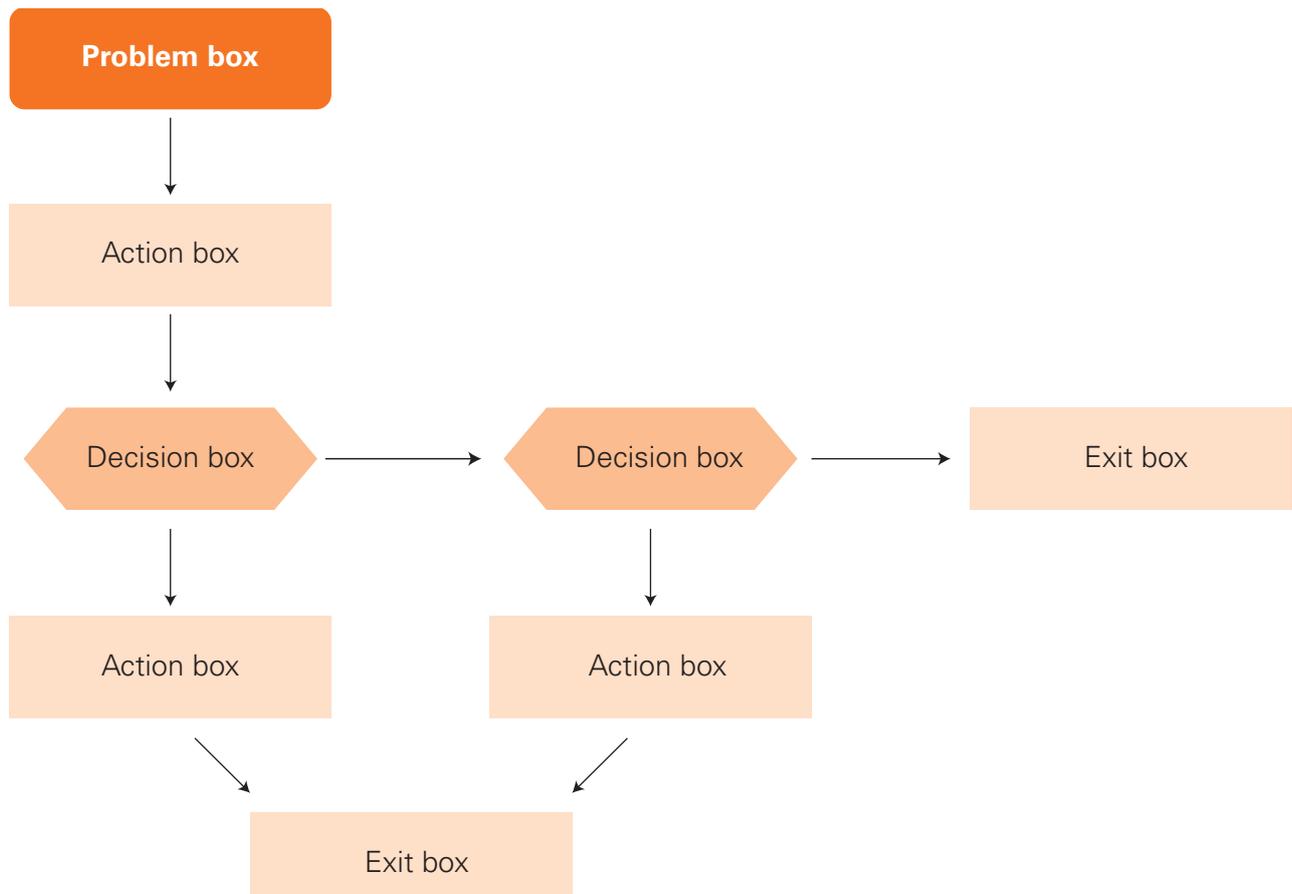
Once the syndrome has been diagnosed, treatment is provided for the majority of organisms known to be responsible for that particular syndrome. The health worker is guided by a flowchart to the most effective treatment for a given syndrome.

The syndromic approach continues to provide developing countries with a cost-effective and appropriate means of managing the most common STI syndromes of public health importance. These syndromes include:

1. Male urethral discharge
2. Vaginal discharge (including cervicitis)
3. Lower abdominal pain
4. Anal discharge
5. Genital/anal ulcer disease
6. Genital/anal warts
7. Inguinal bubo
8. Scrotal swelling
9. Ophthalmia neonatorum (neonatal conjunctivitis)

- Start at the top of the flowchart, at the entry point box describing patient complaint.
- Gather the information needed for diagnosis
- Make decisions based on information gathered and gather more info as required
- Make a diagnosis and use treatment that corresponds to the diagnosis
- Offer HIV and syphilis testing, education and condoms
- Explore options for partner referral

How to use the flow-chart



The entry point is the “problem box” at the top of each flow-chart, describing the STD symptom expressed by the patient. Information should be collected through history or physical exam at each “decision box”, as described in Module 2. At or near the end of each flow-chart, there are “action boxes” indicating the most likely diagnosis and appropriate action for treatment. When choosing treatment, you may need to consider alternative therapies for pregnant or lactating women. All flow-charts will include offering the client HIV and syphilis testing, education for behavior change, condom promotion, and partner referral and care.

2.1 URETHRAL DISCHARGE SYNDROME

2.1.1 URETHRAL DISCHARGE

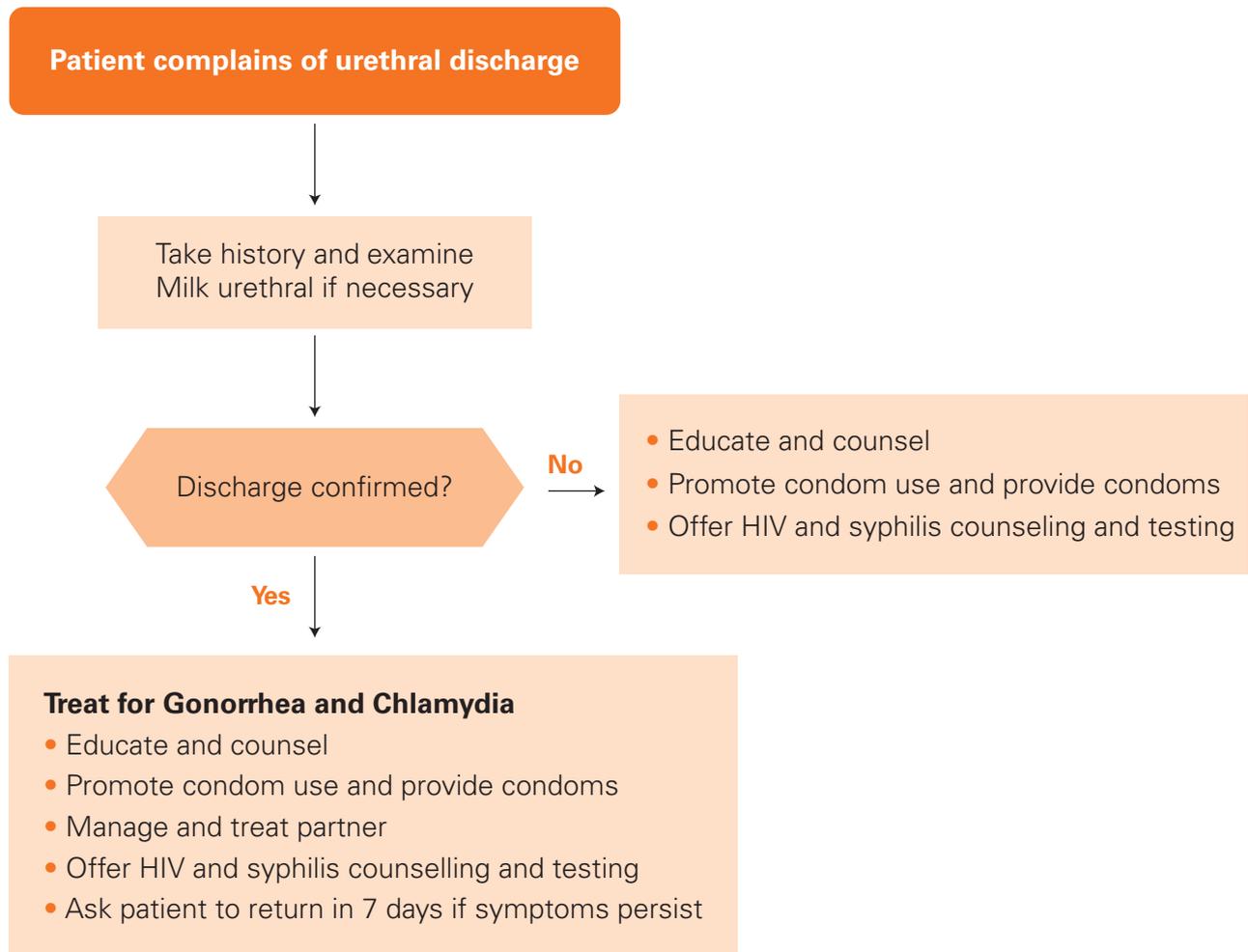
Male patients complaining of urethral discharge and/or dysuria should be examined for evidence of discharge. If discharge is present, then the patient should receive syndromic treatment for urethral discharge.

The major pathogens causing urethral discharge are *Neisseria gonorrhoeae* and *Chlamydia trachomatis*. In the syndromic management, treatment of a patient with urethral discharge should adequately cover these two organisms.

Only if reliable diagnostic tests are available should a distinction be made between the two organisms and specific treatment instituted.

If discharge is not immediately obvious among male patients complaining of urethral discharge, the urethra should be gently massaged from the ventral part of the penis towards the meatus.

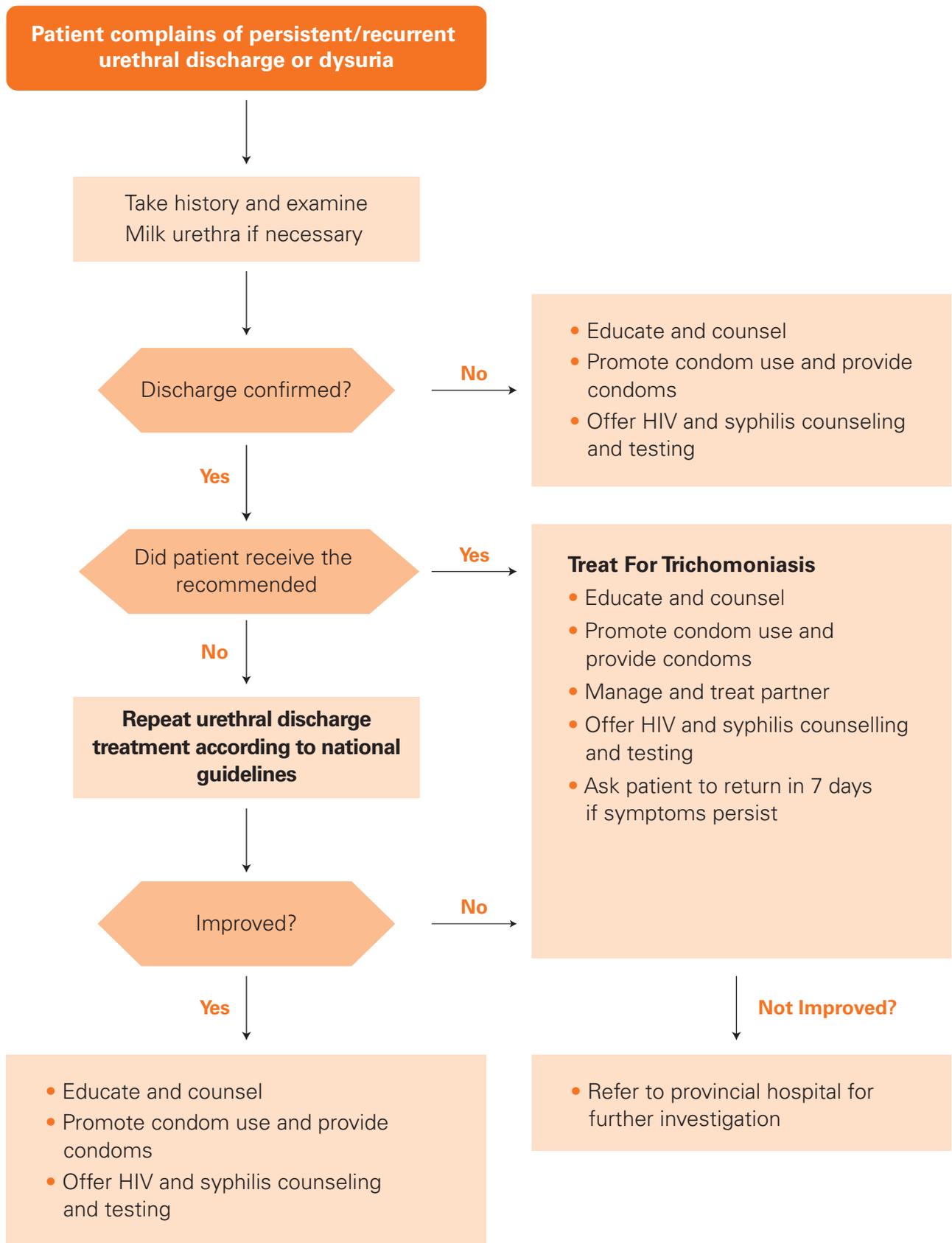
Figure 4: Urethral Discharge Syndrome Flowchart



2.1.2 PERSISTENT/ RECURRENT URETHRAL DISCHARGE

Persistent or recurrent symptoms of urethritis may be due to poor compliance or re-infection, drug resistance (for gonorrhoea, for example), or infection with another organism such as *Trichomonas vaginalis* (TV) or *Mycoplasma genitalium*. If the symptoms still persist at follow up the patient must be referred for more advanced investigation of potential drug resistance or alternative etiologies.

Figure 5: Persistent Urethral Discharge Syndrome Flowchart



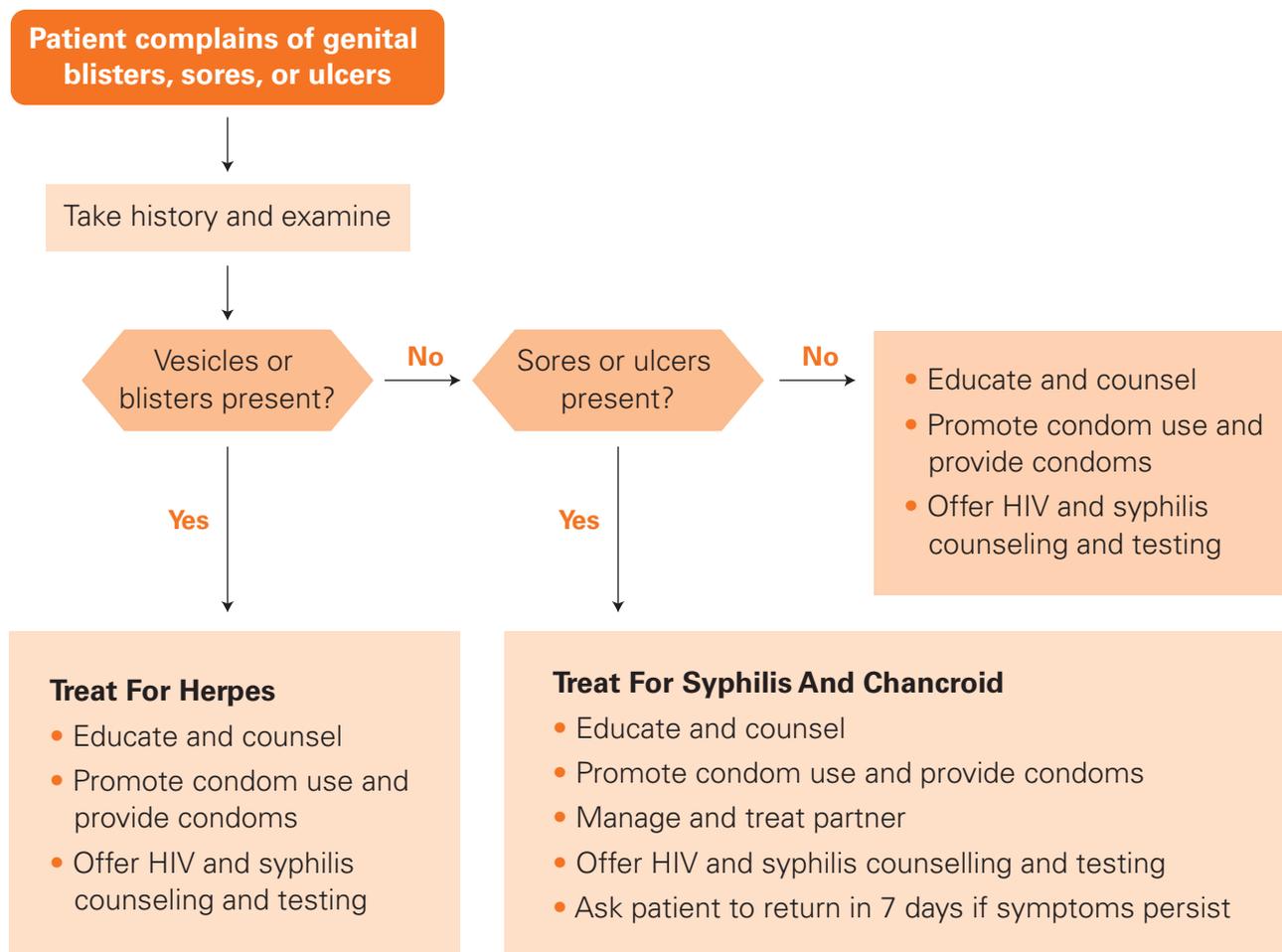
2.2 GENITAL ULCER DISEASE

A patient complaining of genital ulcers should be examined for evidence of ulcers. If ulcers are present, then the patient should receive syndromic treatment for genital ulcers.

The major pathogens causing genital ulcers are herpes simplex virus (HSV), *Treponema pallidum* (syphilis), or Chancroid. The syndromic management of a patient with genital ulcers should adequately cover these three organisms.

Clinical differential diagnosis of genital ulcers is inaccurate. Clinical manifestations and patterns of genital ulcer disease may be further altered in the presence of HIV infection. Only if reliable diagnostic tests are available should a distinction be made.

Figure 6: Genital Ulcer Syndromic Management Flowchart



2.3 VAGINAL DISCHARGE

Vaginal discharge is any fluid that leaves a woman's body through the vagina. Some vaginal discharge is normal for all women, especially those in their reproductive years (15 to 50). When the amount, quality or consistency of vaginal discharges changes, it may be a sign of disease or irritation. The vagina contains a balanced, slightly acidic combination of certain bacteria, mucus, yeast and other organisms. This combination is called the vaginal flora. When in balance, they help to clean the vagina and protect it from outside organisms. Any change the component of vaginal flora affects the natural balance and may affect vaginal discharge. Changes may originate from both internal factors (hormonal changes or stress) or from external factors (infection or poor hygiene).

Normal vaginal discharge is clear or white with no bad odor. It has regular fluctuations that result from hormonal changes occurring throughout the menstrual cycle. The normally clear and thin fluid becomes a bit thicker and heavier at the time of ovulation.

A speculum and bimanual exam can assist making the distinction between vaginitis and cervicitis. *T. vaginalis*, *C. albicans* and bacterial vaginosis are the commonest causes of vaginal infection and *N. gonorrhoeae* and *C. trachomatis* cause cervical infection. The clinical detection of cervical infection is difficult because a large proportion of women with gonococcal or chlamydial cervical infection are asymptomatic. The symptom of abnormal vaginal discharge is highly indicative of vaginal infection, but poorly predictive for cervical infection. Thus, all women presenting with vaginal discharge should receive treatment for trichomoniasis and bacterial vaginosis.

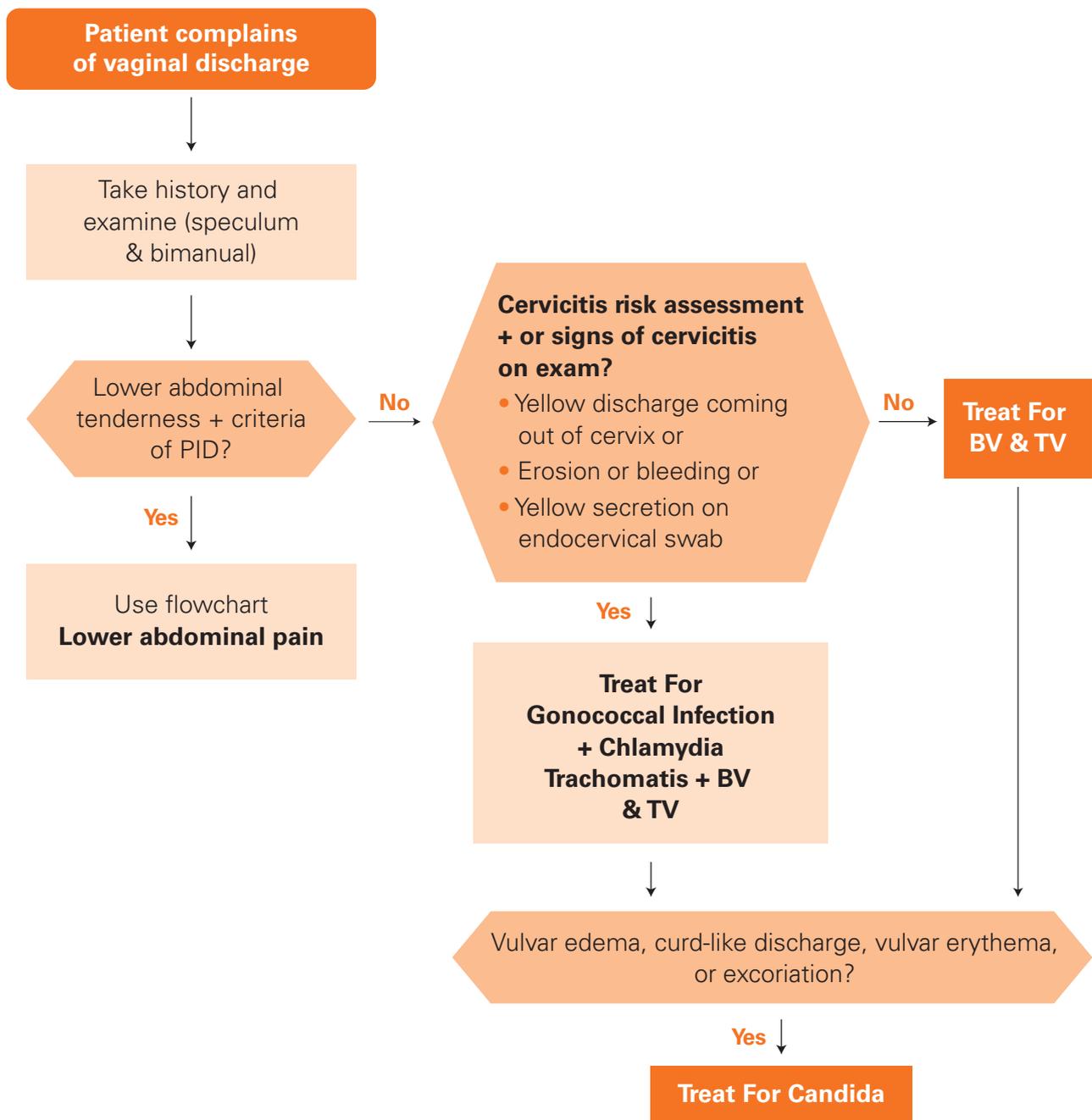
Microscopy adds little to the diagnosis of cervical infection and is not recommended. To identify women at greater risk of cervical infection, an assessment of a woman's risk status is useful, especially when risk factors are adapted to the local situation. A 2011 study of entertainment workers in Cambodia found that STI prevalence was higher among women with the following characteristics: having sex with partner (s) without using condom all the times, exchanging sex for gift or money without using condom all the times, drinking alcohol 7 days per week, newly identified HIV-positive, or partner is HIV-positive OR partner has an STI (reference: 2011 EW survey).

Women with vaginal discharge and a positive risk assessment could therefore, be offered syndromic treatment for both gonococcal and chlamydia cervicitis. Only if laboratory tests for gonorrhea or chlamydia are available should a specific diagnosis for either of these infections be made.

Risk assessment for cervicitis: any positive response indicates high risk

- Having sex with partner (s) without using condom all the times
- Exchange sex for gift or money without using condom all the times
- Drink alcohol 7 days per week
- Newly identified HIV-positive
- Partner is HIV-positive OR partner has an STI

Figure 7: Vaginal Discharge Syndromic Management Flowchart



ALL PATIENTS WITH COMPLAINT OF VAGINAL DISCHARGE

- Educate and counsel
- Promote condom use and provide condoms
- Offer HIV and syphilis counseling and testing
- Manage and treat partner if treated for cervicitis

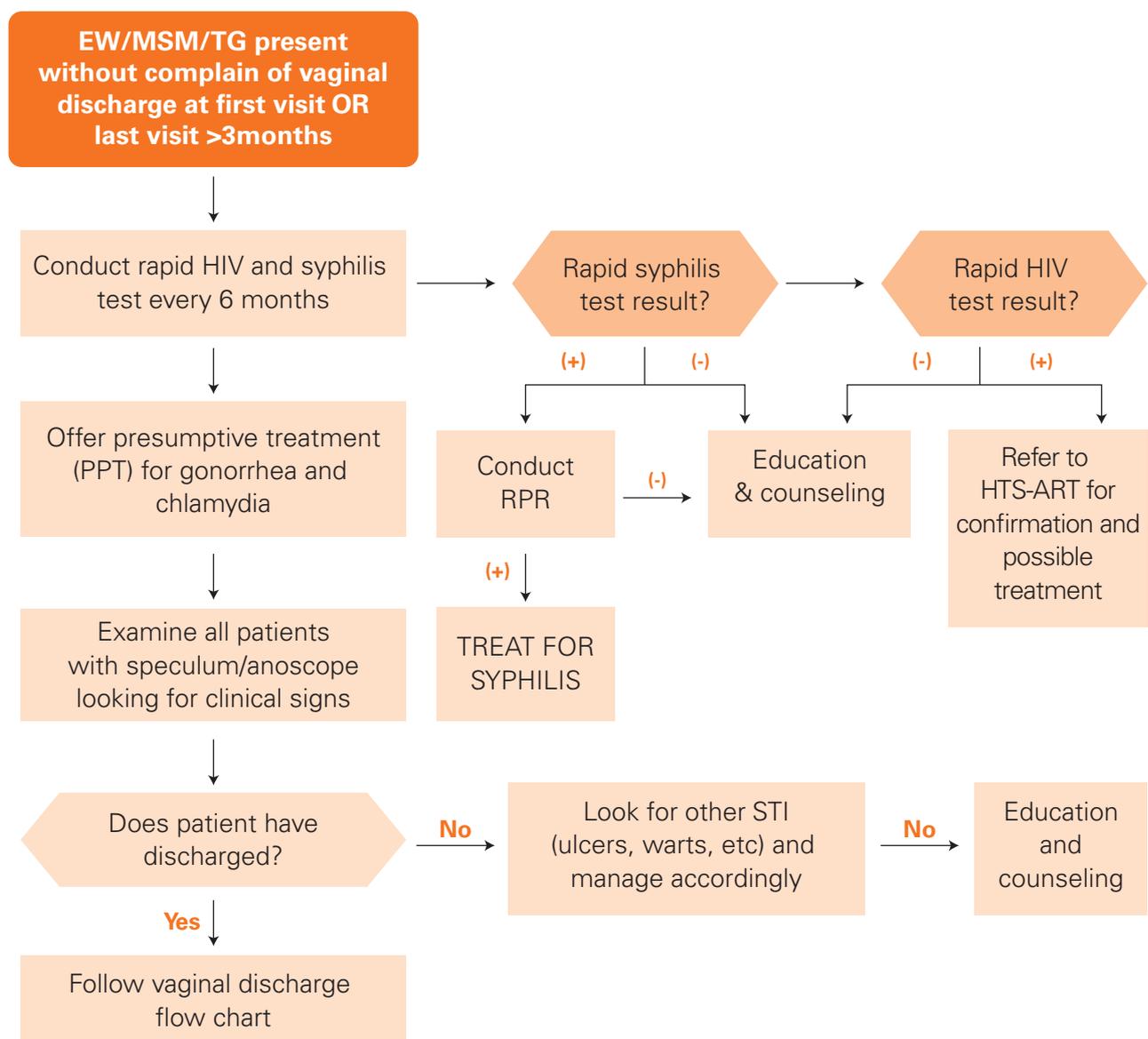
Note: BV: bacterial vaginosis, TV: trichomonas vaginalis

2.4 MANAGEMENT OF ASYMPTOMATIC STIs IN EW/MSM/TG

Syndromic management of STI/RTI in EW/MSM/TG is not different from syndromic management of STD/RTI in symptomatic female patients. Therefore, any EW/MSM/TG with vaginal/urethral/anal discharge or genital ulcer should be treated syndromically using the same flow chart as for women and men. In 2011, a study of EWs found that 5.3% of EWs were infected with gonorrhoea, and 18.9% with chlamydia, or 20.8% with either STI. Based on findings from the latest STI sentinel prevalence survey in 2005 (SSS-2005), 1.8% of MSM had rectal gonorrheal infection and 3.9% of these men had Chlamydia infection.

Because of this high prevalence of gonorrhoea and chlamydia among KPs in Cambodia, systematic treatment of gonorrhoea and chlamydia is recommended at EW/MSM/TG's first visit and subsequently on a quarterly basis (every 3 months). Routine treatment of STI is called periodic presumptive treatment (PPT).

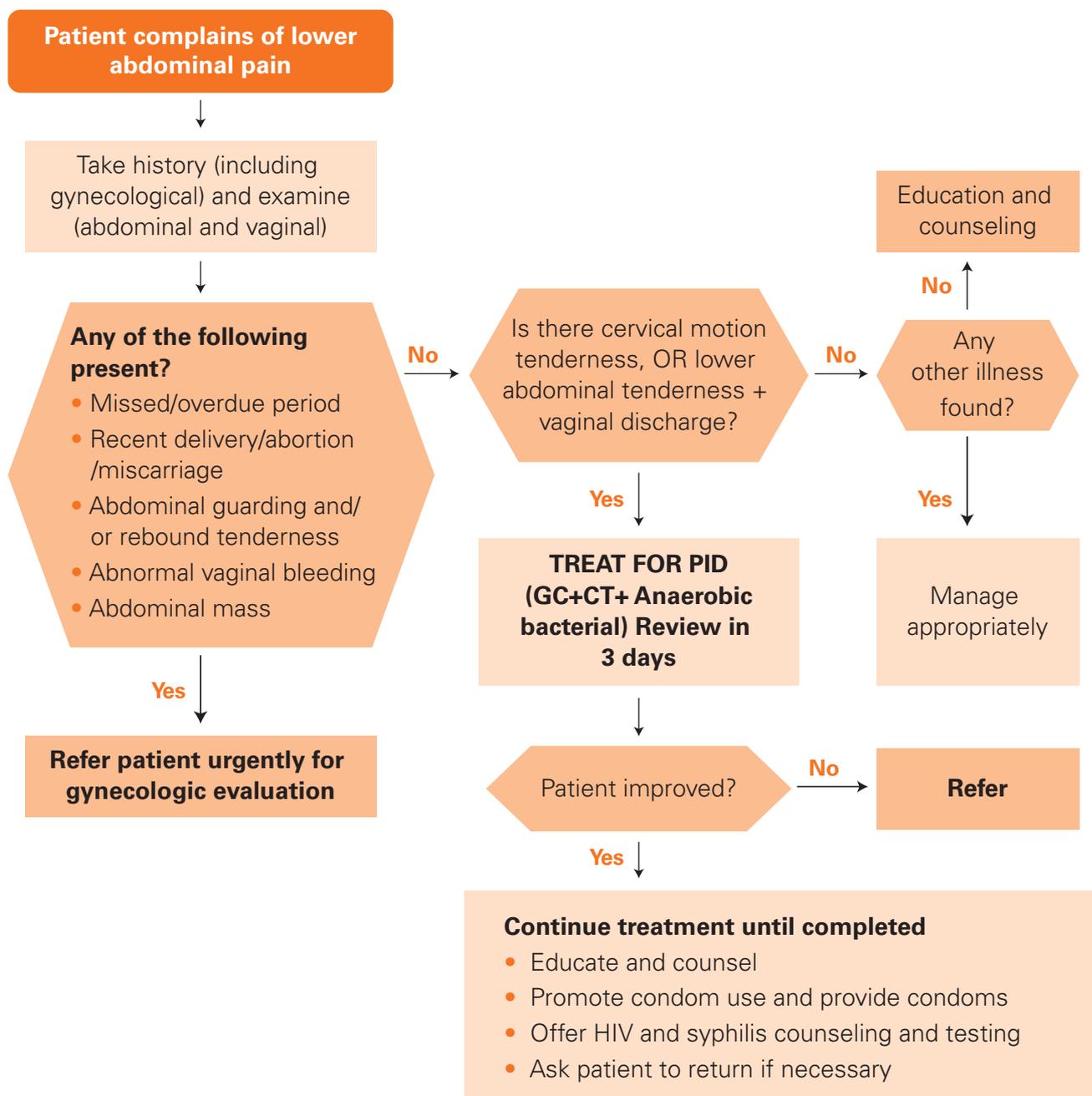
Figure 8: Flowchart for Clinical Examination without Laboratory for EW/MSM/TG without STI Symptoms and periodic presumptive treatment



2.5 LOWER ABDOMINAL PAIN

All sexually active women presenting with lower abdominal pain should be carefully evaluated for the presence of salpingitis and/or endometritis – pelvic inflammatory disease (PID). In addition, routine bimanual and abdominal examinations should be carried out on all women with a presumptive STI since some women with PID or endometritis will not complain of lower abdominal pain. PID is difficult to diagnose because clinical manifestations are varied. PID becomes highly probable in a woman with adnexal tenderness, evidence of lower genital tract infection, and cervical motion tenderness. Enlargement or induration of one or both fallopian tubes, a tender pelvic mass, and direct or rebound tenderness may also be present. The patient’s temperature may be elevated but is normal in many cases.

Figure 9: Lower Abdominal Pain Syndromic Management Flowchart



The most common etiologic agents in PID are *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, and several anaerobic bacterial species found in the vagina, particularly *Bacteroides* spp., anaerobic Gram positive cocci, and *E. coli*. *Mycoplasma hominis* may also be a pathogen in PID. These organisms initially cause lower genital tract infections and then spread into the upper genital tract via the endometrium. Many cases are polymicrobial in etiology, with two or more of these organisms involved.

2.6 PROCTITIS, ENTERITIS AND PROTOCOLITIS

Sexually transmitted anorectal infections with syphilis, gonorrhea, HPV (genital warts), and chlamydia (including lymphogranuloma venereum or LGV) have been recognized for many years, while infections such as shigellosis, salmonellosis, hepatitis A and B, giardiasis, and amebiasis have not been considered sexually transmitted until recently. All of these infectious diseases, as well as the syndromes of enteritis and proctitis became very common among MSM.

Symptoms and signs of infection can vary depending on the exact location of the infection. Proctitis, proctocolitis, and enteritis generally have different infectious etiologies, so it is important to be able to distinguish these syndromes. It is also important to realize that some patients with anorectal or enteric infections may be asymptomatic, and some may have polymicrobial infections.

2.6.1 PROCTITIS

The term “proctitis” refers to inflammation of the rectal mucosa. Symptoms include constipation, tenesmus, rectal discomfort or pain, passage of bloody stools, and a mucopurulent rectal discharge, which is occasionally misinterpreted by the patient as diarrhea. Findings on anoscopy or sigmoidoscopy may range from normal mucosa with only mucus present to diffuse inflammation of the mucosa with friability or discrete ulcerations. If these findings are limited to the rectum, and the mucosa above 15 cm is normal, the condition is properly termed proctitis. If the mucosa is abnormal above 12 to 15 cm, then proctocolitis is present. A rectal biopsy will provide histologic confirmation of proctitis and may reveal nonspecific inflammation or changes highly suggestive of certain infections such as lymphogranuloma venereum (LGV), herpes simplex virus (HSV), or syphilis.

2.6.2 ENTERITIS

Enteritis is an inflammatory illness of the duodenum, jejunum, and ileum, and thus sigmoidoscopy will show no abnormalities. Infectious enteritis is usually caused by ingestion of pathogens, either from fecal-oral sexual contact or via non-sexual means, for example, ingestion of contaminated food or water or fecal-oral spread via poor hygienic practices. Symptoms of enteritis consist of diarrhea, abdominal pain, bloating, cramps, and nausea. Additional symptoms may include flatulence, a mucous rectal discharge, and in severe cases, melena. Systemic symptoms such as fever, dehydration, malabsorption syndrome, weight loss, and myalgia may also be present.

2.6.3 PERIANAL LESIONS

Perianal lesions caused by syphilis, HSV, granuloma inguinale, chancroid, and genital warts (HPV) generally resemble the corresponding lesions as they appear elsewhere in the genital area (see Genital Ulcers). Symptomatic infection of the anal canal is commonly very painful and often results in constipation and tenesmus.

2.6.4 PHARYNGEAL INFECTION

The prevalence of pharyngeal gonococcal and chlamydia infections among MSM in Asia is not known. In the absence of etiological tests for gonorrhoea and chlamydia, it is very difficult to diagnose these infections reliably. Additionally, clinicians should be aware that pharyngeal gonorrhoea can be more difficult to clear than urethral infections. It is recommended that wherever a patient is suffering from significant pharyngitis and a history of unprotected oral sex makes pharyngeal gonococcal or chlamydia infection a likely risk, patient should be treated presumptive pharyngeal gonococcal and chlamydia infections.

2.6.5 DIAGNOSIS

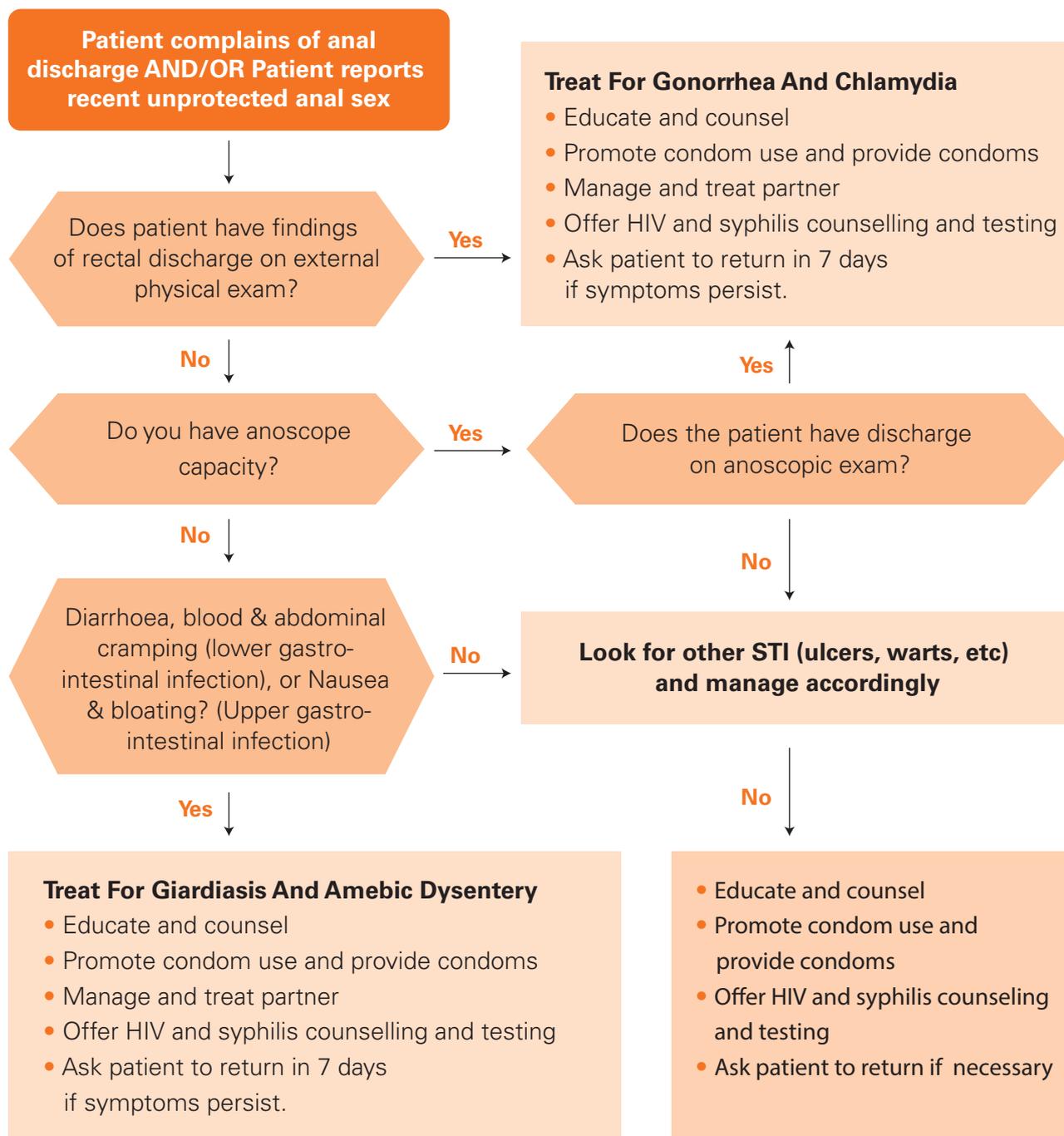
2.6.5.1 HISTORY AND EXAMINATION

In taking the patient's history, inquire about types of sexual practices, condom use, and possible exposure to pathogens known to cause proctitis, proctocolitis, and enteritis, either through sexual practices or travel in countries with poor public health standards or poor personal hygiene.

The physical exam should include inspection of the anus and anoscopy (avoiding or minimizing use of bacteriostatic lubricants which might interfere with bacteriological studies) to identify general mucosal abnormalities. Look for friability and exudate, as well as discrete polyps, ulcerations or fissures, which should be cultured and biopsied if appropriate. In general, patients with symptoms and signs of less than 2 weeks duration can be classified into one of the three syndromes (proctitis, proctocolitis, or enteritis) based on their history and examination.

It must be remembered that infection with several pathogens may occur and that overlapping symptoms may make differentiation on clinical grounds even more difficult. Diagnostic possibilities based on clinical findings are summarized in Table 14.

Figure 10: Management of Symptomatic Ano-rectal STIs Flowchart



2.7 SCROTAL SWELLING

Epididymal infection is one of several diagnoses to consider when a man presents with unilateral scrotal pain and swelling. In approximately 10% of cases, trauma is the cause and, as an etiology, can usually be eliminated by history. In patients with no history of scrotal trauma, important etiologic considerations include testicular torsion, epididymitis, tumor, and tuberculosis. If the patient suspects he has a sexually transmitted disease, infection should be carefully considered as the cause of his symptoms.

2.7.1 ETIOLOGY

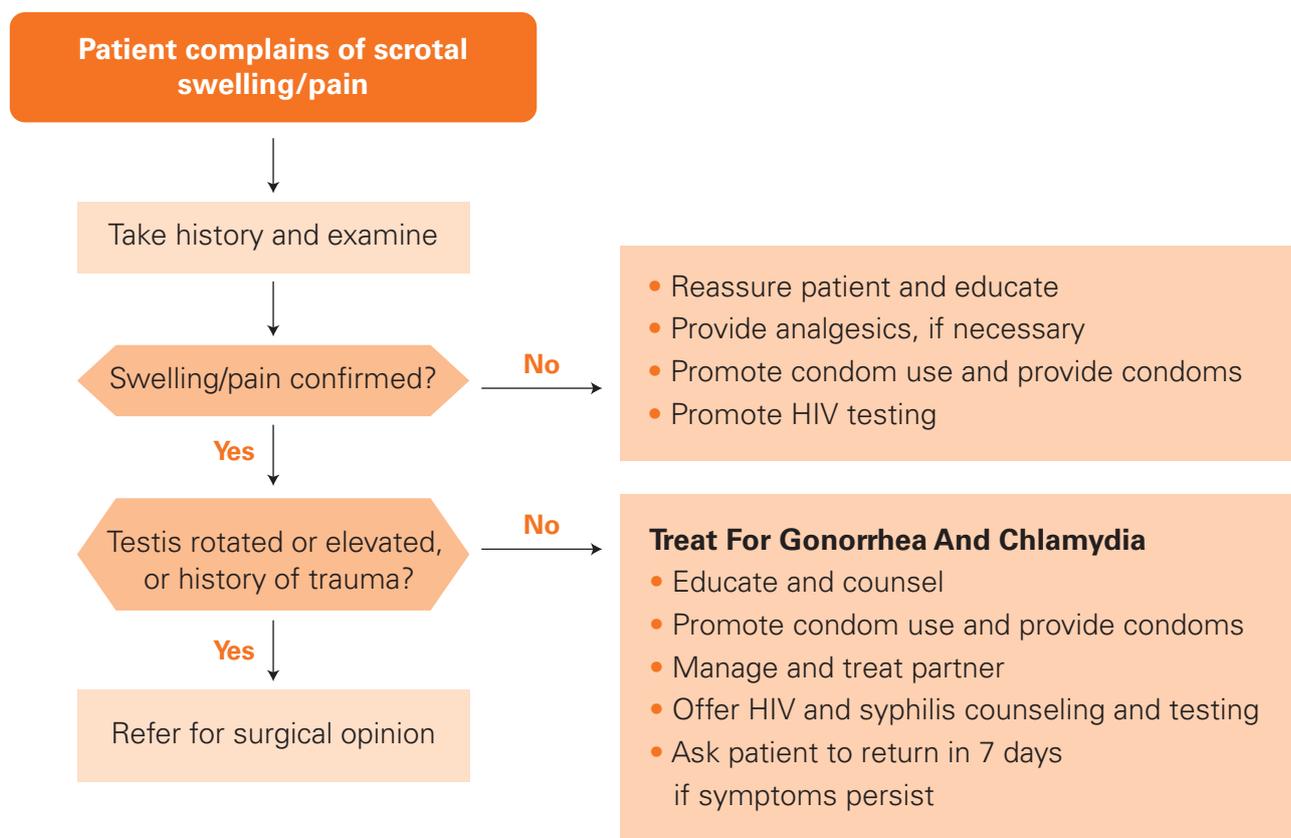
In men under 35 years of age this is more frequently due to sexually transmitted organisms than in those over 35 years of age. When the epididymitis is accompanied by urethral discharge, it should be presumed to be of sexually transmitted origin, commonly gonococcal and/or chlamydial in nature.

In older men, where there may have been no risk of a sexually transmitted infection other general infections may be responsible, for example, *Escherichia coli*, *Klebsiella* spp. or *Pseudomonas aeruginosa*. A tuberculous orchitis, generally accompanied by an epididymitis, is always secondary to lesions elsewhere, especially in the lungs or bones. In brucellosis, usually due to *Brucella melitensis* or *Brucella abortus*, an orchitis is usually clinically more evident than an epididymitis.

In pre-pubertal children the usual aetiology is coliform, pseudomonas infection or mumps virus. Mumps epididymo-orchitis is usually noted within a week of parotid enlargement.

It is important to consider other non-infectious causes of scrotal swelling, such as trauma, testicular torsion and tumour. Testicular torsion, which should be suspected when onset of scrotal pain is sudden, is a surgical emergency that needs urgent referral.

Figure 11: Scrotal Swelling Syndromic Management Flowchart



2.8 INGUINAL BUBO

Inguinal and femoral buboes are localized enlargements of the lymph nodes in the groin area, which are painful and may be fluctuant.

2.8.1 ETIOLOGY

Lymphogranuloma venereum (LGV) is caused by *C. trachomatis* serovars L1, L2, or L3. It is frequently associated with chancroid.

2.8.2 CLINICAL MANIFESTATION

The most common clinical manifestation of LGV among heterosexuals is tender inguinal and/or femoral lymphadenopathy that is typically unilateral. A self-limited genital ulcer or papule sometimes occurs at the site of inoculation. However, by the time patients seek care, the lesions might have disappeared. Rectal exposure in women or MSM might result in proctocolitis (including mucoid and/or hemorrhagic rectal discharge, anal pain, constipation, fever, and/or tenesmus).

LGV is an invasive, systemic infection, and if it is not treated early, LGV proctocolitis might lead to chronic, colorectal fistulas and strictures.

2.8.3 DIAGNOSIS

Diagnosis is based on clinical suspicion, epidemiologic information, and the exclusion of other etiologies (of proctocolitis, inguinal lymphadenopathy, or genital or rectal ulcers). In the absence of specific LGV diagnostic testing, patients with a clinical syndrome consistent with LGV, including proctocolitis or genital ulcer disease with lymphadenopathy, should be treated for LGV.

2.8.4 FOLLOW-UP

Patients should be followed clinically until signs and symptoms have resolved.

2.8.5 MANAGEMENT OF SEX PARTNERS

Persons who have had sexual contact with a patient who has LGV within the 60 days before onset of the patient's symptoms should be examined, tested for urethral or cervical chlamydial infection, and treated with a standard Chlamydia regimen (azithromycin 1 gm orally and ceftriaxone 250mg IM as a single dose).

2.8.6 SPECIAL CONSIDERATIONS

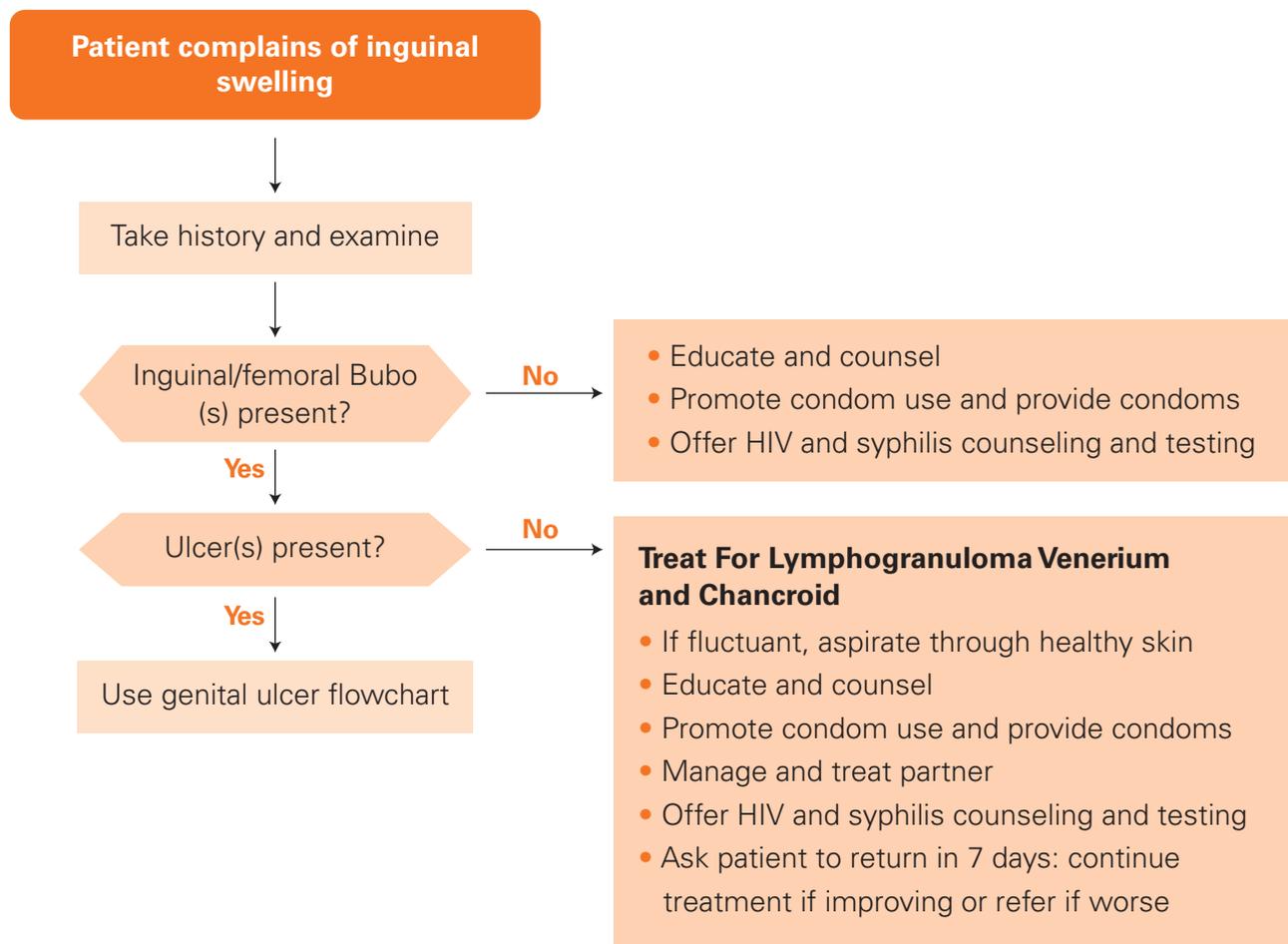
2.8.6.1 PREGNANCY

Pregnant and lactating women should be treated with erythromycin. Azithromycin might prove useful for treatment of LGV in pregnancy, but no published data are available regarding its safety and efficacy. Doxycycline is contraindicated in pregnant women.

2.8.6.2 HIV INFECTION

Persons with both LGV and HIV infection should receive the same regimens as those who are HIV negative. Prolonged therapy might be required, and delay in resolution of symptoms might occur.

Figure 12: Inguinal Bubo Syndromic Management Flowchart



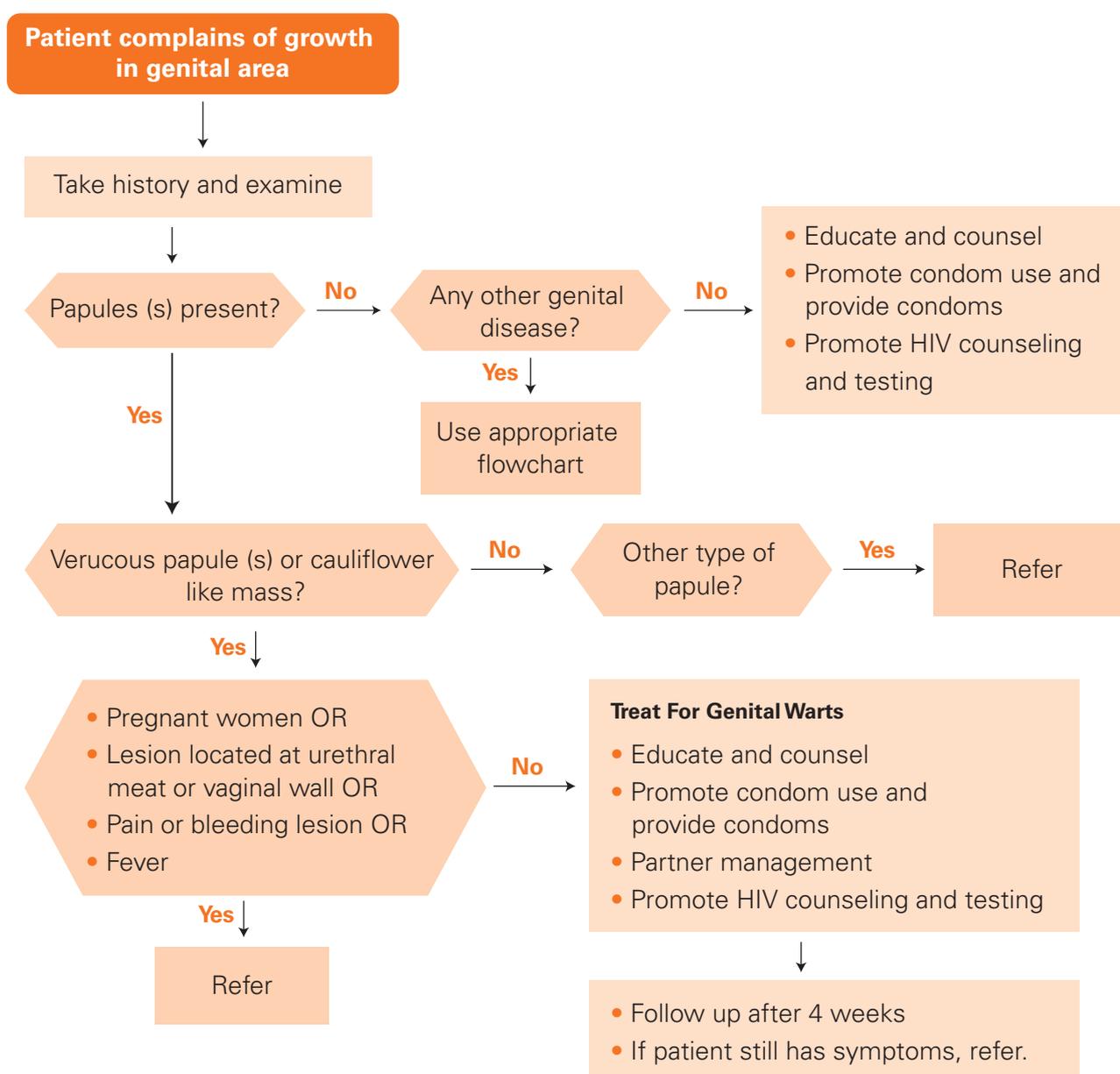
2.9 GENITAL WARTS

The natural history of genital warts is usually benign, but recurrence of genital warts within the first several months after treatment is common.

Treatment for genital warts can reduce HPV infection, but whether the treatment results in a reduction in risk for transmission of HPV to sex partners is unclear. The duration of infectivity after wart treatment is unknown. Sexual partners should be examined for evidence of warts.

Patients with anogenital warts should be made aware that they are contagious to sexual partners. Condoms might reduce the risk for HPV-associated diseases (e.g., genital warts and cervical cancer). Consistent condom use also may reduce the risk for genital HPV. HPV infection can occur in areas that are not covered or protected by a condom (e.g., scrotum, vulva, or perianus). For treatment, see Module 3B.

Figure 13: Genital Warts Syndromic Management Flowchart



2.10 NEONATAL CONJUNCTIVITIS

Neonatal conjunctivitis (ophthalmia neonatorum) can lead to blindness when caused by *N. gonorrhoeae*. The most important sexually transmitted pathogens which cause ophthalmia neonatorum are *N. gonorrhoeae* and *C. trachomatis*. In developing countries, *N. gonorrhoeae* accounts for 20-75% and *C. trachomatis* for 15-35% of cases brought to medical attention. Other common causes are *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Haemophilus* spp. and *Pseudomonas* spp.

Newborn babies are generally presented because of redness and swelling of the eyelids or “sticky eyes”, or because of discharge from the eye(s). As the clinical manifestations and possible complications of gonococcal and chlamydial infections are similar, in settings where it is impossible to differentiate the two infections, treatment should be provided to cover both infections. This would include single dose therapy for gonorrhoeae and multiple dose therapy for chlamydia.

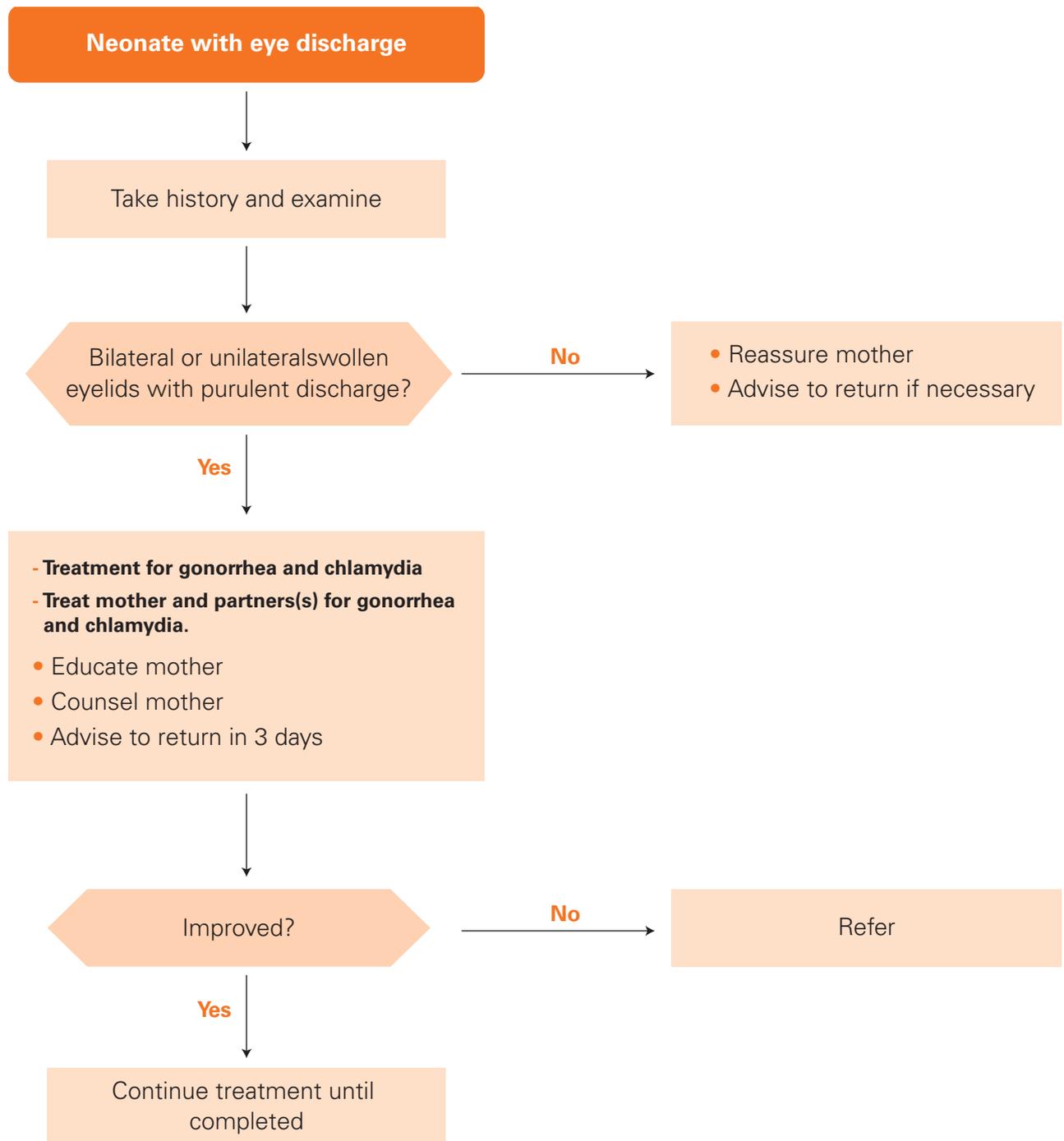


Prevention of ophthalmia neonatorum

Using timely eye prophylaxis should prevent gonococcal ophthalmia neonatorum. The infant's eyes should be carefully cleaned immediately after birth and the application of 1% silver nitrate solution or 1% tetracycline ointment to the eyes of all infants at the time of delivery is strongly recommended as a prophylactic measure. All cases of conjunctivitis in the newborn should be treated for both *N. gonorrhoeae* and *C. trachomatis*, because of the possibility of mixed infection.



Figure 14: Neonatal Conjunctivitis Management Flowchart



2.11 VAGINAL DOUCHING

A vaginal douche is a process of washing or cleaning out the vagina by forcing water or another solution into the vaginal cavity to flush away vaginal discharge or other contents. Usually douches are prepackaged mixes of water and vinegar, baking soda, salted water, lemon juice, tooth paste, or iodine.etc.

2.11.1 WHY WOMEN USE VAGINAL DOUCHES

Women douche because they mistakenly believe it gives many benefits. In reality, douching may do more harm than good. Common reasons women give for using douches include:

- Douching is a practice that is thought to have been around since ancient times.
- Reasons women have given for using:
 - To clean the vagina
 - To rinse away any remaining menstrual blood at the end of the monthly period.
 - Some women douche following sexual intercourse to avoid pregnancy or sexually transmitted diseases.
 - Douching is neither a contraceptive, or preventative measure against STDs or other infections.
 - To reduce vaginal odors. Women who have an unusual vaginal odor need to see their clinician for proper diagnosis, using a douche may only intensify the problem.

2.11.2 PROBLEMS OF DOUCHING (IS DOUCHING HEALTHY?)

Regular vaginal douching changes the delicate chemical balance of the vagina and can make a woman more susceptible to infections. Douching can introduce new bacteria into the vagina which can spread up through the cervix, uterus, and fallopian tubes. Researchers have found that women who douche regularly experience more vaginal irritations and infections such as bacterial vaginosis, and an increased number of sexually transmitted diseases.

Furthermore, regular users of vaginal douches face a 73% greater risk of developing pelvic inflammatory disease (PID) – a chronic condition that can lead to infertility, if left untreated. Bacterial vaginosis and PID can have serious adverse effects on pregnancy including infections in the baby, labor problems, and preterm delivery.

For these reasons, douching is no longer recommended as a safe or healthy way to routinely clean the vagina.

2.11.3 HOW DOES THE VAGINA CLEAN ITSELF?

The vagina cleans itself naturally with its own mucous secretions. When bathing or showering use warm water and gentle unscented soap to cleanse the outer areas of the vagina. Feminine hygiene products such as soaps, powders, and sprays are not necessary and may lead to irritation of sensitive tissues.

2.11.4 CONCLUSION

- The vagina cleans itself in a natural way.
- Women who want to feel fresh can gently clean their vulva with water or water with soap, but there is no need to wash inside the vagina.
- Douching is harmful, because of the risk for lower or upper genital tract infection.

Douching shortly before the consultation at the STI clinic also makes diagnosis of existing infection more difficult or impossible.

MODULE 3B

**ETIOLOGIC DIAGNOSIS AND TREATMENT
OF STI/RTI**

1. Introduction

Etiological diagnostic of STI is a challenge first because current diagnostic tools often have a poor sensitivity and because of the high rates of asymptomatic carriers who contribute to the continuous spread of STIs. In addition, the recent most sensitive molecular tests (NAATs) are often expensive and not affordable or available at the clinic and primary health care. For these reasons, it is important to consider that in the absence of reliable diagnostic tests, STIs should be treated according to the syndromic approach described in the section 3A.

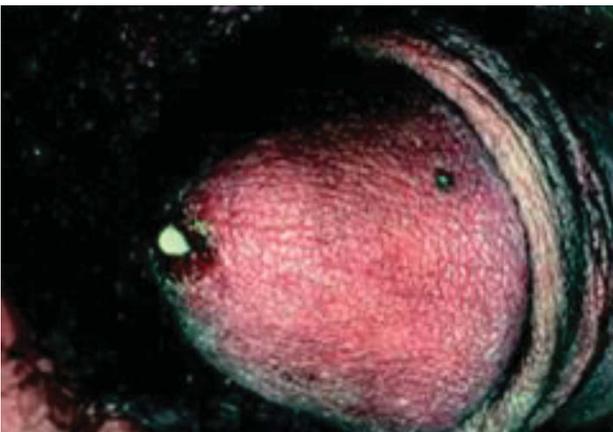
The current section describes in detail the updated treatment for STIs according to recently published WHO guidelines and which should be used for the treatment of the cited STIs in each syndromic approach flowchart.

2. Gonococcal Infections

- Gonorrhoea, caused by *Neisseria gonorrhoeae*, is the second most common bacterial sexually transmitted infection (STI) and results in substantial morbidity and economic cost worldwide.
- The World Health Organization (WHO) estimates that in 2012, 78 million new cases occurred among adolescents and adults aged 15–49 years worldwide with a global incidence rate of 19 per 1000 females and 24 per 1000 males.
- The estimated 27 million prevalent cases of gonorrhoea in 2012 translates to a global prevalence of gonorrhoea of 0.8% among females and 0.6% among males aged 15–49 years, with the highest prevalence in the WHO Western Pacific and African Regions.
- Co-infection with *Chlamydia trachomatis* is detected in 10–40% of people with gonorrhoea.

2.1 CLINICAL MANIFESTATIONS

- Uncomplicated gonococcal infection commonly manifests as urethritis in men with symptoms of urethral discharge and dysuria. On examination, the urethral discharge may range from scanty and mucoid to copious and purulent.
- Gonorrhoea is often asymptomatic in women; less than half of infected women complain of non-specific symptoms such as abnormal vaginal discharge, dysuria, lower abdominal discomfort and dyspareunia. The most common clinical signs are vaginal discharge and cervical friability due to mucopurulent cervicitis.



Gonococcal urethritis (purulent discharge)



Gonococcal Cervicitis

- Rectal infections in men and women are largely asymptomatic; occasionally patients complain of rectal and anal pain or discharge.
- Pharyngeal infections are mainly asymptomatic, but mild sore throat and pharyngitis may occur.
- In the majority of women with gonorrhoea, the lack of discernible symptoms results in unrecognized and untreated infections. Untreated infections usually resolve spontaneously but may lead to serious complications such as pelvic inflammatory disease, including endometritis, salpingitis and tubo-ovarian abscess, which can lead to ectopic pregnancy and infertility.
- Untreated urethral infection in men can lead to epididymitis, urethral stricture and infertility. The risk of complications increases with repeated infection.
- Infants of mothers with gonococcal infection can be infected at delivery, resulting in neonatal conjunctivitis manifesting as purulent ocular discharge and swollen eyelids (Ophthalmia Neonatorum). Untreated conjunctivitis may lead to scarring and blindness.

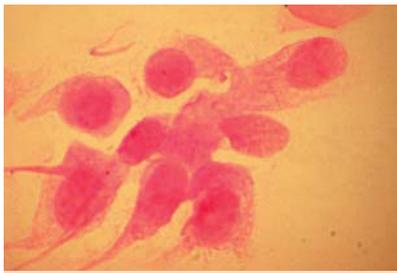


Lesion of disseminated gonococcal infection

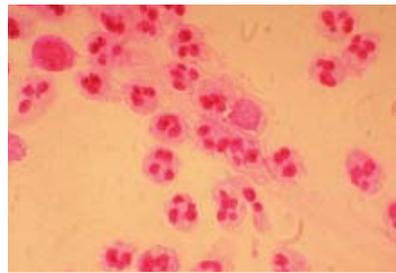
2.2 LABORATORY DIAGNOSIS

N. gonorrhoeae can be diagnosed by culture or nucleic acid amplification tests (NAATs) and, in some instances, Gram stain.

- Gram Stain:
 - Gram-stained smears can provide a presumptive diagnosis of gonorrhoea, especially among symptomatic men with urethritis. In low-income settings, Gram stains may provide a less expensive alternative to NAATs for symptomatic men.
 - However, only 50–70% of asymptomatic infections in men are positive on Gram stain. Gram stain diagnosis for cervical and rectal infection is less reliable and pharyngeal samples should not be analyzed.



**Normal urethral cells
on Gram stain**



**Urethral Gram stain with >5
WBCs per high power**



**Intracellular Gram-negative
diplococci (GNDC) in urethral
Gram stain**

- NAATs;
 - NAAT are highly sensitive and specific and can be conducted on a wide range of samples, including urine, vulvovaginal, cervical and urethral swabs.
 - NAATs have a sensitivity of over 90%, higher than culture (> 85%). The sensitivity varies by NAAT type and is frequently lower for rectal and pharyngeal samples.
 - The lower specificity (98.1–99.7%) of some, particularly early generation, NAATs may result in low positive predictive values, especially in low-prevalence populations, due to cross-reaction with other species of *Neisseria*.
 - A drawback of currently available NAATs is their inability to provide information on antimicrobial susceptibility.
- Cultures of *N. gonorrhoeae*:
 - Cultures could be done in parallel with NAATs to allow for susceptibility testing.
 - Specimens from all cases of suspected gonococcal infection could be collected for microbiological culture and antimicrobial susceptibility testing, to the extent possible considering local availability of resources.
 - Microbiological cultures of *N. gonorrhoeae* are specific and cheap, with a reasonable sensitivity of 85–95% for urethral and endocervical infection. Optimal isolation of *N. gonorrhoeae* requires good specimen collection, timely inoculation into adequate and appropriate culture media, proper transportation and appropriate incubation.

Since laboratory diagnostic tests are not widely available, diagnosis is often made clinically, based on the presence of symptoms such as vaginal and urethral discharge. Presumptive treatment is sometimes provided to those at high risk of gonococcal infection, if indicated based on local epidemiological patterns.

2.3 TREATMENT

2.3.1 TREATMENT OF GONORRHEA INFECTION

- Local resistance data should determine the choice of effective therapy against *N. Gonorrhoea* in the country
- Since recent resistance data are not available, dual therapy is recommended for people with genital and anorectal gonorrhoea according to recent WHO guidelines:

	First choice	Alternatives
Genital, anorectal or oropharyngeal gonorrhea	Cefixime 400mg orally as a single dose PLUS Azithromycin 1g orally as a single dose	Ceftriaxone 250mg intramuscular (IM) as a single dose PLUS Azithromycin 1g orally as a single dose
Neonatal conjunctivitis gonorrhea	Ceftriaxone , 50mg/kg by intramuscular injection as a single dose, to a maximum of 125mg.	

2.3.2 RETREATMENT OF GONORRHEA AFTER TREATMENT FAILURE:

- If reinfection is suspected, retreat with dual therapy, reinforce sexual abstinence or condom use, provide partner treatment
- If the patient received monotherapy or not recommended treatment as first treatment, re-treat with dual treatment as recommended
- If treatment failure occurred after recommended dual therapy, re-treat with the one of the following dual therapy:

	First choice	First choice
Treatment failure of genital, anorectal or oropharyngeal gonorrhea after recommended dual therapy	Cefixime 800mg orally as a single dose PLUS Azithromycin 2g orally as a single dose	Ceftriaxone 500mg intramuscular (IM) as a single dose PLUS Azithromycin 2g orally as a single dose
		Gentamicin 2g IM as single dose PLUS Azithromycin 2 g orally as a single dose
		Spectinomycin 240mg IM as single dose (if not oropharyngeal infection) PLUS Azithromycin 2g orally as a single dose

- **In case of persisting treatment failure**, inform NCHADS STI focal point to organize sample collection and strain resistance analysis

3. Chlamidia Trachomatis Infections (Other Than Lymphogranuloma Venereum)

- Chlamydial infection, caused by *Chlamydia trachomatis*, is the most common bacterial sexually transmitted infection (STI) and results in substantial morbidity and economic cost worldwide.
- WHO estimates that in 2012, 131 million new cases of chlamydia occurred among adults and adolescents aged 15–49 years worldwide, with a global incidence rate of 38 per 1000 females and 33 per 1000 males.
- The estimated 128 million prevalent cases of chlamydia result in an overall prevalence of 4.2% for females and 2.7% for males, with the highest prevalence in the WHO Region of the Americas and the WHO Western Pacific Region. In many countries, the incidence of chlamydia is highest among adolescent girls aged 15–19 years, followed by young women aged 20–24 years.
- The three biovars of *C. trachomatis*, each consisting of several serovars or genotypes, cause genital infections, lymphogranuloma venereum (LGV that affects lymphoid tissue), and trachoma (eye infection).

3.1 CLINICAL MANIFESTATIONS

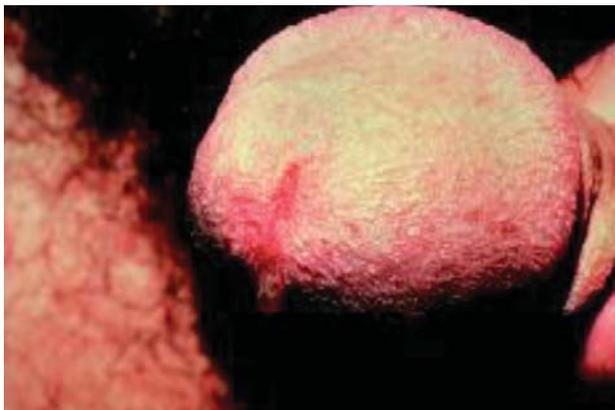
- Genital infections due to *C. trachomatis* are asymptomatic in approximately 70% of women and 50% of men (2).
- Symptoms of uncomplicated chlamydial infection in women include abnormal vaginal discharge, dysuria, and post-coital and intermenstrual bleeding. Common clinical signs on speculum examination include cervical friability and discharge.

3.1.1 SYMPTOMATIC MEN USUALLY PRESENT WITH URETHRAL DISCHARGE AND DYSURIA, SOMETIMES ACCOMPANIED BY TESTICULAR PAIN.

- If left untreated, most genital infections will resolve spontaneously with no sequelae but they may result in severe complications, mainly in young women. Infection can ascend to the upper reproductive tract and can cause pelvic inflammatory disease, ectopic pregnancy, salpingitis and tubal factor infertility in women and epididymitis in men. The risk of complications may increase with repeated infection.

3.1.2 INFECTIONS AT NON-GENITAL SITES ARE COMMON. RECTAL INFECTION MAY MANIFEST AS A RECTAL DISCHARGE, RECTAL PAIN OR BLOOD IN THE STOOLS, BUT IS ASYMPTOMATIC IN MOST CASES. OROPHARYNGEAL INFECTIONS CAN MANIFEST AS PHARYNGITIS AND MILD SORE THROAT, BUT SYMPTOMS ARE RARE.

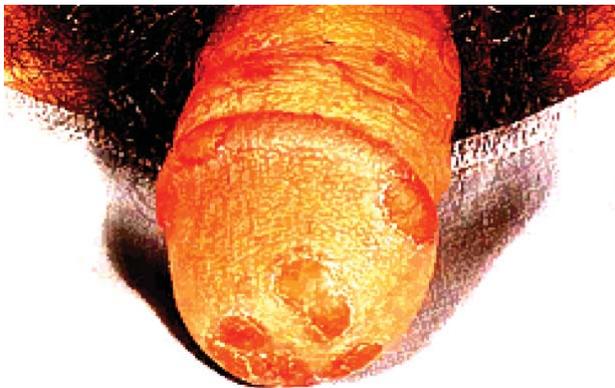
- Chlamydial infection in pregnancy is associated with preterm birth and low birth weight. Infants of mothers with chlamydia can be infected at delivery, resulting in neonatal conjunctivitis and/or nasopharyngeal infection. Symptoms of ophthalmia include ocular discharge and swollen eyelids. In newborns, nasopharyngeal infection can lead to pneumonitis.



**Nongonococcal urethritis
(mucoïd discharge)**



**Cervical erosions due to Chlamydia
trachomatis**



**Reiter's Syndrome Circinate
Balanitis**



**Proctitis due to Chlamydia
trachomatis**

3.2 LABORATORY DIAGNOSIS

- There have been major developments in the diagnosis of *C. trachomatis* in the last 10–20 years.
- Although *C. trachomatis* can be diagnosed by culture, direct immunofluorescence assays (DFAs), and laboratory-based and point-of-care enzyme-linked immunosorbent assays (ELISAs), nucleic acid amplification tests (NAATs) are strongly recommended due to their superior performance characteristics.
- NAATs are highly sensitive and specific and can be used for a wide range of samples, including urine and vulvovaginal, cervical and urethral swabs. Several commercial NAATs using different technologies are available. The increased sensitivity of NAATs compared with other diagnostic tests, such as culture and antigen detection methods (DFA and ELISA), allows testing of non-invasive specimens, which can be collected conveniently at the primary level of care. Commercially available NAATs are not yet licensed for the diagnosis of extra-genital samples but have shown to be reliable for detection of chlamydial infection in rectal and pharyngeal swabs.
- Several commercially available tests for chlamydia are combined with tests for gonorrhoea.

3.3 TREATMENT

For uncomplicated genital chlamydia, the recommended treatment are:

	First choice	Alternatives
Uncomplicated genital, chlamydia infection	Azithromycin 1g orally as a single dose OR Doxyxycline 100 mg orally twice a day for 7 days	Tetracycline 500 mg orally four times a day for 7 days OR Erythromycin 500 mg orally four times a day for 7 days
Anorectal chlamydia infection	Doxyxycline 100 mg orally twice a day for 7 days	Azithromycin 1g orally as a single dose
Chlamydia infection in pregnant women*	Azithromycin 1g orally as a single dose	Amoxicillin 500 mg orally three times a day for 7 days OR Erythromycin 500 mg orally four times a day for 7 days
Chlamydia infection in PID	Doxyxycline 100 mg orally twice a day for 14 days	
Chlamydia infection in Scrotal Swelling	Doxyxycline 100 mg orally twice a day for 14 days	Erythromycin 500 mg orally four times a day for 14 days
Neonates with chlamydial conjunctivitis	Azithromycin 20 mg/kg/day orally, one dose daily for 3 days	Erythromycin syrup, 50 mg/kg per day orally, in 4 divided doses for 14 days

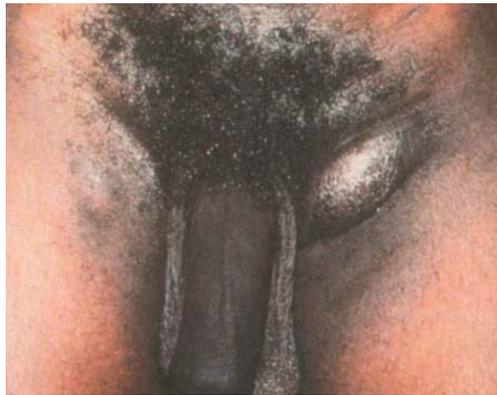
3) * *Doxyxycline and Tetracycline are contra-indicated in pregnant women*

4. Lymphogranuloma Venerum (LGV)

- Lymphogranuloma venereum (LGV) is caused by more invasive serovars of *C. trachomatis* (serovars L1, L2, or L3) and affects the submucosal connective tissue and can spread to regional lymph nodes. LGV is an invasive, systemic infection.
- It is frequently associated with Chancroid

4.1 CLINICAL MANIFESTATIONS

- It commonly presents as a unilateral, tender inguinal or femoral lymph node and a self-limited genital ulcer or papule at the site of inoculation.
- Anorectal exposure may result in proctitis, mucoid and/or hemorrhagic rectal discharge, pain, constipation or tenesmus.
- Left untreated, LGV can lead to rectal fistula or stricture.



Unilateral lymph node

4.2 LABORATORY DIAGNOSIS

- NAATs for *C. trachomatis* testing, if available, on genital and lymph node specimens (i.e., lesion swab or bubo aspirate).

4.3 TREATMENT

- In adults and adolescents with, LGV, the recommended treatment is:

	First choice	Alternatives
LGV infection	Doxyxycline* 100 mg orally twice a day for 21 days	Azithromycin 1 g orally weekly for 3 weeks OR Erythromycin 500 mg orally four times a day for 21 days

* *Doxyxycline are contra-indicated in pregnant women*

5. Syphilis

- Syphilis is a sexually acquired infection caused by *Treponema pallidum*, which may become a chronic infection without treatment.
- Major routes of transmission are sexual and vertical (in utero from infected pregnant woman to her fetus).
- It results in substantial morbidity and mortality. WHO estimates that 5.6 million new cases of syphilis occurred among adolescents and adults aged 15–49 years worldwide in 2012 with a global incidence rate of 1.5 cases per 1000 females and 1.5 per 1000 males.
- The estimated 18 million prevalent cases of syphilis in 2012 translates to a global prevalence of 0.5% among females and 0.5% among males aged 15–49 years, with the highest prevalence in the WHO African Region.
- Mother-to-child transmission (MTCT) may occur if the expectant mother has syphilis. MTCT of syphilis (congenital syphilis) is usually devastating to the fetus in cases where maternal infection is not detected and treated sufficiently early in pregnancy. Untreated primary and secondary syphilis infections in pregnancy typically result in severely adverse pregnancy outcomes, including fetal deaths in a substantial proportion of cases. Latent syphilis infections in pregnancy result in serious adverse pregnancy outcomes in more than half of cases.
- The burden of morbidity and mortality due to congenital syphilis is high. In 2012, an estimated 350 000 adverse pregnancy outcomes worldwide were attributed to syphilis, including 143 000 early fetal deaths/stillbirths, 62 000 neonatal deaths, 44 000 preterm/low-birth-weight babies and 102 000 infected infants.
- There is also an increase in mother-to-child transmission of HIV among pregnant women co-infected with syphilis and HIV.
- Congenital syphilis is preventable, however, and elimination of MTCT of syphilis can be achieved through implementation of effective early screening and treatment strategies for syphilis in pregnant women. The fetus can be easily cured with treatment, and the risk of adverse outcomes to the fetus is minimal if the mother receives adequate treatment during early pregnancy – ideally before the second trimester. There are indications that MTCT of syphilis is beginning to decline globally due to increased efforts to screen and treat pregnant women for syphilis.

5.1 CLINICAL MANIFESTATIONS

- Syphilis is transmitted through sexual contact with infectious lesions of the mucous membranes or abraded skin, via blood transfusion, or vertically from a pregnant woman to her fetus.
- Untreated, the disease lasts many years and is divided into stages. Early syphilis (less than 2 years) consists of primary syphilis, secondary syphilis and early latent syphilis, while late syphilis (more than 2 years) consists of late latent syphilis and tertiary syphilis.

5.1.1 PRIMARY SYPHILIS

- Primary syphilis classically presents as a solitary, painless, indurated chancre at the site of inoculation, usually in the vagina, penis or anus (but it may be extra-genital), after a mean incubation period of 21 days (range: 9–90 days). A regional adenopathy is often associated classically rubbery, painless, and bilateral.
- The primary lesion begins as a raised papule and ulcerates before healing within 3 to 10 weeks, with or without treatment. The primary chancre may go unnoticed by patients. If untreated, the disease progresses to the secondary stage, four to eight weeks after the appearance of the primary lesion.
- Up to 25% of primary syphilis present with multiple lesions. Atypical chancres may occur and can mimic herpes or chancroid.



Genital syphilitic chancres



Perianal Chancres (Syphilis)



Extra genital syphilitic chancres (cutaneous and mucous)

5.1.2 SECONDARY SYPHILIS

- Secondary syphilis is characterized by generalized muco-cutaneous lesions affecting both skin and mucous membranes. The rash of secondary syphilis can vary widely (macular, papular, squamous, pustular, or combination) and mimic other infectious or non-infectious conditions, but characteristically affects the palms and soles. The rash is often symmetrical and non-itchy, but may have several manifestations and can be minimal enough to be overlooked. Any new onset macular, papular or squamous rash should be evaluated to rule out secondary syphilis.
- Mucous patches (5-30%): flat patches involving oral cavity, pharynx, larynx, and genitals.
- Condylomata lata (5-25%): In warm and moist intertriginous areas of the body, such as the anus and labia, large white or grey raised lesions (wart-like papules) develop as a result of the spread of the treponemes from the primary lesion, teeming with treponemes.
- Alopecia (10-15%): occipital and bitemporal patches of non-scarring alopecia with a “moth-eaten” appearance, loss of lateral eyebrows.
- Neurosyphilis (<2%): early forms of basilar meningitis or meningovascular.
- The lesions of the skin and mucous membranes may be associated with non-specific constitutional symptoms of malaise, fever and generalized lymphadenopathy.
- The symptoms and signs of secondary syphilis spontaneously resolve, even without treatment, and if left untreated, the patient enters the latent stage.



Secondary syphilis cutaneous rash with palm and sole involvement



**Secondary syphilis:
Condyloma late**



**Secondary syphilis:
non-scarring alopecia, with
a “moth-eaten” appearance**



**Secondary syphilis:
Mucous patches**

5.1.3 LATENT SYPHILIS

- Latent syphilis is characterized by positive syphilis serology with no clinical symptoms or signs.
- Latent syphilis is often categorized in two phases: early latent syphilis is defined as infection for less than two years and late latent syphilis is the presence of the disease for more than two years or unknown duration.
- The treatment of latent syphilis is different for the early and late phases. Patients with unknown duration of infection should be treated for late latent syphilis.
- Sexual transmission typically occurs only during primary, secondary and early latent infection. Mother-to-child transmission, however, has been documented to occur up to several years after initial infection.
- If left untreated, most patients will remain in the latent stage. Approximately 25% will develop the late clinical sequelae of tertiary syphilis, which can affect any organ system up to 30 years or more after infection. The main manifestations of tertiary syphilis are neurological disease (neurosyphilis), cardiovascular disease (cardiosyphilis) and gummatous lesions (gumma).
- Criteria for early latent syphilis:
 - a. Documented seroconversion in comparison with a serologic titer obtained within the year preceding the evaluation.
 - b. Unequivocal symptoms of primary or secondary syphilis reported by patient in past 12 months.
 - c. Contact to an infectious case of syphilis in the past 12 months.
 - d. A 4-fold increase in serologic titer in comparison with a titer within the past 12 months may represent a case of early latent syphilis or relapse of a previously treated case.

5.1.4 TERTIARY SYPHILIS

- Gummatous lesions may occur in skeletal, spinal, and mucosal areas, eyes, and viscera (lung, stomach, liver, genitals, breast, eyes, brain, and heart); average onset 10-15 years after infection. The destructive lesions can clinically mimic carcinoma.
- Cardiovascular syphilis: pathological lesion is endarteritis of aortic vasovasorum; clinically presents as ascending aortic aneurysm, aortic insufficiency; coronary ostial stenosis; average appearance at about 20-30 years after infection.
- Neurosyphilis:
 - Neurosyphilis can occur at any stage of syphilis infection, even in the first few months (30-40% of patients). Early neurological manifestations include acute changes in mental status, meningitis, stroke, cranial nerve dysfunction and auditory or ophthalmic and ocular abnormalities.
 - CSF laboratory abnormalities are common in persons with early syphilis, even in the absence of clinical neurologic findings. If clinical evidence of neurologic involvement is observed (e.g., cognitive dysfunction, motor or sensory deficits, ophthalmic or auditory symptoms, cranial nerve palsies, and symptoms or signs of meningitis or stroke), a CSF examination should be performed.
 - Late neurosyphilis occurs 10–30 years or more after infection and is characterized by tabes dorsalis and general paresis.
 - All persons who have neurosyphilis should be tested for HIV

- Ocular involvement can also be early or late.
- Syphilitic uveitis (most common) or other ocular manifestations (e.g., neuroretinitis and optic neuritis) can be associated with neurosyphilis.
- A CSF examination should be performed in all instances of ocular syphilis, even in the absence of clinical neurologic findings.
- Ocular syphilis should be managed in collaboration with an ophthalmologist and according to the treatment and other recommendations for neurosyphilis, even if a CSF examination is normal.
- In instances of ocular syphilis and abnormal CSF test results, follow-up CSF examinations should be performed to assess treatment response.

5.1.5 CONGENITAL SYPHILIS:

- Fetal infection can occur during any trimester of pregnancy and the risk is much higher with primary and secondary syphilis
- The most common manifestation of congenital syphilis is second or third trimester fetal loss or premature labour. Thus, serologic testing for syphilis should be performed for all mothers with stillborn infants, to document evidence of syphilis. In most countries, it is estimated that the majority of congenital syphilis cases result in syphilitic stillbirths, often not recognized as having been caused by syphilis.
- Infants born to mothers with positive syphilis serology should be examined for signs and symptoms of early congenital syphilis (<2 years old), including bullous rash, rhinitis with snuffles (chronic nasal discharge), laryngitis, alopecia, generalized lymphadenopathy, hepatosplenomegaly, osteochondritis, periostitis, meningitis and chorioretinitis. Hematologic abnormalities may include thrombocytopenia and anemia.
- The signs of late congenital syphilis infection in children over the age of 2 years include inflammatory manifestations affecting the eyes (interstitial keratitis being the most common), ears (VIII nerve deafness) and joints, as well as skeletal and teeth malformations and stigmata resulting from developmental damage during the early stages of syphilis (saber shins, mulberry molars, Hutchinson incisors). However, it is important to keep in mind that many infants with syphilis infection will not have obvious clinical signs or symptoms.

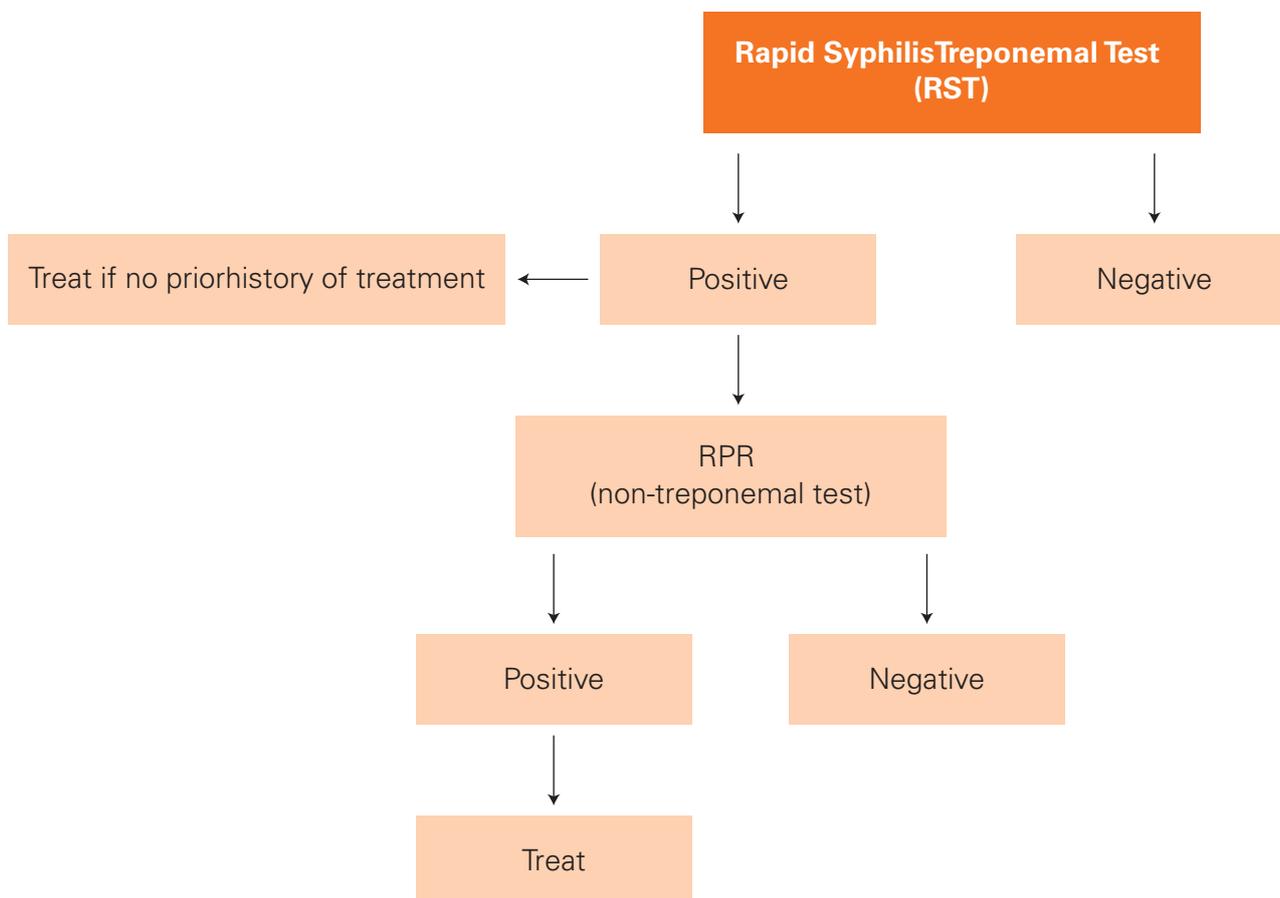
5.2 LABORATORY MANIFESTATION

- The available laboratory tests for diagnosis of syphilis include direct detection methods on lesion samples (i.e. darkfield microscopy, direct fluorescent antibody test and nucleic acid amplification test), serology (treponemal and non-treponemal tests), and examination of cerebrospinal fluids
- Serological tests:
 - There are two types of serological tests for syphilis: non-treponemal and treponemal.
 - A presumptive diagnosis of syphilis requires a positive result from at least one of these types of tests. A confirmed diagnosis requires positive results from both types of serologic tests.
 - Serum is the specimen of choice for serological testing, although plasma can be used in some non-treponemal serological tests. Cerebrospinal fluid is used to diagnose congenital and tertiary syphilis and when neurological symptoms are present.

- Non-treponemal tests:
 - The most widely non-treponemal tests available are the microscopic Venereal Diseases Research Laboratory (VDRL) and the macroscopic rapid plasma reagin (RPR) tests. These tests detect anti-lipid immunoglobulin M or G (IgM or IgG) antibodies which can also be produced in other diseases, and are not highly specific for syphilis giving false-positive results in conditions such as acute febrile viral infections and some chronic autoimmune diseases. Most false-positive results have low titres of less than 1 : 4.
 - Non-treponemal tests may be negative for up to four weeks after the lesion of primary syphilis first appears and can be negative in late latent syphilis
 - Additionally in primary and secondary syphilis, these tests may be false negative due to a prozone reaction (i.e. interference by high concentrations of antibodies in a specimen, which can be uncovered with dilution and retesting).
 - In primary syphilis, repeated testing at two and four weeks may be required to exclude syphilis when suspect lesions are present. A negative non-treponemal test at three months after onset of the primary chancre virtually excludes the diagnosis of syphilis.
 - Non-treponemal tests may be qualitative or quantitative. Quantitative non-treponemal test titres can be used to monitor response to treatment. Titres are expected to decrease following effective treatment and increase in untreated active infection. A four-fold change or higher in titre, equivalent to a change of at least two dilutions (e.g. from 1 : 16 to 1 : 4 for effective positive response to treatment, or from 1 : 8 to 1 : 32 for continued active infection) is considered a significant difference between two sequential tests using the same method (e.g. VDRL or RPR) and preferably by the same laboratory. Titres that differ by only one dilution (e.g. 1 : 8 versus 1 : 4 or 1 : 2 versus 1 : 1) are not considered significant and may only represent differences in laboratory interpretation).
- Treponemal tests:
 - Treponemal tests include the *Treponema pallidum* haemagglutination assay (TPHA), the *Treponema pallidum* particle agglutination assay (TPPA) and the fluorescent treponemal antibody absorbed (FTA-ABS) tests.
 - These tests are highly specific because they detect antibodies against treponemal-specific antigens; however, they do not differentiate venereal syphilis from endemic syphilis (the latter includes yaws and pinta).
 - Classically, one of these tests is used as a confirmatory test following a positive non-treponemal test. Treponemal tests usually remain positive (85%) for the patient's lifetime, regardless of treatment. Thus, a positive treponemal test does not distinguish between active infection and infection that has been previously treated.
- Rapid diagnostic tests (RDTs):
 - In the past decade, a number of point-of-care rapid diagnostic tests (RDTs) for treponemal antibodies in syphilis infection have been developed.
 - RDTs mostly use immunochromatographic strips impregnated with treponemal antigens that react with antibodies to syphilis in whole blood or serum.
 - RDTs provide treponemal antibody results in 10–15 minutes and can be performed in any setting since they do not require refrigerated storage or laboratory equipment.
 - The sensitivity of the RDTs ranges from 85% to 98% and the specificity from 93% to 98%, compared to the TPHA or TPPA as reference standards. In general, RDTs with higher sensitivities tend to have lower specificities and vice versa.
 - The tests work on the same principle as the specific treponemal tests described above, thus a positive result does not distinguish between active and previously treated infections.

- In Cambodia, the Alere HIV/Syphilis Duo RDT recently pre-qualified by WHO is being used for pregnant women at all ANC sites and for key populations and STI clients at HTS/ART and FHC.

Figure 15: WHO interim recommended syphilis testing and treatment strategy for high syphilis prevalence settings (above 5%)



5.3 TREATMENT

- For adults and adolescents including people living with HIV, key populations (including Entertainment workers, men who have sex with men and transgender persons):

	First choice	Alternatives
Early Syphilis primary, secondary and early latent syphilis(< 2 years'duration)	Benzathine Penicillin G 2.4 million units IM as a single dose	Procaine Penicillin G 1.2 million units intramuscularly for 10–14 days OR* Doxycycline 100 mg orally twice daily for 14 days or* Ceftriaxone 1 g intramuscularly once daily for 10–14 days
Late Syphilis infection of more than two years' duration (Late latent & tertiary) or unknown duration	Benzathine Penicillin G 2.4 million units IM once weekly for 3 consecutive weeks#	Procaine Penicillin G 1.2 million units intramuscularly for 20 days OR* Doxycycline 100 mg orally twice daily for 30 days
Neuro-syphilis and Ocular syphilis	Aqueous Crystalline Penicillin G 18-24 million units IV daily, administered as 3-4 million units IV every 4 hours or continuous infusion for 10-14 days	Procaine Penicillin G 2.4 million units IM daily plus Probenecid 500 mg, orally four times daily, both for 10-14 days

* In case of penicillin allergy or if not available

the interval between consecutive doses of BP should not exceed 14 days

- For people living with HIV**, evidence suggests that there may be little to no difference in the effects of different medicines and those not living with HIV. Thus, the recent WHO recommendations for syphilis treatment for PLHIV are the same as for non-HIV patients.
- For Neurosyphilis:** (CDC guidelines 2015)
 - No evidence exists to support variation from recommended treatment for syphilis at any stage for persons without clinical neurologic findings, with the exception of tertiary syphilis.
 - Although systemic steroids are used frequently as adjunctive therapy for otologic syphilis, such drugs have not been proven to be beneficial

- **Follow-Up:** If CSF pleocytosis was present initially, a CSF examination should be repeated every 6 months until the cell count is normal. Follow-up CSF examinations also can be used to evaluate changes in the CSF-VDRL or CSF protein after therapy; however, changes in these two parameters occur more slowly than cell counts, and persistent abnormalities might be less important. Leukocyte count is a sensitive measure of the effectiveness of therapy. If the cell count has not decreased after 6 months, or if the CSF cell count or protein is not normal after 2 years, retreatment should be considered. Limited data suggest that in immunocompetent persons and persons with HIV infection on highly active antiretroviral therapy, normalization of the serum RPR titer predicts normalization of CSF parameters following neurosyphilis treatment.
- For pregnant women:

	First choice	Alternatives
Early Syphilis primary, secondary and early latent syphilis (< 2 years' duration)	Benzathine Penicillin G 2.4 million units IM as a single dose	Procaine Penicillin G 1.2 million units intramuscularly for 10 days OR* Erythromycin # 500mg orally four times daily for 14 days or* Ceftriaxone 1g intramuscularly once daily for 10–14 days
Late Syphilis infection of more than two years' duration (Late latent & tertiary) or unknown duration	Benzathine Penicillin G 2.4 million units IM once weekly for 3 consecutive weeks	Procaine Penicillin G 1.2 million units intramuscularly for 20 days OR* Erythromycin # 500mg orally four times daily for 30 days

* In case of penicillin allergy or if not available

Erythromycin doesn't cross the placental barrier completely, so as a result the fetus is not treated

- For congenital syphilis:

	First choice	Alternatives
Infants with confirmed congenital syphilis or who are clinically normal, but whose mothers had untreated syphilis, inadequately treated syphilis (including treatment within 30 days of delivery) or syphilis treated with non-penicillin regimens	Aqueous Benzyl Penicillin 100,000-150,000 Unit/kg/day intravenously for 10-15 days	Procaine Penicillin G 50,000 units/kg/day single dose intramuscularly for 10-15 days

In infants who are clinically normal and whose mothers had syphilis that was adequately treated with no signs of reinfection, a close monitoring of the infants is recommended over treatment.

5.4 MANAGEMENT OF SEX PARTNERS

- Persons exposed sexually to a patient who has syphilis in any stage should be presumptively treated with the same treatment regimen used for the index patients.

5.5 OTHER MANAGEMENT CONSIDERATIONS

- All patients who have syphilis should be tested for HIV infection. In geographic areas in which the prevalence of HIV is high, patients who have primary syphilis should be retested for HIV after 3 months if the first HIV test result was negative.

5.6 FOLLOW-UP

- Non-treponemal test titers might decline more slowly for persons who previously had syphilis.
- All patients treated for syphilis should be reexamined clinically and serologically with RPR at 6 months and 12 months after treatment.

6. Chancroid

- Acute infection manifested by deep genital ulceration(s) and by the frequent occurrence of inguinal adenopathy and bubo formation.
- The etiologic agent is *Haemophilus ducreyi*; a Gram-negative coccobacillus.
- Transmission is exclusively via sexual contact.
- Like genital herpes and syphilis, chancroid is a risk factor in the transmission and acquisition of HIV infection

6.1 CLINICAL MANIFESTATIONS

- Chancroid usually develops 3 to 10 days after exposure to *H. ducreyi*
- The combination of a painful genital ulcer and tender suppurative inguinal adenopathy suggests the diagnosis of chancroid
- Characteristics of the ulcer(s):
 - Single or multiple, beginning as a papule, which ulcerates within 24 hours.
 - Typically "soft", i.e., not indurated (vs. indurated ulcer in syphilis), usually painful (vs. generally painless ulcer in syphilis), with ragged borders with undetermined deep edges, punched out, and with a necrotic generally purulent base.
- Lymphadenopathy:
 - Often (40-50%) but not always present; may occur after ulcer resolves.
 - Bubo, suppurative, tender lymphadenopathy (vs. non-tender, "rubbery" nodes in syphilis).
 - Often a sterile abscess.



Chancroid: Multiple Penile Ulcers



Chancroid: Multiple vulvo-vaginal Ulcers

- Differential diagnosis
 - **Syphilis:** singular hypoesthetic clean ulcer.
 - **Genital herpes:** Painful, usually multiple, immunocompromised patients (ulcers large and necrotic).
 - **Lymphogranuloma venereum:** tender bubo but primary lesion not distinctive.
 - **Other:** Behcet's disease, aphthosis major, trauma.

For both clinical and surveillance purposes, a probable diagnosis of chancroid can be made if all of the following criteria are met: 1) the patient has one or more painful genital ulcers; 2) the clinical presentation, appearance of genital ulcers and, if present, regional lymphadenopathy are typical for chancroid; 3) the patient has no evidence of *T. pallidum* infection by darkfield examination of ulcer exudate or by a serologic test for syphilis performed at least 7 days after onset of ulcers; and 4) an HSV PCR test or HSV culture performed on the ulcer exudate is negative.

- Complications:
 - Destructive ulcers.
 - Bubo rupture; fistula formation, scarring with phimosis.
 - Autoinoculation from infected pus.

6.2 LABORATORY DIAGNOSIS

A definitive diagnosis of chancroid requires the identification of *H. ducreyi* on special culture media that is not widely available from commercial sources; even when these media are used, sensitivity is <80% (315).

- Specimen collection: a sterile swab is rolled across the base of a genital ulcer. Crusting and excess pus should be wiped away, which may precipitate bleeding.
- Gram-stain : "railroad ties": short Gram-negative rods; sensitivity low; requires experienced microscopist (not available in Cambodia).
- Culture: using selective media is the gold standard. Sensitivity of 40-80% but is not commercially available.
- PCR: No FDA-cleared PCR test for *H. ducreyi* is available.

Patients should be tested for HIV infection at the time chancroid is diagnosed. If the initial test results were negative, a serologic test for syphilis and HIV infection should be performed 3 months after the diagnosis of chancroid.

6.3 TREATMENT

	First choice	Alternatives
Chancroid (painful non indurated genital ulcer with tender suppurative inguinal adenopathy)	Azithromycin, 1g, orally as a single dose. OR Ceftriaxone, 250mg IM single dose	Ciprofloxacin 500 mg orally twice daily for 3 days OR Erythromycin base 500mg orally four times daily for 7 days

6.3.1 FOLLOW-UP

- Patients should be re-examined 3–7 days after initiation of therapy. If treatment is successful, ulcers usually improve symptomatically within 3 days and objectively within 7 days after therapy.
- If no clinical improvement is evident, the clinician must consider whether 1) the diagnosis is correct, 2) the patient is coinfecting with another STD, 3) the patient is infected with HIV, 4) the treatment was not used as instructed, or 5) the *H. ducreyi* strain causing the infection is resistant to the prescribed antimicrobial.
- The time required for complete healing depends on the size of the ulcer; large ulcers might require >2 weeks. In addition, healing is slower for some uncircumcised men who have ulcers under the foreskin.
- Clinical resolution of fluctuant lymphadenopathy is slower than that of ulcers and might require needle aspiration or incision and drainage, despite otherwise successful therapy. Although needle aspiration of buboes is a simpler procedure, incision and drainage might be preferred because of reduced need for subsequent drainage procedures. Buboes may appear to worsen in the 1-2 days following therapy. Buboes may need additional antibiotic therapy for resolution.

6.3.2 HIV INFECTION

- Persons with HIV infection who have chancroid should be monitored closely because they are more likely to experience treatment failure and to have ulcers that heal slowly.
- Persons with HIV infection might require repeated or longer courses of therapy, and treatment failures can occur with any regimen.

7. Genital And Anorectal Herpes Infections

- Herpes simplex virus type 2 (HSV-2) is the most common cause of genital ulcers with an estimated 19.2 million new HSV-2 infections among adults and adolescents aged 15–49 years worldwide in 2012, with the highest rates among younger age groups.
- HSV-2 is a lifelong infection with an estimated global prevalence of 11.3% giving an estimated 417 million people with the infection in 2012. The prevalence of HSV-2 is highest in the WHO African Region (31.5%), followed by the Region of the Americas (14.4%). Despite lower prevalence, the WHO South-East Asia and Western Pacific Regions also have large number of people with the infection due to the large populations of some countries in the region.
- HSV-2 infection rate is consistently higher in females compared to males with an estimated 11.8 million new infections and 267 million prevalent infections among women in 2012 versus 7.4 million new and 150 million prevalent infections among men. The higher infection rate among women is most likely due to their greater biological susceptibility to HSV-2 infection.
- HSV type 1 (HSV-1) typically causes non-sexually-transmitted oral herpes infection. However, it can also be transmitted to the genitals through oral sex and is increasingly noted as a cause of genital HSV infection, especially in high-income countries. Globally, an estimated 140 million people had genital HSV-1 infection in 2012.
- HSV-2 is of particular concern due to its epidemiological synergy with HIV infection and transmission. People who are infected with HSV-2 are approximately three times more likely to become infected with HIV, and people with both HIV and HSV-2 are more likely to transmit HIV to others. In addition, infection with HSV-2 in PLHIV is often more severe and can lead to serious, although rare, complications, such as brain, eye or lung infections. Suppressive anti-HSV therapy in PLHIV does not reduce the risk for either HIV transmission or HSV-2 transmission to susceptible sex partners.

7.1 CLINICAL MANIFESTATIONS

- HSV-2 infection is the most common cause of recurrent genital ulcer disease (GUD) worldwide. Symptomatic genital HSV is a lifelong condition that can be characterized by frequent symptomatic recurrences.

Primary (initial) infection:

- Most initial infections are asymptomatic or atypical, therefore the majority of people with HSV-2 infection might not been diagnosed.

- The classical clinical presentation of the first episode of primary genital HSV infection is characterized by bilateral clusters of erythematous papules, vesicles or ulcerations on the external genitalia, in the perianal region or on the buttocks, occurring 4–7 days after sexual exposure. This classical syndrome occurs only in 10–25% of primary infections. Patients present with genital pain and itching and 80% of women also report dysuria. Constitutional symptoms, such as fever, headache, myalgia and malaise are common. Cervicitis and tender inguinal and femoral lymphadenopathy frequently accompany initial infections.
- Primary HSV cervicitis occurs in ~90% of primary HSV-2 infection and ~70% of primary HSV-1 infections. It may manifest as a mucopurulent cervicitis, or it may be asymptomatic. The cervix will appear abnormal to inspection in the majority of cases, with ulcerative lesions, erythema, or friability. Clinical differentiation from gonorrhoeal or chlamydial cervicitis may be difficult, although cervical ulceration may suggest HSV.
- Over a period of 2–3 weeks, new lesions appear and existing lesions progress to vesicles and pustules and then coalesce into ulcers before crusting over and healing. Lesions on mucosal surfaces may be ulcerative without initially presenting as vesicles.
- Atypical presentations of HSV-2 infections may include small erosions and fissures, as well as dysuria or urethritis without lesions. Although HSV-1 and HSV-2 are usually transmitted by different routes and affect different areas of the body, the signs and symptoms overlap. The first episode of symptoms of genital HSV-1 infection cannot be clinically differentiated from genital HSV-2 infection; it is only through laboratory tests that these infections can be differentiated.

Recurrent infection

- Most people will experience one or more symptomatic recurrences within one year after the first symptomatic episode of HSV-2 infection (average of 2-6 recurrences/year). With genital HSV-1 infection, symptomatic episodes are much less likely to recur. Symptomatic recurrences are generally less severe than the first episode.
- After initial infection, chronic HSV-2 infection typically leads to intermittent viral shedding from the genital mucosa, even in the absence of symptoms. As a result, HSV-2 is often transmitted by people who are unaware of their infection or who are asymptomatic at the time of sexual contact.
- Recurrences are often preceded by prodromal symptoms (including tingling, paresthesia and pain), are characterized by fewer lesions than the first episode, and are usually present unilaterally and without systemic symptoms. Pain is less severe during recurrences, and the lesions heal in 5–10 days without antiviral treatment.



Typical ano-genital vesicles and ulceration in man and woman due to HSV infections

Asymptomatic viral shedding

- Most HSV-2 is transmitted during asymptomatic shedding.
- Asymptomatic shedding is of briefer duration than during clinical recurrences.
- Rates of asymptomatic shedding are greater with HSV-2 than HSV-1.
- Vulva and perianal areas in women and penile skin and perianal area in men are the most common sites of asymptomatic shedding.

Herpes in pregnancy

- Neonatal herpes is one of the most serious complications of genital herpes. Herpes infection can be passed from mother to child during pregnancy or childbirth, or babies may be infected shortly after birth, resulting in a potentially fatal neonatal herpes infection.
- Healthcare providers should ask all pregnant women if they have a history of genital herpes.
- Infants born to women who acquire genital herpes close to the time of delivery and are shedding virus at delivery are at a much higher risk for developing neonatal herpes, compared with women who have recurrent genital herpes.
- Thus, it is important that women avoid contracting herpes during pregnancy. Women should be counseled to abstain from intercourse during the third trimester with partners known to have or suspected of having genital herpes.
- While women with genital herpes may be offered antiviral medication late in pregnancy through delivery to reduce the risk of a recurrent herpes outbreak, third trimester antiviral prophylaxis has not been shown to decrease the risk of herpes transmission to the neonate.
- Routine serologic HSV screening of pregnant women is not recommended. However, at onset of labor, all women should undergo careful examination and questioning to evaluate for presence of prodromal symptoms or herpetic lesions. If herpes symptoms are present a cesarean delivery is recommended to prevent HSV transmission to the infant.

Herpes and HIV co-infection

- Immunocompromised patients, including those with HIV, generally have more frequent recurrences with more severe symptoms. Recurrent ulcers can cause significant physical and psychological morbidity.
- In people whose immunity is deficient, persistent and/or severe mucocutaneous ulcerations may occur, often involving large areas of perianal, scrotal or penile skin. The lesions may be painful and atypical, making a clinical diagnosis difficult.

Complications of genital infection

- Aseptic meningitis, radicular pain, sacral paresthesias, myelitis
- Stomatitis and pharyngitis
- Disseminated (viremic) infection
- Ocular involvement (more common with HSV-1)

7.2 LABORATORY DIAGNOSIS

- Genital HSV infection is often diagnosed clinically.
- However, laboratory testing is required to differentiate between HSV-1 and HSV-2. When vesicles are not present, laboratory confirmation may be needed to rule out other causes of genital ulcers.
- Available tests for HSV-2 include cytology (Tzank or Pap), antigen detection, isolation of virus by culture and nucleic acid amplification tests (NAATs) for viral DNA.
- Serological assays are also available to screen for HSV-2 infection by detection of type-specific antibodies, which develop in the first several weeks after initial infection and persist indefinitely.
- Although viral culture has previously been considered the gold standard for HSV-2 diagnosis, NAATs are increasingly preferred due to higher sensitivity, ease of specimen collection and transportation, and faster results.

7.3 TREATMENT

- For adults and adolescent, including PLHIV, people immune-compromised and pregnant women:

	First choice	Alternatives
First Clinical Episode of Hsv Infections For all	Acyclovir 400 mg orally, 3 times daily for 10 days OR Acyclovir 200 mg orally, 5 times daily for 10 days	Valaciclovir , 500 mg, 2 times daily for 10 days OR Famciclovir , 250 mg, 3 times daily for 10 days
Recurrent Episodes Of Hsv Infections For Adults and adolescents, pregnant women (episodic therapy)	Acyclovir 400mg orally 3 times daily for 5 days OR Acyclovir 800mg orally twice daily for 5 days OR Acyclovir 800mg orally 3 times daily for 2 days	Valaciclovir 500 mg orally twice daily for 3 days OR Famciclovir 250 mg orally twice daily for 5 days
Recurrent Episodes Of Hsv Infections for PLHIV and immunocompromised patients (episodic therapy)	Acyclovir 400mg orally twice daily	Valaciclovir 500 mg orally once daily (twice daily for PLHIV) OR Famciclovir 250 mg orally twice daily (500 mg twice daily for PLHIV)
Neonates	Acyclovir 20 mg/kg IV every 8 hours for 14 days if limited to skin/mucous membranes, or for 21 days if disseminated or involving the CNS	

7.4 RECURRENT INFECTIONS

- Episodic treatment:
 - Treatment should be given within the first 24 hours of the onset of symptoms of genital HSV infection or during the prodromal phase
 - Episodic or suppressive antiviral therapy will shorten the duration of genital lesions.
 - When treatment is started during the prodromal or within 1 day after onset of lesions, many patients who have recurrent disease benefit from episodic therapy. If episodic treatment of recurrences is chosen, the patient should be provided with antiviral therapy, or a prescription for the medication, so that treatment can be initiated at first sign of prodromal or genital lesions
- Suppressive treatment:
 - For adults and adolescents with recurrent clinical episodes of genital HSV infection that are frequent (e.g. 4-6 times a year), severe or cause distress, the WHO STI guideline suggests suppressive therapy over episodic therapy, and reassessment after one year.
 - To determine frequency or severity, episodes can be monitored for the first few months.

7.5 HERPES IN PREGNANCY

- During the first clinical episode of genital herpes, treat with oral acyclovir. Vaginal delivery in women who develop primary genital herpes shortly before delivery puts babies at risk for neonatal herpes.
- Babies born to women with recurrent disease are at very low risk.
- Genital cultures late in pregnancy are poor predictors of shedding during delivery.
- Careful history and physical examination serve as a guide to the need for caesarean section in mothers with genital herpes lesions.

7.6 NEONATAL HERPES

- Newborn infants exposed to HSV during birth, as documented by maternal virologic testing of maternal lesions at delivery or presumed by observation of maternal lesions, should be followed carefully in consultation with a pediatric infectious-disease specialist.
- Surveillance cultures or PCR of mucosal surfaces of the neonate to detect HSV infection might be considered before the development of clinical signs of neonatal herpes to guide initiation of treatment.
- In addition, administration of acyclovir might be considered for neonates born to women who acquired HSV near term because the risk for neonatal herpes is high for these infants. All infants who have neonatal herpes should be promptly evaluated and treated with systemic acyclovir.
- *The recommended regimen for infants treated for known or suspected neonatal herpes is acyclovir 20 mg/kg IV every 8 hours for 14 days if disease is limited to the skin and mucous membranes, or for 21 days for disseminated disease and that involving the central nervous system.*

7.7 HIV

- Most lesions of herpes in HIV infected persons will respond to acyclovir, but the dose or duration may have to be adapted.
- Subsequently, patients may benefit from chronic suppressive therapy.
- Suppressive anti-HSV therapy in persons with HIV infection does not reduce the risk for either HIV transmission or HSV-2 transmission to susceptible sex partners
- In some cases the patients may develop thymidine-kinase deficient mutants for which standard antiviral therapy becomes ineffective.

8. Genital Warts

- The natural history of genital warts is usually benign, but recurrence of genital warts within the first several months after treatment is common.
- Treatment for genital warts can reduce HPV infection, but whether the treatment results in a reduction in risk for transmission of HPV to sex partners is unclear. The duration of infectivity after wart treatment is unknown. Sexual partners should be examined for evidence of warts.
- Patients with anogenital warts should be made aware that they are contagious to sexual partners. Condoms might reduce the risk for HPV-associated diseases (e.g., genital warts and cervical cancer). Consistent condom use also may reduce the risk for genital HPV. HPV infection can occur in areas that are not covered or protected by a condom (e.g., scrotum, vulva, or perianus).
- Specific types of HPV may give rise to invasive carcinoma of the cervix. It is recommended practice to examine the cervix in all female STI patients, and to perform regular cervical smears in this population for Papanicolaou examination. The presence of genital warts is not an indication for HPV testing, a change in the frequency of Pap tests, or cervical colposcopy. HPV testing is not indicated for partners of persons with genital warts.



Ano-genital warts in man and woman due to HPV infections

8.1 TREATMENT FOR GENITAL WARTS

Chemical treatment

- Podophyllin 10-25%, applied carefully to the warts, avoiding normal tissue. External genital and perianal warts should be washed thoroughly 1-4 hours after the application of podophyllin. (0.5 ml per day)
- TCA 80-90%, applied carefully to the warts, avoiding normal tissue, followed by powdering of the treated area with talc or sodium bicarbonate (baking soda) to remove unreacted acid. Repeat application at weekly intervals.

- Imiquimod 5% cream applied with a finger at bedtime, left on overnight, 3 times a week for as long as 16 weeks. The treatment area should be washed with soap and water 6-10 hours after application. Hand must be washed with soap and water immediately after application.

Physical treatment

- Cryotherapy with liquid nitrogen, solid carbon dioxide, or a cryoprobe. Repeat applications every 1-2 weeks.
- Electrosurgery
- Surgical removal

Treatment of vaginal and cervical warts

- Cryotherapy with liquid nitrogen OR
- Podophyllin 10-25%. Allow to dry before removing speculum OR
- TCA 80-90% OR
- Electrosurgery

Warts during Pregnancy

- Imiquimod, podophyllin, and podofilox should not be used during pregnancy.
- However, because genital warts can proliferate and become friable during pregnancy, many specialists advocate their removal during pregnancy.
- HPV types 6 and 11 can cause respiratory papillomatosis in infants and children. The route of transmission (i.e., transplacental, perinatal, or postnatal) is not completely understood.
- Whether cesarean section prevents respiratory papillomatosis in infants and children is unclear; therefore, cesarean delivery should not be performed solely to prevent transmission of HPV infection to the newborn. Cesarean delivery might be indicated for women with genital warts if the pelvic outlet is obstructed or if vaginal delivery would result in excessive bleeding.

9. Trichomonas Vaginalis Infections

- The flagellated protozoan, *T. vaginalis*, is almost exclusively sexually transmitted in adults.
- The infection may be asymptomatic.
- Symptomatic trichomoniasis presents with offensive vaginal discharge and vulval itching in women, and urethritis in men.

9.1 CLINICAL MANIFESTATIONS

- "Frothy" gray or yellow-green vaginal discharge.
- Pruritus.
- Cervical petechiae ("strawberry cervix")



Trichomoniasis in pregnancy

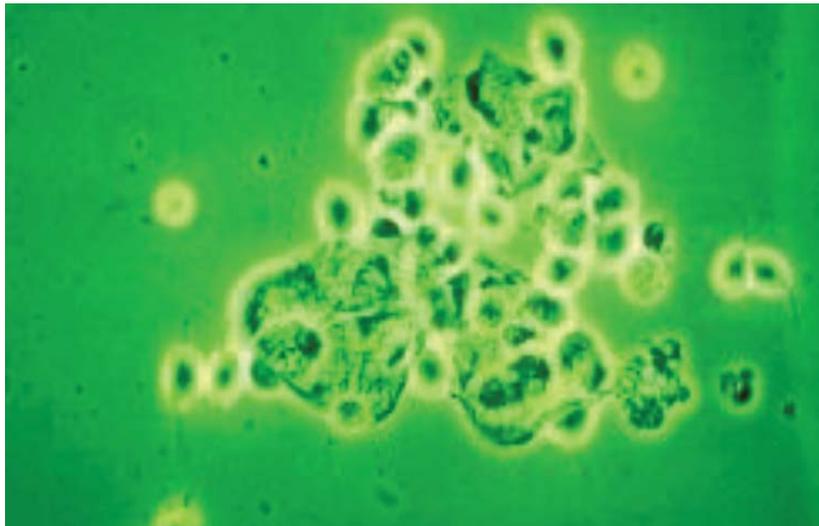
- There is increasing evidence of an association between infection with *T. vaginalis* and adverse pregnancy outcomes (e.g. premature rupture of the membranes, low birth weight).

Neonatal infections

- Infants with symptomatic trichomoniasis or with urogenital colonization persisting past the fourth month of life should be treated with Metronidazole.

9.2 LABORATORY DIAGNOSIS

- Vaginal pH >4.5 often present.
- Positive amine (KOH) test ("whiff" test) in many cases.
- Motile trichomonads seen in saline wet mount (usual mode of diagnosis). White blood cells are frequently seen. Saline microscopy should be performed as soon as possible after obtaining the specimen.
- Culture (Diamond's media or InPouch TV) is more sensitive than wet mount.
- For suspected trichomoniasis in males, first-void urine concentrated and examine for motile trichomonads; urethral swab or 10 cc of first-void urine may also be obtained for culture.



T. vaginalis motile organisms seen in wet preparations

9.3 TREATMENT

- Metronidazole is the key treatment giving almost 95% cure rate:

	First choice	Alternatives
Non pregnant women	Metronidazole 2g orally as a single dose	Metronidazole 500 mg orally, twice daily for 7 days
Pregnant women	Metronidazole* 2 g orally as a single dose	
Neonates	Metronidazole 5 mg/kg orally, 3 times daily for 5 days	
Persistent, recurrent, Treatment failures,	Metronidazole, 500 mg orally, twice daily for 7 days And Assure treatment of sex partners	Metronidazol, 2g orally as a single dose,

* No evidence of teratogenicity; treatment may be administered throughout pregnancy

- Patients taking metronidazole should be cautioned not to consume alcohol while they are taking the drug and up to 24 hours after taking the last dose.

10. Bacterial Vaginosis

- Bacterial vaginosis is a clinical syndrome resulting from replacement of the normal hydrogen peroxide (H₂O₂)-producing *Lactobacillus* sp. in the vagina with high concentrations of anaerobic bacteria, such as *G. vaginalis* and *Mycoplasma hominis*.
- The cause of the microbial alteration is not fully understood.
- Whereas trichomoniasis is a sexually transmitted infection, bacterial vaginosis is an endogenous reproductive tract infection.
- Treatment of sexual partners has not been demonstrated to be of benefit.
- It is recommended that predisposing factors such as the use of antiseptic/antibiotic vaginal preparations or vaginal douching be reduced or eliminated.
- Additional studies are needed to confirm the relationship between an altered vaginal microflora and the acquisition of HIV.

10.1 CLINICAL MANIFESTATIONS

- 50% report malodorous vaginal discharge, sometimes reported more commonly after unprotected vaginal intercourse and after completion of menses.
- 50% asymptomatic: May have increased discharge, and vaginal pruritus may or may not be present.

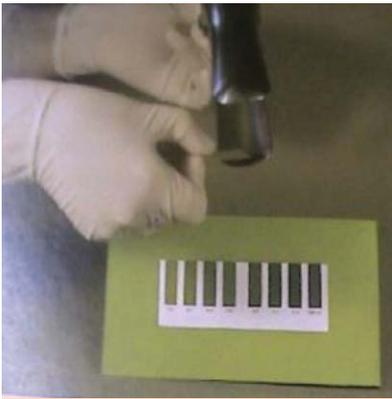


Thin homogenous vaginal discharge

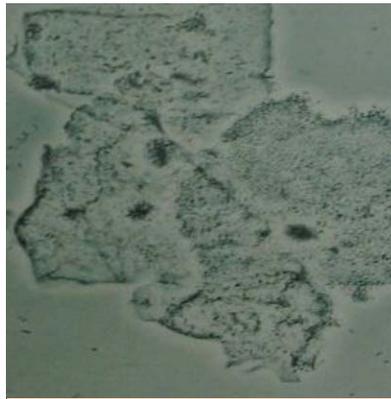
10.2 LABORATORY DIAGNOSIS

Amsel criteria: at least three of the following findings for diagnosis

1. Vaginal pH >4.5 (most sensitive but least specific).
2. Presence of "clue cells" on wet mount examination (bacterial clumping upon the borders of epithelial cells). Clue cells should constitute at least 20% of all epithelial cells
3. Positive amine or "whiff test" (liberation of amines with or without the addition of 10% KOH, with resultant "fishy" odor).
4. Homogeneous, non-viscous, milky-white discharge adherent to the vaginal walls.



Vaginal pH > 4.5

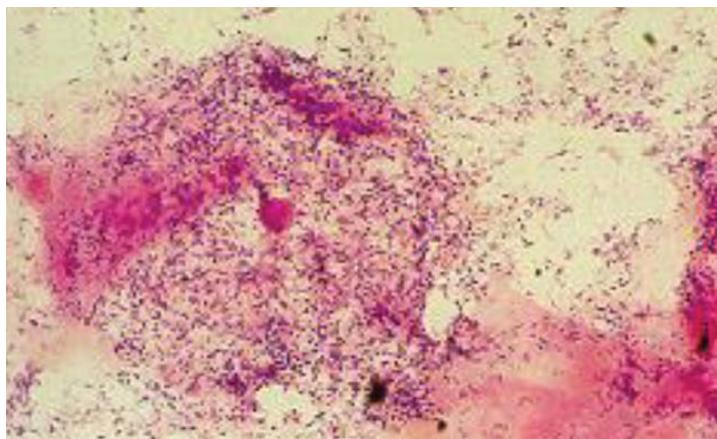


Clue cells



Amine odor

Some experts use vaginal Gram stain: to diagnose BV (Nugent criteria). A normal Gram stain shows predominantly Lactobacillus bacteria. When a more mixed flora is present (Gram-positive cocci, small Gram-negative rods, curved Gram variable rods) and Lactobacillus absent or present in low numbers, the smear is interpreted Nugent score ≥ 7 .



Gram stained smear of vaginal discharge showing Nugent score ≥ 7

10.3 TREATMENT

	First choice	Alternatives
Non pregnant women	Metronidazole 500 mg orally, twice daily for 7 days	Metronidazole , 2 g orally, as a single dose OR Clindamycin vaginal cream 2%, 5 g at bedtime intravaginally for 7 days OR Metronidazole gel 0.75%, 5g once daily intravaginally for 5 days OR Clindamycin , 300 mg orally twice daily for 7 days.
Pregnant women*	Metronidazole , 500 mg orally twice times daily for 7 days	Metronidazole , 2g orally, as a single dose OR Clindamycin , 300 mg orally twice daily for 7 days
Women with PID	Metronidazole , 500 mg orally twice times daily for 14 days	

* Consider pre-treatment with anti-emetic

- Patients taking metronidazole should be cautioned not to consume alcohol while they are taking the drug and up to 24 hours after taking the last dose.
- Follow-up: Patients should be advised to return if symptoms persist as re-treatment may be needed.
- Bacterial vaginosis in pregnancy
 - There is evidence that bacterial vaginosis is associated with an increased incidence of adverse pregnancy outcomes (e.g., premature rupture of membranes, pre-term delivery and low birth weight).
 - Symptomatic pregnant women should be treated, and those with a history of previous pre-term delivery should be screened to detect asymptomatic infections. Pregnant women with current of symptoms should be re-treated. Screening of asymptomatic pregnant women without a history of prior pre-term delivery is recommended.

11. Vulvovaginal Candidiasis

- In the majority of cases, vulvo-vaginal candidiasis is caused by candida albicans (C. albicans).
- Up to 20% of women with the infection may be asymptomatic.
- If symptoms occur, they usually consist of vulval itching, soreness and non-offensive.
- Pregnancy, oral contraceptive use, menstruation, antibiotic use, corticosteroid use, diabetes mellitus, and immunosuppression, including HIV infection, are all factors predisposing to candidiasis and should be recorded in the patient's history.
- Vulvo-vaginal candidiasis usually is not acquired through sexual intercourse. Although treatment of sexual partners is not recommended it may be considered for women who have recurrent infection. A minority of male sex partners may have balanitis, which is characterized by erythema (redness) of the glans penis.

11.1 CLINICAL MANIFESTATIONS

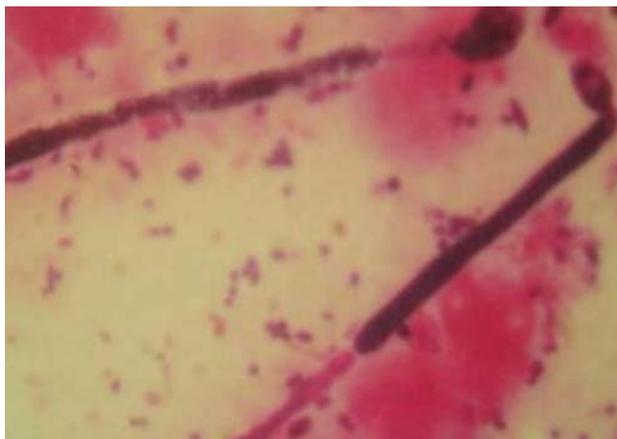
- Thick, white, curdy vaginal discharge ("cottage-cheese-like").
- Vulvar pruritus, erythema, irritation.
- External dysuria.



Thick white vaginal discharge due to C.Albicans

11.2 LABORATORY DIAGNOSIS

- 1 Clinical presentation and symptoms.
- Visualization of pseudohyphae (mycelic) and/or budding yeast (conidia) on 10% KOH examination (preferred), saline wet mount, or Gram stains.
- pH usually <4.5. If pH is abnormally high >4.5, consider concurrent BV or trichomoniasis.
- Cultures not useful for routine diagnosis,
- DNA probe is available but expensive.



Gram stained smear of vaginal discharge showing gram-positive yeasts and mycelia



Yeast seen in 10% KOH wet prep

Vulvovaginal Candidiasis and HIV infection

- Candidiasis at several sites, including the vulva and vagina, is an important correlate of the stage of HIV disease.
- It is often quite severe and frequently relapses. Prolonged treatment is generally required, and chronic suppressive therapy is frequently employed.

Recurrent Vulvo-Vaginal Candidiasis (RVVC)

- RVVC, usually defined as four or more episodes of symptomatic VVC in 1 year, and affects a small percentage of women (<5%).
- The pathogenesis of RVVC is poorly understood, and the majority of women with RVVC have no apparent predisposing or underlying conditions.
- Vaginal cultures should be obtained from patients with RVVC to confirm the clinical diagnosis and to identify unusual species, including non-albicans species, particularly *Candida glabrata* (*C. glabrata* does not form pseudohyphae or hyphae and is not easily recognized on microscopy). *C. glabrata* and other non-albicans *Candida* species are observed in 10%–20% of patients with RVVC. Conventional antimycotic therapies are not as effective against these species as against *C. albicans*.

11.3 TREATMENT

	First choice	Alternatives
Non pregnant women	Clotrimazole* 500 mg intravaginally, as a single dose OR Miconazole* or Clotrimazole* 200 mg intravaginally daily for 3days OR Fluconazole 150 mg orally, as a single dose	Nystatin 100,000 IU intravaginally daily x 14 days
pregnant women	Clotrimazole* 500 mg intravaginally, as a single dose OR Miconazole* or Clotrimazole* 200 mg intravaginally daily for 3 days	

- **Pregnant women:** Although there are now some effective single dose oral treatments, they are not known to be safe or effective. Only topical azoles should be used to treat pregnant women. Of those treatments that have been investigated for use during pregnancy, the most effective are miconazole, clotrimazole, butoconazole and terconazole.

Recurrent Vulvovaginal Candidiasis

- Each individual episode of RVVC caused by *C. albicans* responds well to short duration oral or topical azole therapy. However, to maintain clinical and mycologic control, some specialists recommend a longer duration of initial therapy (e.g., 7–14 days of topical therapy or a 100 mg, 150 mg, or 200 mg oral dose of fluconazole every third day for a total of 3 doses (day 1, 4, and 7) to attempt mycologic remission before initiating a maintenance antifungal regimen.

Maintenance Regimens

- Oral fluconazole (i.e., 100-mg, 150-mg, or 200-mg dose) weekly for 6 months is the first line of treatment. If this regimen is not feasible, some specialists recommend topical clotrimazole 200 mg twice a week, clotrimazole (500-mg dose vaginal suppositories once weekly), or other topical treatments used intermittently.

Table 12: Differentiating Bacterial Vaginosis, Candidiasis, and Trichomoniasis

	Normal	Bacterial Vaginosis	Candidiasis	Trichomoniasis
Symptoms/ Presentation		Odor, discharge, itch	Itch, discomfort, dysuria, thick discharge	Itch, discharge, 50% asymptomatic
Vaginal Discharge	Clear to white	Homogenous, adherent, thin, milky-white; malodorous "foul fishy"	Thick, clumpy, white "cottage cheese"	Frothy, gray or yellow-green; malodorous
Clinical Findings			Inflammation and erythema	Cervical petechiae "strawberry cervix"
Vaginal pH	3.8-4.2	>4.5	Usually ≤ 4.5	>4.5
KOH "whiff test"	Negative	Positive	Negative	Often positive
NaCl Wet Mount	Lacto-bacilli	Clue cells ($\geq 20\%$), no/few WBCs	Few WBCs	Motile flagellated protozoa, many WBCs
KOH Wet Mount			Pseudohyphae or spores if non-albicans species	

12. Scabies

- Scabies is an infestation by the mite, *sarcoptes scabiei* var. *hominis*.

12.1 CLINICAL MANIFESTATIONS

- The clinical features of scabies are pruritic papules on the genitals, finger webs, wrists, axillae and buttocks with nocturnal exacerbation of the itch.
- Family members may have similar symptoms.



Wrist and genital pruritic due to Scabies

12.2 LABORATORY DIAGNOSIS

- The mite can be demonstrated by microscopic examination of scrapings from burrows on the skin.

12.3 TREATMENT

	First choice	Alternatives
Above 2 year old children and adults	<p>Emulsion benzyl benzoate* (EBB) 25% application for adults and 10% for children under 10 years old. Apply nightly from neck down on all areas of body for 3 nights.</p> <p>OR</p> <p>Malathion* 0.5% lotion applied thinly to all areas of the body from the neck down and washed off after 24 hours. Apply nightly for 2 nights.</p>	<p>Gamma benzene hexachloride 1% (Lindane)# overnight x 1 application</p>
Under 2 year-old children	<p>Permethrin 5% cream overnight, to be repeated one week later</p> <p>OR</p> <p>Sulphur 6% in aqueous cream overnight for 3 to 5 days</p>	<p>Crotamiton 10% lotion (Eurax) for 7 days (this is a weak scabicide and 7 days of treatment are required)</p>
Crusted (Norwegian) scabies in HIV patients	<p>Combined topical AND oral treatment with Ivermectin (0.2 mg/kg) 2 or 3 doses every 1 to 2 weeks</p>	

* not for use in children under 2 years of age.

Avoid bathing 2 hours before application because wet skin enhances absorption. Not for use in pregnant or lactating women or children below 2 years old

Scabicide	Frequency of application	Toxicity
Permethrin 5% cream	One application left on over 8–12 hours	Low
Malathion liquid emulsion	One application left on over 4 hours	Low
Benzyl benzoate	Two applications over 48 hours	Low
Lindane	Two applications 72 hours apart	Medium
Sulfur ointment	Each night for 3 nights	Low

12.4 FOLLOW-UP

- Clothing and bed sheets should be washed with hot water or dry cleaned. Patients must be warned that there might be an initial exacerbation of the pruritus. Antihistamines are required to relieve the itch.
- Repeat treatment with different agent is often necessary –treatment failure may be due to resistance to medication, faulty application techniques, poor penetration through thick scales, mites in difficult to reach areas, and reinfection.
- Post-scabetic itch can last several weeks and is treated with topical steroids and antihistamines.

12.5 MANAGEMENT OF SEXUAL CONTACT

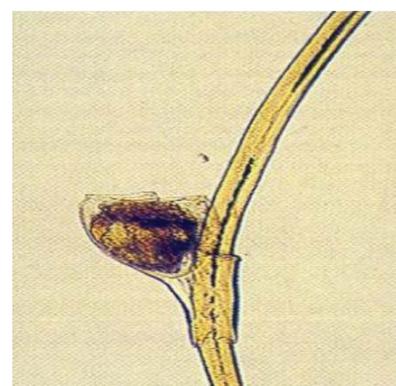
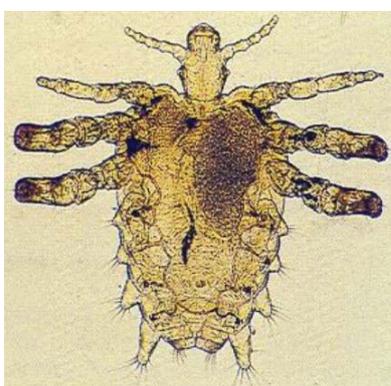
- Sex partners and close family contacts should be treated even if asymptomatic.

13. Pubic Lice (Pediculosis Pubis)

- This is an infestation of the anogenital region by the crab louse, *phthirus pubis*. In adults it is usually sexually transmitted.

13.1 CLINICAL FEATURES

- The infestation is indicated by the presence of brown adult lice on the pubic skin as their ova (nits) on pubic hair shafts. Small haemorrhagic spots are also seen on the pubic/genital skin



and underwear.

13.2 LABORATORY TESTS

- The presence of lice or nits recovered from pubic hair confirms the diagnosis.

13.3 TREATMENT

- Recommended Regimens
 1. Malathion 0.5% lotion application. Wash off after 12 hours. or
 2. Permethrin (1%) crème rinse. Wash off after 10 minutes. or
 3. Lindane 1% shampoo: Wash off after 4 minutes (not recommended for pregnant or lactating women)

If the eyelashes are affected, apply an occlusive ophthalmic ointment or vaseline to the eyelid margin twice daily for 10 days or remove lice with tweezers or forceps.

- Treatment in pregnancy: Pregnant or lactating women should be treated with Permethrin.

13.4 FOLLOW-UP

- Patients should be re-evaluated after 1 week, which is the time taken for any nits to hatch into lice. Re-treat only if the lice are found or eggs are observed.

13.5 MANAGEMENT OF SEXUAL CONTACTS

- Regular sex partners within the last month should be encouraged to come for examination and treatment.

14. Molluscum Contagiosum

- Molluscum Contagiosum is a viral infection caused by a pox virus. Genital molluscum infections in adults are usually sexually-transmitted.

14.1 CLINICAL FEATURES

- Individual lesions of molluscum contagiosum are discrete, smooth, pearly or flesh-coloured, dome-shaped papules and are often confined to the genital area. Each papule may have a mildly erythematous base and a central punctum beneath which lies a white curdlike core.



14.2 LABORATORY TESTS

- Giemsa-stained smears of the expressed core from the punctum or a skin biopsy will demonstrate molluscum bodies.

14.3 TREATMENT

- The condition is usually self-limiting and the lesions may heal spontaneously. Treatment is therefore not mandatory.
- Derof the lesion with a sharp curette, a comedone extractor or a needle.
- Destroy the remaining lesion with liquid nitrogen, trichloroacetic acid application or electrocautery.
- More than one treatment session is often required.

14.4 MANAGEMENT OF SEXUAL CONTACTS

- Regular sex partners should be encouraged to come for examination and treatment, where indicated

15. Non-STI Genital Lesions

- Many dermatologic conditions can affect the genitals, and some anatomic variants occasionally are confused with abnormal conditions by patients or their health care providers. Not surprisingly, sexually active persons with genital dermatoses often present to providers with concerns about STD.
- Examples of a few conditions are presented, with emphasis on those that are especially likely to affect younger persons or that are easily confused with STDs.

15.1 INFLAMMATORY DERMATOSES OF THE GENITALS

15.1.1 PSORIASIS

- Psoriasis is the most common inflammatory reaction affecting the genitalia.
- It may appear in 2 forms:
 - Inverse psoriasis: Patients may develop bright red well-defined inguinal plaques known as. The scale so apparent in other parts of the body is not seen. No central clearing often seen in tinea is present. The plaque appears homogeneously erythematous. Similar lesions may be affected the axilla or the popliteal fossa. Unlike psoriasis elsewhere, inverse psoriasis may be itchy. Often, no past history of psoriasis is present
 - Psoriasis may affect the penis, particularly the glans penis. Thin pale erythematous plaques with slight scale are seen in discreet or continuous forms. No itching or burning is present. It may be aggravated by trauma. Often, no psoriasis is seen on the rest of the body. Like inverse psoriasis, psoriasis on the penis tends to be well defined. No vesicles or erosions are seen.
- Both types of psoriasis respond well to low-potency cortisone creams. Mild and high potency steroids must not be used to avoid atrophy. It can be helpful to compound hydrocortisone 2.5% cream and ketoconazole cream. Calcipotriol cream, a vitamin D derivative, used elsewhere for psoriasis can be a non-steroidal alternative for psoriasis on the glans penis.



**Psoriasis of the glans penis
in a circumcised male**



**Psoriasis of the glans penis
in an uncircumcised man**

15.1.2 REITER'S DISEASE

- Reiter's disease is associated with arthritis, urethritis, and conjunctivitis.
- Patients may also develop a balanitis circinata consisting of moist serpiginous plaques with ragged white borders on the glans penis.



Balanitis circinata in Reiter's Disease

15.1.3 ECZEMA

- It frequently affects the genital region, particularly the scrotum.
- Patients complain of intense itching often related to heat and sweat. Patients present with lichenified erythematous plaques on the lateral scrotum. Darker skinned patients often exhibit hyperpigmented rather than erythematous eruptions leading the clinician to underestimate the degree of inflammation.



- In acute cases, low potency topical steroids for a maximum of 2 weeks can be helpful. In chronic cases, most topical medications are soothing for only a few hours.
- Patients often wash the area vigorously with soap feeling that cleanliness will aid the problem. Getting them to stop excessive washing is very important to long term resolution.
- Zinc oxide paste is very soothing and helps absorb sweat. For particularly inflammatory eruptions, hydrocortisone 2.5% cream can be added to the zinc oxide.
- The eruption may develop into lichen simplex chronicus (LSC) characterized by extensive lichenification and hypertrophy of the affected skin. The lichenification results from prolonged scratching and rubbing. Breaking the itch-scratch-itch cycle is paramount. Antihistamines at night may temporarily provide relief.

A. Contact dermatitis

It can be divided in irritant and allergic forms: All patients are theoretically susceptible to irritant contact dermatitis. It may develop from chronic use of soaps, disinfectants or aseptic solutions. The latter are often used in hopes of preventing STD's. Irritants can be transferred from the hands to the genitals such as 5-floururacil cream used for actinic keratoses on the face.

B. Allergic contact dermatitis

- It is also common. The penis may develop immense swelling accompanied by erythematous and scaling. The marked edema occurs because of the thin elastic skin on the genitalia.
- The list of offenders is numerous and includes many medications used elsewhere on the body that can be transferred to the genital area. Poison ivy or rash dermatitis is commonly transferred by the hands to the genitals. Lesions on other locations are common. Benzocaine, triple antibiotic ointment, and topical benadryl are frequent offenders. Obtaining a history of topical products is very important as many products may be used in patients who are concerned about hygiene or STD's. Men with latex allergy can develop erythema and scale along the entire penis due to latex condoms.
- Treatment is mild topical steroids. Switching to a non-latex condom is another option.

15.1.4 FIXED DRUG ERUPTIONS

- It can occur secondary to antibiotics from the tetracycline class or laxatives containing phenolphthalein. More than 500 medications have been implicated.
- The eruption presents acutely with single or multiple well defined circular plaques on the distal shaft and glans penis. The eruption may be bullous. The surface can appear necrotic. It has been compared to branding with a hot iron.
- Some patients have been falsely labeled with herpes simplex due to the intermittent nature of the eruption.
- Females do not seem to get genital fixed drug eruptions as commonly as men.
- Recurrent eruptions are associated with hyper pigmentation



15.1.5 LICHEN PLANUS

- Lichen planus is an inflammatory disorder characterized by violaceous flat-topped papule that may appear on any part of the body. Typically, the glans penis is involved as part of a systemic process. Multiple small 2-5 mm flat topped papules are seen. No vesicles, erosions, or crust are seen.



Lichen planus of the scrotum and penis

15.1.6 LICHEN NITIDUS

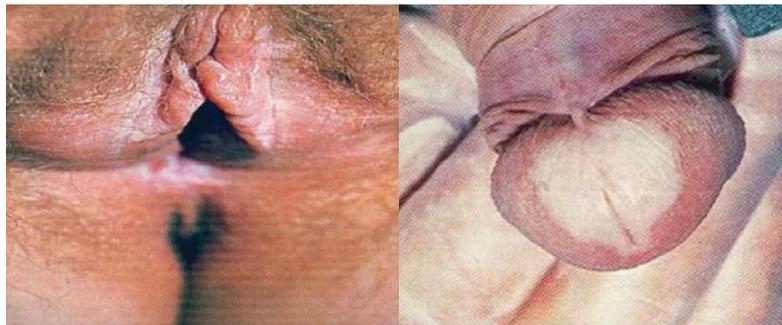
- It is a similar inflammatory disorder of unknown etiology. Patients may present with a monomorphic flesh colored 1-2 mm papules along the shaft of penis.



Lichen nitidus of the penis

15.1.7 LICHEN SCLEROSIS

- It is a progressive sclerosing dermatosis of unknown origin.
- Atrophic white plaques occur in men on the glans or prepuce. The eruption tends to fissure. Adhesion may develop.
- In females, extensive white atrophic plaques may cover most of the vulva and perianal area forming a "figure of 8" appearance. Adhesions may also develop obliterating the labia minora and sometimes narrowing the vaginal orifice.
- Skin biopsy is necessary to make the diagnosis.



Lichen sclerosis of the vulva and penis

15.1.8 VITILIGO

- Vitiligo can appear similar to lichen sclerosis, also presenting with hypo pigmented or depigmented areas on the genitals.
- Unlike lichen sclerosis, no atrophy is present.
- In men, the glans penis and shaft are commonly affected. There are no symptoms.
- Diagnosis can be aided by the presence of depigmented areas elsewhere on the body, especially on the face and dorsum of the hands.
- Treatment, if desired, with low potency steroids is helpful in some cases.



15.1.9 HIDRADENITIS SUPPURATIVA:

- Inflammatory red somewhat fluctuant nodules along the inguinal folds and gluteal cleft. Lesions may be several centimeters in size. Pain is common. Most clinicians now believe feel this disorder represents an inflammatory form of acne inversa rather than an infectious process. Lesion should be sought in the axilla. Larger lesions may need incision and drainage.



15.1.10 ZOON'S BALANITIS

- Presents with a chronic erythematous lesion on the distal penis in uncircumcised men. The lesion is poorly defined and has a moist surface.



15.1.11 PURPLE STRIAE

- They are from steroid atrophy and often occur in the inguinal folds and thighs after using high potency steroids for one month.



Stretchmarks on the abdomen of an obese adult male



Striae gravidarum in a pregnant woman at 38 weeks



Stretch marks in a female breast

15.2 BENIGN LESIONS

15.2.1 SEBACEOUS HYPERPLASIA

- It is common on the genitals in men and women.
- Patients who perform self-examination may be shocked to learn there are dozens of suspicious lesions present along the vulva or along the proximal penile shaft. Lesions tend to be 1-2 mm yellow to flesh colored monomorphic papules sometimes containing individual hairs.
- Having pictures of normal human anatomy can be reassuring to patients as they are concerned about genital warts.



15.2.2 VESTIBULAR PAPILLAE

- Vestibular papillae are also normal variants found in up to one-half of premenopausal women. These small monomorphic filiform tubular projections appear in the vestibule and may be confused with genital warts.
- Reassurance to the patient is all that is needed.



15.2.3 PEARLY PENILE PAPULA (PPP)

- Pearly penile papule (PPP) present on the coronal sulcus of the glans penis with monomorphic 1-2mm flesh colored smooth papules. They may present during late adolescent and may be clinically confused with genital warts.
- The lesions are asymptomatic and reassurance is all that is needed.



15.2.4 EPIDERMAL CYSTS

- They are common in the follicle rich genital area. They consist of a dilated oil gland or hair shaft that may reach 1-2 cm in size. They are usually asymptomatic but patients are concerned over the appearance and may request removal. Lesions respond well to simple excision.



Epidermoid cyst on ventrolateral surface of penis



Parameatal urethral cyst



woman presented with a right epidermal cyst

15.2.5 SCROTAL CYSTS

- Scrotal cysts commonly calcify forming rock-hard deposits. Multiple lesions are known as scrotal calcinosis. No treatment is needed but individual lesions may be excised. Median raphe cysts occur on the ventral midline of the penis and probably represent a fusion anomaly.



15.2.6 ANGIOKERATOMAS

- They are common asymptomatic vascular lesions occurring on the scrotum. They may be identified incidentally on an exam.
- Lesions appear as red to black 1-4 mm nodules. Patients may present after an episode of bleeding after trauma.



15.3 MALIGNANT LESIONS OF THE GENITALS

15.3.1 SQUAMOUS CELL CARCINOMA (SCC)

- It is the most common genital skin cancer. Men present in their 50's and 60's with red irregular defined plaques typically along the coronal sulcus. They may give a history of the lesion being present for 1-2 years. A history describing partial clearing with topical creams is common, as most patients have attempted some form of treatment.



15.3.2 ERYTHROPLASIA OF QUEYRAT

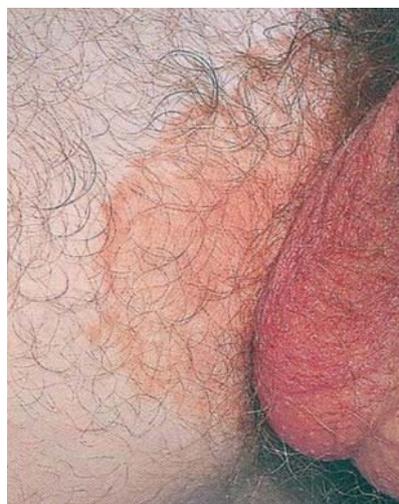
- They are usually treated by excision with little morbidity. Invasive see of the penis occurs primarily in uncircumcised males. Women may develop vulvas see which presents with ill-defined erythematous somewhat scaly plaque. Invasive see on the genitals in men and women tends to be aggressive and metastases are common.



15.4 INFECTIONS

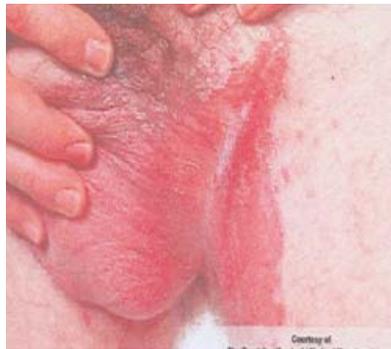
15.4.1 TINEA CRURIS

- Most tinea cruris are caused by dermatophyte fungi like *Trichophyton rubrum*.
- Tinea cruris or jock itch is a relatively common problem. Typically, a male will present complaining of a rash that is somewhat for several weeks or months in the groin.
- Most patient have typically tried several over the counter creams, powder, or sprays, so a good history is important. Inciting factors include obesity and excessive heat and humidity.
- Men are affected more than women.
- Patients present with diffuse bilateral erythema and scaling along the inguinal folds. A raised border typical of tinea infection is usually present. The eruption may extend along the perineum up the gluteal cleft. Involvement of the scrotum is distinctly uncommon and another diagnosis should be considered with extensive scrotal involvement.



15.4.2 CANDIDIASIS

- Candidiasis also occurs in the inguinal folds. The eruption is erythematous and scaly but usually without a raised border. So-called satellite lesions consisting of small patches are present near the inguinal folds.
- In women, the inflamer fold should be examined.
- Incontinence and heat are inciting factors.
- Both tinea cruris and candidiasis readily respond to topical antifungal treatment such econazole, ketoconazole, cicloprox, or terfenidine. Nystatin will not effectively treat tinea. The use of mixture containing topical steroids is strictly discouraged due to lack of efficacy in eradicating infection as well as steroid atrophy in the thin genital skin characterized by a waxy appearance, softness, and telangiectasia.
- Removing environmental factors such as heat, sweat, and obesity are important to prevent re-infection. Men may be encouraged to wear boxers.
- Patients should also consider an antifungal powder.



15.4.3 TINEA VERSICOLOR

- They are caused by pityrosporum ovale may present with tan patches in the pubic area alone or in association with similar lesions on the chest and back.
- The eruption is usually asymptomatic.
- Diagnosis can be confirmed clinically with a KOH prep which will show the typical "spaghetti and meatballs" appearance.
- The eruption will respond to selenium sulfide lotion or any of the axole creams.
- Oral azoles may be considered if the eruption is extensive.



15.4.4 ERYTHRASMA

- It is an uncommon bacterial infection caused by corynebacterium minisutum that presents with diffuse thin red patches along the inguinal folds.



15.4.5 FOLLICULITIS

- They are usually caused by staphylo-coccus aureus (S.aureus) common in the follicle rich genital region.
- Typically, patients have several 1-2 mm pustules, each centered on a hair follicle. Careful exam may show a hair follicle extending out of the pustule. Note, the lesions are not grouped nor are they usually unilateral like genital herpes.
- Folliculitis can occur anywhere on the genitals though less common on the distal penis due to absence of follicles.
- Heat and sweat are aggravating factors.
- Patients may give a history of a new exercise routine or wearing synthetic jogging pants that retain perspiration.
- Patients will respond to topical or oral antibiotics directed toward S.aureus. A mainstay of treatment is antibacterial soaps



MODULE 4

EDUCATING AND COUNSELING THE PATIENT

1. Introduction

STI control programmes aim to reduce the rate of new infections through a combination of strategies, including behaviour change, risk reduction, condom use and treatment of patients with STIs. Health education and counseling for STIs empower individuals to appreciate their own responsibilities and opportunities to reduce STI transmission. A person who presents for STI care at a health centre is at his/her most receptive phase for education. Education has to cover the nature of the infection, its consequences, and risk reduction to prevent both transmission to others and acquisition of future infections. The education process must be carried out effectively and appropriately to have the desired effect. If the patient is not educated and/or counselled about the infection, he/she is at higher risk of becoming re-infected and/or spreading the infection to sexual partners. A person who is made aware through appropriate health education is more likely to be cooperative and receptive of the health care provider's advice. Indeed, every health care provider should be equipped with the appropriate basic knowledge of STI/RTIs and counseling skill in order to give health education to patients.

2. Key Points

- Health education for STI/RTI prevention should address:
 - **Correct and consistent condom use,**
 - **Reducing the number of sex partners or delaying sexual activity,**
 - **Recognizing symptoms** and early use of services.
- Providing essential health education for STI/RTI takes little time. All patients with an STI/RTI should be given information about completing their treatment and preventing reinfection.
- The partners of patients who are treated for infections that are clearly sexually transmitted should also be treated. Partner treatment is not needed for non-sexually-transmitted RTI, however, and care must be taken not to mislabel infections as sexually transmitted when they are not.
- Counselling should always be flexible, be adapted to the needs and circumstances of each patient, and take into account barriers to behavior change.
- Counselling should stress the importance of STI/RTI prevention in
 - **Maintaining fertility,**
 - **Ensuring safe pregnancy** and preventing congenital infection,
 - **Reducing risk of HIV infection,** and
 - **Helping people find ways to lead enjoyable sex lives.**
- Sexuality must be clearly and directly addressed in STI/RTI prevention.

People may be at risk of STI because of their behaviour, yet this behaviour may be difficult to change because of factors or circumstances-including gender, cultural, expectations, poverty, migration and family disruption-that may limit their options, and increase their vulnerability. To effectively reduce risk and vulnerability, people may need not only specific information about STI transmission but also support in making changes in their lives. Health care providers can help by providing:

- **Health education** during clinic visits;
- **Counselling** to support people in changing behaviour;
- **Community education** to raise awareness about STI/RTI and help change negative ideas and attitudes that may be barriers to healthy sexuality.

There is a big difference between health education and counseling. Health education is the provision of essential information related to the prevention or treatment of STI/RTI and need not take much time. Counseling, on the other hand, requires time to establish trust, assess the person's individual situation, and relate prevention information directly to the person's life. Busy health care providers rarely have the time to counsel every patient with an STI/RTI.

Table 13: Steps in patient education and counselling

To raise awareness	Health education		Counseling
	For prevention	As part of SRT/RTI management	
Talk about STIs/RTIs and 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 sex partners	Promote condom use (including during treatment to prevent reinfection)	Examine barriers to Prevention Discuss solutions and build skills for safer sex
Promote early use of services	Support delay in starting sex (for young people)	Encourage referral of partners for treatment	Make a plan and follow up

2.1 PRIVACY AND CONFIDENTIALITY

Privacy and confidentiality are essential for all aspects of patient care-history taking, examination, education and counselling. This is especially true for potentially stigmatizing conditions such as STI/RTI. All patients have a right to privacy and confidential services, but some-such as adolescents, entertainment workers, refugees and others who live or work in illegal or marginalized settings-may feel a particular need to know that services are confidential. Adolescents, especially those who are unmarried, often do not use services because they feel providers will be judgmental or disapproving and might reveal information to parents or elders. Patients will avoid a health care facility altogether-sometimes travelling to a distant clinic to preserve anonymity-if they feel that their privacy and confidentiality are not respected or that service providers are critical and judgmental.

2.2 MAKING SPACE FOR PRIVACY

Assuring visual and auditory privacy and confidentiality can be difficult in many health care settings, especially those that are busy or crowded-but it is essential. The space where interviews, examinations and counselling take place should be separated from waiting rooms, so that people waiting cannot see or hear what takes place between the provider and the patient. Forms and records should be stored securely and clinic staff should avoid talking about patients both inside and outside the clinic. Patients should be treated with the same respect whether or not an STI is detected or suspected, and regardless of age or marital status. Where health care providers are likely to know patients' extended families or neighbors, they must take extra care to reassure patients (and their partners who may be asked to come in for treatment) that confidentiality will be respected.

2.3 GENERAL SKILLS FOR STI/RTI EDUCATION AND COUNSELING

Box 4.1 lists some general skills that health care providers should develop in order to educate and counsel patients. Many of them are also useful for history-taking and examination. Education and counselling often start early in the consultation, when the health care provider asks questions about risk, symptoms and signs of infection.

Remember that adolescents in particular may not admit to being sexually active, and may not recognize, or be comfortable talking about, symptoms of infection or pregnancy. Prevention advice to individuals should be based on their personal needs and concerns, and related to practical steps they can take to reduce their risk of acquiring infection and developing complications.

BOX 4.1. SKILLS FOR EDUCATION AND COUNSELLING

- Welcome your patient warmly by name and introduce yourself.
- Assure your patient that privacy and confidentiality will be respected.
- Sit close enough to be able to talk comfortably and privately.
- Make eye contact and look at the patient as she speaks.
- Use language that the patient understands.
- Listen to the patient and take note of body language (posture, facial expression, looking away, etc.). Try 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 patient’s real concerns.
- Suggest various options to the patient.
- Respect the patient’s choices.
- Always verify that the client has understood what has been discussed by having her repeat the most important information.
- Do not:
 - keep moving in and out of the room;
 - encourage other providers to interrupt;
 - write notes continuously as the patient is speaking;
 - make judgmental comments or negative facial expressions.

3. Health Education and Counselling

3.1 HEALTH EDUCATION

All patients need information about STIs/RTIs, how they are transmitted and how they can be prevented. Health care providers should express positive attitudes about sexuality and emphasize the benefits of enjoying a healthy sexual life while preserving health and fertility. Box 4.2 includes a checklist of essential information that should be provided during patient education. In addition:

- If a client has come for family planning, she should be offered information about STI/RTI, how to prevent infection and how to recognize signs of infection. Stress that consistent condom use is the only way to avoid both pregnancy and exposure to sexually transmitted infections (dual protection).
- If the patient is pregnant, she needs to understand the importance of preventing STI/RTI in pregnancy and of detecting syphilis, HIV and other infections that could be a danger to her or the pregnancy.
- Patients who come to the clinic with STI/RTI symptoms should be urged to follow recommended treatment, discuss prevention and, if the infection is sexually transmitted, refer partners for treatment (see Module 3).

BOX 4.2. CHECKLIST: WHAT PATIENTS SHOULD KNOW

Inform about STI/RTI

- How STIs are passed between people (but other RTIs are not).
- Consequences of STI/RTI including infertility and pregnancy loss.
- Links between STI and HIV and behaviour that spreads both.

PREVENTION OF STI

- Where to get condoms.
- Using condoms consistently and correctly (especially with new partners).
- Limiting number of partners.
- Delaying sex (adolescents).
- Using alternatives to penetrative sex.
- Negotiating skills.

HEALTHY SEXUALITY

- Normal biological and emotional changes.
- Benefits of a healthy sexual life.
- When and how to seek advice about problems.

STI/RTI SYMPTOMS

- What to look for and what symptoms mean.
- Early use of clinic services.

STI/RTI TREATMENT

- How to take medications.
- Abstaining or having protected sex during treatment.
- Importance of partner referral.
- Signs that call for a return visit to the clinic.

Much of this information can be presented to groups of patients while they are waiting in the clinic to be seen. A health educator or other staff member can be trained to present basic sexual health information, including on STI prevention, using a flipchart or posters to reinforce messages. In some clinics, information can be presented using videos or audio tapes. Whatever the method, patients should be given a chance to discuss the information and ask questions in private during the examination or counselling session.

Such group presentations can help patients identify their concerns and ask specific questions. Health education should continue during the consultation and examination. For example, techniques for negotiating condom use can be discussed if the patient complains that she has trouble getting her partner to use them. Be sure to summarize important points at the end of the visit and offer patients a chance to ask questions.

3.1.1 PATIENT EDUCATION ABOUT SAFER SEX

We know that certain behaviours increase the risk of STI transmission. Some of these involve unprotected sexual contact with body fluids in the vagina, mouth, or anus.

With others, such as sex work, it may be hard for the person to use condoms or other prevention methods.

Safer sex (Box 4.3) can be more pleasurable for both partners because it is less likely to cause worry, discomfort, or disease. Emphasize that safer sex is real sex-couples can talk about sex together to learn different ways of pleasing each other.

BOX 4.3. WHAT IS SAFER SEX?

Safer sex is any sexual activity that reduces the risk of passing STI and HIV from one person to another. Safer sex does not allow semen, vaginal fluid, or blood to enter the body through the vagina, anus, or any open sore or cut.

SOME SAFER SEX PRACTICES

- Use a condom every time you have sex (especially with new partners).
- Reduce the number of your sex partners-sex with an uninfected monogamous partner is the safest.
- Try massage, rubbing, touching, dry kissing, hugging, or masturbation instead of intercourse.
- Keep away from unsafe sexual practices, like “dry sex”, which may break the skin-the vagina should be wet inside when you have intercourse.
- If you have anal sex, always use a condom with lubrication because the mucous membrane there can tear easily.
- DO NOT have intercourse or oral sex if you or your partner has genital sores or an abnormal discharge.

3.1.2 PATIENT EDUCATION FOLLOWING STI/RTI TREATMENT

Patients who are being treated for an STI/RTI need additional information to help ensure they complete their treatment and avoid reinfection and their sex partners are also treated and educated.

BOX 4.4. PATIENT EDUCATION AS PART OF STI/RTI CASE MANAGEMENT

- Encourage patients to seek treatment from their clinic or doctor. Discourage self-medication or getting medication from unlicensed sources.
- Encourage patients to complete their course of treatment. Stopping treatment too early, as soon as symptoms disappear, is a common reason for treatment failure. Discourage sharing of medicines.
- Avoid labelling an infection as sexually transmitted when the diagnosis is not certain. Most RTIs are not sexually transmitted, and patients (and their partners) should understand this.
- Encourage partner treatment when appropriate (see Module 5). Partner treatment is indicated for women who have genital ulcers, signs of cervicitis or PID, but careful counselling is needed to avoid misunderstanding and potential conflict between partners.
- Emphasize what patients can do to prevent reinfection. This includes providing information on safer sex (Box 4.3) and condom use, and may require more in-depth counselling.

Some health care providers may feel uncomfortable using certain words about sexual matters. It is important to become familiar with those words when talking to and educating the patients. The following detailed messages could guide STI patients for better treatment.

- Explaining the STI and its treatment: Explain what sexually transmitted infection (STI) is and how it transmits from one to another. Most transmission is through sexual intercourse either by penile-vaginal, oral or anal type. Explain that sexually transmitted organisms can be bacterial (e.g. the gonococcus), parasitic (e.g. *Trichomonas vaginalis* or pubic lice), or viral (e.g. herpes simplex virus or HIV). Then explain which STI the patient has and what treatment will be necessary – the name of the medication and how much to take, how often and for how long.
- Write down these details for the patient – or use recognizable symbols if the patient cannot read. Also:
 - Find out what the patient understands about the STI and its treatment and what questions and concerns he or she may have;
 - Advise about any common side-effects of the treatment;
 - Encourage the patient to comply with treatment.
- With all treatments, the patients should be advised to complete all medication, even if symptoms are improved or resolved. Remind them that if they do not take all the medication, the symptoms may recur and that they will not be completely cured.

- Educate on prevention of future infection: once the patient understands what infection they have, and the treatment plan, he or she next needs to appreciate the risk of becoming reinfected. The provider must then assess the patient's risk factors for reinfection:
- **Changing sexual behavior:** high risk behaviour is any act that exposes the patient to sex fluids and blood. Therefore, changing from high risk to low risk sexual behaviour is one way to prevent future infection. Reducing the number of sex partners is important.
- **Condoms:** prevents the spread of STIs. Male latex condoms can reduce the risk of contracting or transmitted STIs if consistently and correctly used. The health care provider must demonstrate the correct use of condoms, using a penile model where available, and let the client practice on the model until they demonstrate competence.
- **Sexual practice:** some sexual practices have a higher risk of infection; for example, anal sex, whether it is male to female or male to male, carries a higher risk than penile-vaginal sex.
- **Other methods:** the use of spermicides, microbicides or vaccines (e.g. for hepatitis B).
- **Personal hygiene and cultural practices:** Vaginal douching may remove protective bacteria in the vagina which increases the risk of getting some STIs, e.g. HIV.
- **The need to treat sexual partners:** it is very important that all sex partners must be treated (see module 5). Partner treatment not only reduces reinfection but also prevents future serious complications.

3.2 HEALTH COUNSELING

Counseling is a two-way interaction between a client and a provider. It is an interpersonal, dynamic communication process done by STI health care provider/ counsellor who is trained to an acceptable standard bounded by a code of ethics. It requires empathy, genuineness and the absence of any moral or personal judgement.

Counseling is a more in-depth process than health education and requires more time. Because of this, in busy clinics it may make sense to have a person specifically assigned to counsel patients. Such a person may provide other services, such as voluntary HIV Testing Service (HTS). Effective counselling must deal with issues of risk and vulnerability (Box 4.5).

Counselling aims to encourage healthy living and requires the client to explore important personal issues and to identify ways of living with the prevailing situation, whether it is an infection or bereavement. In STI and HIV, the counseling process assesses and addresses the client's needs to enable the person to cope with any anxiety and stress brought about by the diagnosis. The counseling process should also evaluate the person's risk of STI transmission and explore preventive behaviour in future. So, counseling helps clients understand themselves better as individuals, exploring their feelings, attitudes, values and beliefs.

BOX 4.5. ELEMENTS OF EFFECTIVE COUNSELING

Try to understand how a person's situation may increase risk and vulnerability: Understand that there may be circumstances in a person's life that are difficult to change (for example, alcohol use, sex work for survival) and that may make safer sex difficult.

Provide information: Give patients clear and accurate information on risky behaviours, the dangers of STI, and specific ways to protect themselves.

Identify barriers: What keeps someone from changing behaviour? Is it personal views, lack of information, or social restraints such as the need to please a partner? Which of these can be changed and how?

Help people find the motivation to reduce their risk: People often change behaviour as a result of personal experience. Meeting someone who has HIV/AIDS, hearing about a family member or friend who is infertile due to an STI/RTI, or learning that a partner has an infection are all experiences that can motivate someone to change behaviour.

Establish goals for risk reduction. Set up short- and long-term goals that the patient thinks are realistic.

Offer real skills. Teach negotiation skills, demonstrate how to use condoms, and conduct role-playing conversations.

Offer choices. People need to feel that they have choices and can make their own decisions. Discuss substitute behaviours that are less risky.

Plan for setbacks. Rehearse how to deal with a difficult situation (for example, the husband becomes angry or refuses to use condoms).

Messages should be adapted to be relevant for each person or couple. Finding the right balance between reliable prevention of pregnancy and prevention of STI (dual protection) for each client requires a **flexible approach to counselling** on the part of the health care provider:

- Preventing pregnancy may be the main concern for young, single clients who may be unaware of their risk of STI (see Box 4.6). Education about STI risk may increase motivation to use condoms for **dual protection**, or to delay onset of sexual activity.
- Women and men in their early reproductive years-whether or not they are currently using contraception-are often concerned about their future ability to have children. Emphasizing the importance of STI prevention in **maintaining family health and fertility** may be effective motivation.
- Pregnant women and their partners who are concerned about maintaining a healthy pregnancy can be motivated to prevent infection to **reduce the risk of congenital infection**.
- Pregnancy prevention is not an issue for some people. A woman who has undergone tubal ligation, is postmenopausal or currently pregnant may still be at risk of STI and require advice on prevention.

BOX 4.6. SPECIAL CONSIDERATIONS FOR COUNSELING YOUNG PEOPLE

- Counselling young people may take more time.
- Young people must feel confident that their privacy and confidentiality will be respected.
- Try to establish whether the young person has someone with whom to discuss her/his problems
- Be sensitive to the possibility of sexual violence or coercion. Sex with much older partners may be more likely to be coerced and may carry a higher risk of HIV or STI.
- Make sure the young person understands normal sexual development, and how pregnancy occurs.
- Make sure the young person understands that it is possible to say “no” to sex.
- Discuss issues related to drug and/or alcohol use and sexual risk-taking.
- It may be useful to involve peers in education.
- Check that the adolescent can afford any medicines necessary to treat an RTI and will be able to take the full course of treatment. Young people are particularly likely to stop or interrupt treatment if they experience unexpected side-effects.
- Ensure follow-up is offered at convenient times.

3.2.1 COUNSELLING FOR HIV RAPID TESTING

STI clients are offered on site HIV/Syphilis dual test at every six months (HTS consolidated Guideline 2017); so the STI health care providers will be trained on how to provide counseling and perform finger prick testing (see HTS training curriculum 2018).

Globally nearly half of estimated HIV-infected are unknown HIV status. Giving HIV testing is an opportunity for STI patient to get to understand their HIV status. The clients will better protect their health if the test is negative, and will be promptly treated if the test is confirmed positive. The reactive client will be referred from STI clinic to HTS-ART for confirmatory test.

A negative test result at the first visit may be true or false. This person may not be infected at the time of doing the test. However, there is a period between getting infected and developing enough antibodies during which no HIV test can detect the infection. This is called the ‘window period.’ For most infected people, this period is from two to twelve weeks (comprehensive VCCT training Tool, Module 2. P28). Therefore, for high risk clients, it is important to offer repeat testing after 3 months.

3.2.2 THINKING ABOUT RISK AND VULNERABILITY

Few people are able simply to accept information about what is good for them and make the necessary changes in their lives. Health care providers should be aware of situations and behaviour that influence STI risk and vulnerability, and take a realistic approach to behaviour change. Risk and vulnerability are influenced by behaviour as well as by other factors, such as age and gender, the place where one lives and works, and the larger social, cultural and economic environment, which may be beyond the person's power to change. Migrant workers who are separated from their families for long periods of time may have risky sex because they are lonely; poor people often have poor access to health care services; and some women and men are forced to sell or trade sex in order to survive or support their families.

An understanding of these factors permits a realistic approach to counselling that takes into account circumstances in a person's life that may be difficult to change. Knowledge of risk can also help with decisions about RTI management (Table 14).

Table 14: How individual risk may influence reproductive health decisions and STI/RTI prevention, detection and management

	High Risk	Low Risk
Contraceptive choice	Women with multiple sexual partners should use condoms alone, or in addition to another contraceptive method.	Dual protection may not be needed for couples in a stable mutually monogamous relationship.
RTI detection	Priority for STI screening (where available) should be people with multiple partners or other risk. Women over 35 should be given priority for cervical cancer screening because they are at higher risk.	Apart from syphilis testing in pregnancy, and cervical cancer screening for all sexually active women, asymptomatic patients without obvious risk do not need to be screened for STI.
RTI Management	An adolescent with vaginal discharge, whose boyfriend has a discharge, should receive additional treatment for cervical infection, and counselling on partner treatment and STI prevention.	A woman with vaginal discharge who is monogamous and has a stable family life is probably at low risk for STI and should be treated for the common vaginal infections (see Module 3).
Counseling	Counseling should address specific risk behaviours.	Women with no apparent risk do not require lengthy counseling (and may not welcome it).

**Partner treatment
(Module 6)**

Decisions about partner treatment should be made in the context of the couple's situation. If one partner has had other sexual partners, or travels away from home often, it may be safer to treat both partners for STI even when symptoms are unclear.

Many RTIs do not require partner treatment because they are not sexually transmitted. If in doubt, approach the issue of partner notification carefully and let the patient decide.

Unfortunately, there is no foolproof way to evaluate a person's risk. Table 4.3 may help providers manage patients, using their clinical skills and knowledge of the community, and the patient's own assessment in thinking about risk. By addressing real issues, patients may be able to find solutions that will work for them.

Table 15: Factors to assess the patient's risk of further STI

Prevalence of STI in the community or social network	STI prevalence is often higher among: <ul style="list-style-type: none">• Sex workers, clients of sex workers and partners of either;• People who engage in risky sexual behaviour for money, gifts or favours. These people may not consider themselves sex workers or at risk;• Migrant workers and other people in occupations that involve frequent travel and separation from family;• Adolescents and young adults.
Information collected from patient	Increased exposure may be suggested by a patient: <ul style="list-style-type: none">• Having multiple sexual partners;• Having a recent new sexual partner;• Having a partner with STI symptoms.
Provider judgement	Health care providers can use their clinical judgement and knowledge of the community, together with the above factors, to evaluate risk.
Patient thinks she may be at risk	Sometimes it is difficult to ask intimate questions about risk behaviour, or patients may be reluctant to answer them. In such cases, it may be useful simply to ask the patient whether she thinks she may be at risk for STI. Asking about risk may open the door to more questions and discussion, or a woman may simply acknowledge being at risk even when she declines to discuss the details.

Counselling patients about "risks" and "protection" can easily sound negative, especially to adolescents and others who may feel confused or guilty about their sexuality. Health care providers should strive to maintain a positive attitude and emphasize the benefits of enjoying a healthy sex life while protecting health and fertility.

Table 16: Factors to assess the patient’s risk of further STI

Personal sexual behaviour	<ul style="list-style-type: none"> • Number of sexual partners in the past year. • Sex with a new or different partner in the last three months. • Any other STIs in the past year. • The exchange of sex for money/goods or drugs (giving or receiving). • Use of herbs as a drying agent, or similar sexual practices.
Personal drug use	<ul style="list-style-type: none"> • use of alcohol or other drugs (which drugs?) before and during sex. • sharing needles or ‘works’ (high risk of transmitting or being infected with HIV). • Exchange of sex for drugs or drugs for sex
Other personal risk factors	<ul style="list-style-type: none"> • HIV infection. • Use of skin-piercing instruments such as needles (injections, tattoos), scarification or body-piercing tools, circumcision knives. • Blood transfusion. • For young children, all these risk factors relate to the parents.
Partner(s) sexual behaviour	<ul style="list-style-type: none"> • Have sex with other partners? • Also have an STI? • Have HIV infection? • Inject drugs? • If male, have sex with other men?
Patient’s protective behaviour	<ul style="list-style-type: none"> • what the patient does to protect him/herself from STIs? • Use of condoms: when and how, with whom, why? • Low-risk or safe sexual activities the patient might practice: when and how, with whom, why?

3.2.3 SUPPORTING BEHAVIOR CHANGE

Whatever their situation, patients need information about STI/RTI, behaviours that increase risk and how to avoid them. They also need support and encouragement in negotiating safer sex, including condom use.

Health care providers can use their counseling skills to support women and men to agree on adopting safer sex behaviour that meets their needs. Box 4.7 gives some pointers that may be useful in helping patients negotiate safer sex.

BOX 4.7. 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 one person to decide what she or he wants, and what she or he is willing to offer in return.

Focus on safety

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

Use other people 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

Condom negotiation is one example. Box 4.8 suggests some responses to common objections that partners may raise when asked to use condoms.

Table 17: Help women with condom negotiation skills

If he says: Try saying:	If he says: Try saying:
It will not feel as good...	It may feel different, but it will still feel good. Here let me show you.
	You can last even longer and then we will both feel good!
I do not have any diseases!	I do not think I have any, either. But one of us could and not know it.
You are already using family planning!	I would like to use it anyway. One of us might have an infection from before that we did not know about.
Just this once without a condom...	It only takes one time without protection to get an STI or HIV/AIDS. And I am not ready to be pregnant.
Condoms are for sex work. Why do you want to use one?	Condoms are for everyone who wants to protect themselves.
NO CONDOM, NO SEX!	
Do what you can to make sure that you both enjoy having sex with a condom. That way, it may be easier to get him to use one the next time.	

3.2.4 THE NEED TO CHANGE SEXUAL BEHAVIOUR

Once the patient understands how he or she was infected and is aware of the risk of reinfection, the next steps are perhaps the service provider's most challenging tasks. These are the need for the client to change sexual behaviour, the barriers to such change and establishing the changes that the client intends to make.

This step is about helping the client decide to change his or her sexual behaviour in order to avoid further infection. It is a good idea to give the patient the opportunity to identify what changes might be possible in his or her own life. Assist the client to rate the importance of changing the risky behaviour and his/her confidence in succeeding.

There are some barriers to change the behaviour. All health care providers are aware of the difficulty of changing a person's behaviour. Life would be easy if people responded to health messages by doing as they were advised, but many do not. Why? This is because awareness of health messages and knowledge alone are not enough to change behaviour. To make real changes, one needs first to overcome 'barriers to change' in life and experience. Such barriers might arise from any aspect of the individual's life and experience.

FOR EXAMPLE:

- **Gender barriers:** essentially, these can arise from the different expectations and values relating to male and female sexuality.
 - Women may sometimes have little control over when, with whom, and under what circumstances they have sex. They might therefore not be in a position to protect themselves, even if they so wish or have the means (e.g. a condom).
 - For men, the expectations can be very different, although young men in particular can be under peer and social pressure to conform to local male norms.
- **Cultural practices:** Culture practices may help or hinder the client's ability to change. Consider the possible barriers to change in relation to: age differences at marriage, wife inheritance, puberty rites, child-rearing and so on, as well as the values of family and community.
- **Religion:** Religion may, under some circumstances, contribute to adoption of safer sexual behaviour. However, it can pose major barriers to change if it discourages open discussion about sexuality and use of protective measures.
- **Poverty, social disruption and civil unrest:** Poverty, social disruption and civil unrest force women and girls/boys in particular into exchanging sex for material favours or even for survival. In less extreme situations, lack of access to education and employment may force women to exchange sex with a number of partners in return for food, shelter and clothing for themselves and their children.

4. How to Educate and Counsel

First, the communication skills explored in Module 2 including the use of open questions, facilitation, summarizing and checking, reassurance, direction, empathy and expression of partnership are essential for assessing risky behaviors and helping the patient deal with emotions. Second, some additional skills will need to cope with results and encourage clients to change their behavior as such explanation and instruction, modeling, reinforcing strengths you see in the patient, helping the patient explore choices, rehearsing what the patient will do or say, confirming the patient's decisions.

- **Explanation and instruction:** these are skills many service providers use most of the time.
- **Instruction:** Telling patients what to do or how to do something, such as use a condom or take medication: *"Remember to complete the whole course of tablets, right to the last one..."*
- **Explanation:** Telling patients how or why something should be done:
"You have pain low in your tummy because of an infection passed to you during sexual intercourse..."
- **Modelling:** this skill encourages patient to change behaviour or/and help them successfully complete treatment. In other words, it offers positive models for change.

For example, *"I've noticed that more guys are being careful - and they still have their 'fun' even while being safe. I've seen lots of guys lately who have decided to drink less and use a condom. They say sex is better sober..."*

- **Reinforcing Strengths:** a strength or positive attribute the patient has – something that will help him or her recover or prevent the recurrence of STI.

For example, *"It may seem difficult but I noticed you walked 10 kilometres to get here for treatment of your infection. That means you are a very determined person. You can use this determination to keep you safe."*

"I appreciate your feelings. You care for your husband and family, I am sure, and those feelings will help you to get through the next few days... but first, let's talk about how we can get you better."

- **Exploring choices:** This is about reviewing the patient's alternatives or steps towards curing the current STI or preventing another one. The patient can then decide which is best and feasible. Offering a choice also empowers the patient, who feels more in control of the decision that he/she will make. The patient may have a sense of 'ownership' of the decision:

For example, *“That’s right. You can either settle down with one partner or, if you’re not ready for that, protect yourself with condoms or nonpenetrative sex. Which will be easiest for you right now?”*

“For today, I’d like you to make a choice. Would you prefer to avoid sex until you have finished the treatment or to ask your husband to use condoms?”

- Rehearsing decisions: Make a plan when the patient has reached a decision on the appropriate safe behaviour(s), ask him or her to work through the steps to put the decision into practice. Rehearsal is also useful to check the patient’s understanding of the provider’s instructions on treatment.

For example, *“The plan is very good; how are you going to explain this to your girlfriends?”*

“So, you’re planning to avoid sex until you’ve finished the tablets. Your husband needs to be treated as well... how will you approach him about it?”

- **Confirming decisions:** This is a useful way to conclude the conversation. Asking the patient to confirm a decision helps him or her to feel motivated on leaving the clinic.

For example, *“Well, I think that’s about everything. Just tell me once more what you intend to do with these tablets.”*

“You’re being very brave and that’s important. Go over your plans with me once again.”

Box 4.8: Checklist for education and counseling

Observation checklist for education and counseling STI clients			
To what extent does the service provider:	Yes	No	If "No, explain"
a) Cover these education issues?			
• The STI, its implications and treatment, and the importance of complying with treatment	<input type="checkbox"/>	<input type="checkbox"/>	
• The need to treat any sex partners	<input type="checkbox"/>	<input type="checkbox"/>	
• The patient's risk level and future prevention options	<input type="checkbox"/>	<input type="checkbox"/>	
• The need to change sexual behaviour and what constitutes safer sex (does the patient fully understand the need to change?).	<input type="checkbox"/>	<input type="checkbox"/>	
b) Use these education and motivation skills?			
• Explanation and instruction	<input type="checkbox"/>	<input type="checkbox"/>	
• Modeling	<input type="checkbox"/>	<input type="checkbox"/>	
• Reinforcing strengths	<input type="checkbox"/>	<input type="checkbox"/>	
• Exploring choices	<input type="checkbox"/>	<input type="checkbox"/>	
• Rehearsing decisions	<input type="checkbox"/>	<input type="checkbox"/>	
• Confirming decisions	<input type="checkbox"/>	<input type="checkbox"/>	
c) Apply these communication skills?			
• Facilitation	<input type="checkbox"/>	<input type="checkbox"/>	
• Summarizing and checking	<input type="checkbox"/>	<input type="checkbox"/>	
• Reassurance	<input type="checkbox"/>	<input type="checkbox"/>	
• Direction	<input type="checkbox"/>	<input type="checkbox"/>	
• Empathy	<input type="checkbox"/>	<input type="checkbox"/>	
• Partnership	<input type="checkbox"/>	<input type="checkbox"/>	

5. Using Condoms to Stay Cured

Condoms help people to have safer sex when contacting vaginal or seminal fluids. Using condoms is especially important if patient has sex with more than one partner or with one partner who has other sexual partners or with a new partner. So, patients must also know how to use them properly.

Many people resist the idea of using condoms, not because of the embarrassment or cost of buying them, but due to misconceptions and myths about them. For instance, they think that condoms spoil sex or that they are too big or too small. There are often myths about them – such as the condom itself is infected with STI. People may also associate them with illicit sex – rather than for use with a regular partner.

If the patient continues to resist their use, repeat the other forms of safer sex and ask if one of them would be preferable.

For example, “You said condoms are one way of keeping safe, but I wouldn’t use them.”
“So you have tried to use them before?”

“Well, they needn’t get in the way. You can be shown how to use them. I know a lot of men who say they have fun with them because their partners are involved in putting them on.”

“The most important thing about condoms is that, if you use them regularly, you protect your partners as well as yourself. STIs in women can be very serious, so you should feel responsible for their safety too.”

“Good – but remember, if you don’t use condoms, you must practise non-penetrative sex. Let me show you on this penis model how to put on a condom properly.”

Demonstrating the use of Condoms

It is important to first demonstrate its use and then ask the patient to practice the same method, helping him or her to get it right. This means that you will need a supply of condoms and a penis model or something to represent one, such as a banana or broom handle. Box 4.9 will indicate steps for demonstrating the use of condom.

BOX 4.9: THE DEMONSTRATING THE USE OF CONDOM

STEPS FOR CONDOM DEMONSTRATION:

- Stress the importance of carrying condoms all the time – the patient should never be without one
- show the expiry or manufacture date and explain that the condom should not be out-of-date, smelly, sticky or hard to unroll
- Explain how to open the package carefully, using the tear-point
- Show the correct side of the condom to insert over the penis, explaining that it will not roll down if placed the other way
- Show how to hold the tip of the condom to press out air, before rolling it all the way down the erect penis
- Emphasize that the condom must be rolled right down to its base
- Explain that the condom should be removed just as the penis begins to lose its erection and that the patient should hold it carefully at the base and slide it off slowly
- explain that the patient should tie the top of the condom and dispose of it safely

These are three other tips you might want to give the patient:

- The importance of not using oil or oil-based lubricants such as petroleum jelly, because they damage latex condoms (water-based lubricants such as glycerin and K-Y Jelly are safe, as are most spermicidal foams)
- The need to dispose of condoms hygienically
- Condoms should not be re-used

MODULE 5

PARTNER MANAGEMENT

1. Introduction

1. INTRODUCTION

In previous module 2 and 4, we concentrated on the earlier stages of the interview. These included taking the patient's history and examining him or her, making a syndromic diagnosis, and educating and counseling the patient on a number of important issues, from complying with treatment to changing his/her sexual behavior.

In this module, we cover the final issue to explore with the patient: the need to treat his/her sexual partners. We will also consider which partners to treat and how to treat them.

1.1 THE IMPORTANCE OF PARTNER MANAGEMENT

Partner management is so important because its purpose is to break the cycle of STI transmission, by treating, educating and counseling both the patient and his or her sexual partners. Notice that partners are treated for the same STI as the patient. Also, partners are treated whether or not they have signs of STI – ensuring that even those people who are asymptomatic are treated.

1.2 THE SEXUAL PARTNERS WHO NEED TO TREAT

These are the main features of partner management: treatment of the entire patient's sexual partners for the same STI as the patient, and treat any new STI identified.

STI management is syndromic, the treatment must be given presumptively and the partner treated regardless of STI signs or symptoms.

A patient diagnosed with STI has been infected during unprotected sexual intercourse with an STI infected partner. If the patient has had more than one sexual partners, any of these partners could have been the source of the infection. Once, he/she can also be able to transmit the STI to other sexual partners. It is often difficult to identify when the patient/partner was infected and it is assumed the period of infection is three months.

1.3 IT IS EASY TO IDENTIFY THE SOURCE OF A PATIENT'S INFECTION IN ONLY TWO OCCASIONS

In fact, only in these two cases is it possible to identify the source of an STI:

- When the patient has had unprotected sexual intercourse with only one other person in the last three months – that person is the source of the infection.
- When the patient is a baby with neonatal conjunctivitis – the mother is the source of the infection.

Identifying the source has no particular value because our aim is to treat all partners – or all those partners we can reach – and their partners in turn.

So far, we have identified the three main features of partner management, and we have stressed the importance of trying to treat, educate and counsel all the sexual partners with whom the patient has had unprotected sexual intercourse.

1.4 THE IMPACT ON INDIVIDUALS

Before considering how to manage the treatment of partners, we would like you to consider the possible impact on the individuals concerned.

When taking patients' history and educating and counseling them, you know the importance of showing respect, responding to emotions and helping patients to overcome barriers and change behavior. Awareness of having STI can affect a patient's relationships, lifestyle – even his/her income, as we have discussed in earlier modules.

In this final stage of the interview, we must explain to the patient that his or her partners also need to be treated. For many patients this is uncomfortable news. Indeed, it might cause far-reaching damage to the individuals concerned.

1.5 NEWS OF STI MIGHT HAVE A SERIOUS EFFECT ON THE RELATIONSHIP BETWEEN PATIENT AND PARTNER

News of STI can be especially damaging when a patient or partner hears of their partner's infidelity for the first time. Equally, someone with mistaken ideas about the cause of STI may respond in ways that are inappropriate or extreme. Patients are sometimes blamed for being the source of infection when, as we have seen, it is rarely possible to identify the source of infection.

This might lead to marital breakdown, divorce, loss of home or livelihood, or even ostracism from the social group. You might like to discuss this matter in more detail with your colleagues or trainer.

So it is clear that any approach to partner management must take account of the possible impact on the lives of each individual.

1.6 TWO PRINCIPLES SHOULD GUIDE SERVICE PROVIDERS IN ORDER TO PROTECT THEIR STI PATIENTS

The two principles we have to think about are that partner management must be confidential and voluntary. The privacy of both patient and partner must be maintained and no-one should be forced to say or do anything they are unwilling to do. These two principles are crucial to any approach to partner management.

Partner management must comply with the principles of confidentiality and non-compulsion: patients should never be forced to divulge information about partners, and their identity must not be disclosed to anyone outside the health team.

To be successful in limiting the transmission of STI, any approach to partner management must have these three features:

- Treatment of all a patient's sexual partners
- Treatment for the same STI as the patient, and
- Treatment of any new STI identified.

Presumptive treatment must be given for the same STI as for the index patient, whether or not the partner has symptoms or signs of the infection. It may not be necessary in referral centers where available and reliable quality laboratory diagnosis is available to exclude the infection.

Finally in this section, we will introduce two approaches to partner management and explore how well each approach meets these criteria.

2. Approaches to Partner Management

If the purpose of partner management is to treat as many of the patient's sexual partners as possible, there are two approaches to contacting sexual partners:

- by the patient: this is known as patient referral
- by a service provider: this is known as provider referral.

2.1 PATIENT REFERRAL

In this option, the patient takes responsibility for contacting partners and asking them to come for treatment. For reasons we have explained already, many patients might feel unwilling or unable to discuss the STI with partners, so the service provider's aim is to help the patient decide what to do. In fact, a patient might approach partners in several ways:

- By directly explaining about the STI and the need for treatment,
- By accompanying a partner to the health centre or asking the partner to attend without specifying why,
- By giving each partner a card asking him or her to attend the centre.

2.2 PROVIDER REFERRAL

This is where a member of the health team contacts the partners of a patient with STI. The service provider might be the person who treated the initial patient or someone whose role includes searching for and treating partners. The service provider asks the partner to attend the clinic for treatment keeping the index cases identity confidential.

2.3 THE ADVANTAGES OR DISADVANTAGES OF EACH APPROACH

Bearing in mind the two principles of non-compulsion and confidentiality, in box below is any possible advantages or disadvantages of each approach that occur.

	Patient referral	Provider referral
Advantages	<ul style="list-style-type: none"> • The patient has control over decisions – so both confidential and voluntary. • No cost to the health centre. 	<ul style="list-style-type: none"> • Could be done anonymously • If successful, able to contact and treat more partners- more efficient.
Disadvantages	<ul style="list-style-type: none"> • Depends on willingness of patient to refer partners. • Risks of Intimate Partner Violence (IPV) 	<ul style="list-style-type: none"> • Depends on willingness of patient to divulge names. • Cost, time and practical problems of tracing partners. Need for extra, highly trained outreach staff. • May be viewed by patients as a threat to confidentiality.

The most difficult part of this question is to find positive advantages for provider referral. At a price, provider referral can contact and treat more partners – but at the possible expense of confidentiality. Why? Finding partners can be difficult – even when their name is known. Also, service providers trying to find someone may quickly become known in any tight-knit community. Then there is the matter of paperwork: great care must be taken to ensure that such paperwork protects the patient’s identity. For all these reasons, the patient referral is the better approach for partner management.

3. Patient Referral

The success of patient referral depends on your skills as a service provider: what you say to the patient, how you say it and, equally important, how you listen to the patient and respond to what he or she says. This section will enable you to apply the skills you learned in earlier modules to this last and essential objective of treating the patient's partners.

3.1 EDUCATING AND COUNSELING THE PATIENT: THE ISSUES

You may remember from Module 4 that partner management is the sixth issue on which we need to educate and counsel the patient. The service provider needs to:

- Explain why it is important for all the patient's partners to be treated remind the patient how to avoid re-infection
- Help the patient decide how to communicate with partners if possible, obtain the names of the patient's partner(s).

3.2 EDUCATING AND COUNSELING THE PATIENT: YOUR SKILLS

The skills you need to educate, counsel and support the patient about provider referral are exactly the same as for history-taking and for educating and counseling the patient on the earlier issues (discussed in Modules 2 and 4).

Remember that, for the patient, anticipating the need to talk to partners about STI may provoke feelings as uncomfortable as those the patient first felt when told that he or she had a disease that was sexually transmitted.

3.3 PATIENT REFERRAL CARDS

A young man tells you that a girlfriend asked him to come to the clinic for treatment for an STI. He does not know the name of the syndrome and as no symptoms or signs of any infection. The name he gives for his friend is not in your centre's records, so you have no way to identify what syndrome to treat him for.

Given the high proportion of partners who have no STI symptoms, the above scenario is an example of failed partner management. We cannot treat a patient's partner unless we know who the patient was or can identify the partner's syndrome.

Patient referral cards can help to resolve this problem and many health centers use them for this purpose. An example is illustrated below.

Card No.....	Card No.....
Date of Issue:.....	Date of Issue:.....
Clinic name:	Clinic name :
Diagnostic Code:.....	Please come to Family Health Clinic and to bring this card with you.
Name of partner and detail infomation:.....	
.....	Diagnostic code:
.....	

The card above is in two parts. Once the details are recorded, the card is cut in two and the right side given to the patient to pass on to the partner. The left side is retained for center records.

The cards like this can be linked to the record systems of several centers. They also offer one way to record the numbers of partners who attend for treatment – as well as the numbers who fail to attend. This would be useful if provider referral is used to contact the partners.

To summarize then, a referral card could be extremely useful to help you identify the necessary treatment for any partner referred by a patient with STI. The card can contain any extra information that is required, but should never threaten anyone’s confidentiality or risk them being stigmatized. If your centre uses patient referral cards, we strongly advise that you make a habit of giving one or more to every patient with an STI syndrome. It is much easier to do this than it is to remember to ask if a new patient has been referred to you by someone else.

3.4 PROVIDER REFERRAL, IF PATIENT REFERRAL FAILS

Provider referral needs special outreach staff that has been specially trained in contacting partners. It is not a viable option for most health centers.

However, it might be possible to offer provider referral as a follow-up to patient referral in these two circumstances:

- When a patient refuseds, for whatever reason, to refer partners
- When a patient has agreed to refer partners, but they have not since come for treatment.

3.5 IF THE PATIENT REFUSED TO REFER PARTNERS

If, despite your best endeavors, a patient refused to refer a partner for treatment, provider referral may be the center's only option.

3.6 IF A PARTNER FAILS TO COME FOR TREATMENT

If a partner fails to come for treatment, an efficient recording system is essential to follow up these partners. After a specific time – for example, two weeks after the patient was treated – it should be possible to identify any partners who have not come for treatment, so that arrangements can be made to contact them.

It may be useful to share data between clinics. For example, if a female patient's STI is diagnosed at an antenatal clinic, her partner may need to attend a different clinic for treatment. To overcome such an example, outreach service providers should liaise with all nearby centers offering syndromic diagnosis of STIs.

4. Treating Partners

This short section is about treating the partners of a patient with STI. In it, we answer three questions:

1. How does STI management differ when treating the partner?
2. Is it necessary to examine the partner?
3. What STI should we treat the partner for?

The aim of partner management is to treat any partner for the same STI as the original patient. Although examining the partner is not essential, we recommend it whenever possible to check for other STI signs.

We deal with the partners of patients in exactly the same way as with the original or 'index' patient: taking their history, treating and educating them and managing their partners, in turn.

4.1 PARTNER MANAGEMENT

Syndrome of Index patient	Treatment of partner
Urethral discharge	<i>Treat partner for gonorrhoea and chlamydia</i>
Genital/anal ulcer	<i>Treat partner for syphilis and chancroid</i>
Vaginal discharge:	
1. Patient treated for vaginitis and cervicitis	<i>Treat partner for gonorrhoea and chlamydia</i>
2. Patient treated for vaginitis only	<i>Not necessary for the partner to be treated unless the discharge is recurrent</i>
Pelvic inflammatory disease	<i>Treat partner for gonorrhoea and chlamydia</i>
Scrotal swelling	<i>Treat partner for gonorrhoea and chlamydia</i>
Inguinal bubo	<i>Treat partner for lymphogranuloma venereum</i>
Neonatal conjunctivitis	<i>Treat both parents for gonorrhoea and chlamydia</i>
Genital Wart	<i>Treat partner for Genital Wart if symptom appearing</i>
Anal discharge	<i>Treat partner for gonorrhoea and chlamydia</i>

Notice that if a female patient with vaginal discharge is diagnosed syndromically as having vaginitis but not cervicitis, her partner need not be treated unless the vaginitis is recurrent. In this case treatment is either for candidiasis or trichomonas vaginalis. There is currently no evidence that treating partners for bacterial vaginosis makes any difference.

5. Follow-Up Visits, Treatment Failure and Reinfection

- Are follow-up visits really necessary? It can be useful for health care providers to see some patients again, to find out whether treatment relieved symptoms and achieved a clinical cure.
- Routine follow-up visits can be an inconvenience for patients, however, and an unnecessary burden on busy clinic staff. Syndromic management provides effective treatment for the most common STIs/RTIs and most patients will get better quickly. It is usually not necessary to have them come back just for a “check up” if they have taken their medicine and are feeling better.
- However, it is a good idea to advise patients to come back if no improvement is seen after a week of treatment (2–3 days for PID). Patients with genital ulcers should be encouraged to return after 7 days, because ulcers often take longer to heal (treatment should be extended beyond 7 days if ulcers have not epithelialized-formed a new layer of skin over the sore). When patients with an STI/RTI do not get better, it is usually because of either treatment failure or reinfection. Try to decide which by asking the following questions:

Treatment failure

- Did you take all your medicines as directed?
- Did you share your medicine with anyone, or stop taking medicines after feeling some improvement?
- Also consider the possibility of drug resistance. Was treatment based on the national treatment guidelines? Are cases of treatment failure increasing?

Reinfection

- Did your partner(s) come for treatment?
- Did you use condoms or abstain from sex after starting treatment?

Recurrence is also common with endogenous vaginal infections, especially when underlying reasons (douching, vaginal drying agents, hormonal contraceptives) are not addressed.

MODULE 6

PREVENTION & CARE OF STI/RTI FOR VULNERABLE PEOPLE

1. Introduction

1. INTRODUCTION

A public health approach to prevention and control of STI/RTI includes reducing barriers to services, raising awareness in the community, promoting services, and reaching out to people who do not typically use sexually transmitted infection/ STI services particularly the key populations (KPs) group including female entertainment workers (EW), men who have sex with men (MSM), people who inject drugs (PWID), and transgender (TG).

2. Reducing Barriers to use of STI/RTI Services

The first step to increasing use of services is to remove the barriers that keep people away. Recently, NCHADS and relevant development partners have done some critical works to reduce the barriers such as:

- **Laws, policies and regulations:** Cambodia has revised their laws, policies to friendly service for young people specifically women and children accessing health care services including STI, HIV and RH services.
- **Location:** STI/RTI services have available at Family Health clinic mostly located at provincial hospitals and a huge number of STI Integrated services at HC level as well as at private clinics and non-governmental organizations.
- **Hours:** are opening hours of the clinic convenient for working people, students, and others.
- **Cost:** costs should be affordable for any people, and poor people should be subsidized by HEF.

However, there may be barriers to acceptability of services, including:

- Stigma and discrimination
- Lack of privacy
- Lack of quality service or poorly managed health care facility
- Inadequate supplies and drugs
- Health care provider competency

Addressing these barriers will make it easier to promote use of services for STI/RTI prevention and care.

3. Raising Awareness and Promoting STI/RTI Services

Even when accessibility and acceptability barriers to clinic attendance have been removed, some people may not use STI/RTI services because they are not aware that anything is wrong. Prevention efforts, as well as promotion of clinic services for STI/RTI detection and treatment, must therefore be directed to people in the community. Health care workers should promote early use of services for people with symptoms or concerns about STIs/RTIs. This includes:

- Raising awareness of STIs/RTIs and their complications
- Educating people about STI/RTI symptoms, the possibility of asymptomatic infection and the importance of early use of health care services
- Promoting screening services such as syphilis and HIV testing early in pregnancy
- Promoting services and reaching out to young people or other vulnerable groups especially EWs, MSMs and TGs who may not feel comfortable using clinic services

Messages to promote the use of services for prevention and treatment of STIs/RTIs

People in the community should be aware of STIs/RTIs and know how to prevent and treat them.

1. **Prevention is better than cure:** the most effective strategy is to prevent infection in the first place by reducing exposure (delaying initiation of sex, reducing number of partners and/or using condoms consistently).
2. **Early treatment is better than late treatment:** when STIs/RTIs do occur, early identification and treatment can eliminate infection before it causes complications or spreads to other people.
3. **Better late than never:** diagnosis and treatment of complications are possible even if the first two levels of prevention fail. However, interventions at this level are often less effective and more expensive than those applied earlier.

4. Reaching Other Groups In Reproductive Ages

Prevention and management of STIs/RTIs require special attention to factors that can influence risk and vulnerability, such as age, sex, culture and occupation. This is as true for control of STIs in the community as it is for management of individual patients. If key sectors of the population, such as men or adolescents, are ignored, community control of STIs will be very difficult to achieve. Other groups, such as EWs and their clients, and migrant and mobile workers, may be at high risk of STI yet may not know about health services or feel comfortable using them. Outreach to these groups strengthens STI control.

4.1 INVOLVING MEN

Men tend to have more sexual partners than women and thus more opportunity to acquire and spread STI. Men are also more likely to have symptoms when they have an STI and may seek treatment at clinics, from private doctors or directly from pharmacies or drug vendors. Access for men to quality services for prevention and treatment is thus an important component of STI control. Reproductive health clinics such ANC, delivery and maternity service has include men in the mother class when they are waiting for service aiming to involve them in decision-making about dual protection (against both infection and pregnancy). In Cambodia, the national maternal and child health (NMCHC) has work with the National Center for HIV/AIDS, Dermatology and STD (NCHADS) to broadening services to include men into services where men go for care, and create mechanisms for easy referral, partner treatment and other needs.

Self-treatment

Self-treatment should be discouraged for several reasons. First, ineffective drugs are often sold by people with minimal training (such as pharmacy sales assistants). Secondly, drugs may be sold in insufficient dosages to make treatment more affordable. As a result, the infection is not cured (although symptoms may disappear for a while) and the germs become more resistant to common antibiotics.

Health care providers should try to understand why people treat themselves. It may be because local clinics are not acceptable for various reasons, such as cost, waiting time, or perceived lack of privacy. Improving and promoting clinic services can restore confidence and reduce the amount of self-treatment.

Reaching men

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 spouse, sweethearts and children. HIV prevalence is particularly high amongst MSM at 2.3% (MSM IBBS 2014) and TG women at 5.9% (TG IBBS 2016).

Two objectives for reproductive health or STI's program interventions for men are:

- To encourage men including MSM and TG with an STI to bring or refer their partners for treatment. Since STIs are more often symptomatic in men than in women, partner management is an important way to identify asymptomatic women who need treatment.
- To reach men including MSM and TG with information about prevention, especially the use of condoms in any sex encounters. This reduces the chance they will take an STI home.

4.2 YOUNG PEOPLE

Young people have higher rates of STI than older adults. There are many social, behavioral and biological reasons for this. For instance:

- Young people tend to have more partners and shorter relationships, so there is more opportunity for STIs to spread
- They may find it difficult or embarrassing to obtain or use condoms
- They may find it difficult to refuse sex in some situations (within the family, in exchange for goods such as school supplies, food or clothes)
- They may not recognize situations and sexual partners where risk of infection is high.
- They may lack knowledge about the symptoms of STIs and when to seek care
- They may feel uncomfortable using family planning or other STI services for fear of critical and judgmental responses from staff
- They may not be aware of places to go for private and confidential services
- They may be unable to afford health services.

In some societies, adolescent girls are expected to marry early and have little or no sexual experience prior to marriage. They may still be at risk of infection, however, because their husband may have had previous partners or may have more than one partner. Young girls with an older sexual partner are at much greater risk of acquiring some infections (especially incurable infections such as HIV, HSV-2 and HPV), and are more likely to be in a relationship where the sexual activity is not wholly consensual. Biologically, for many adolescent girls-especially those near puberty-the tissue covering the cervix is more vulnerable to infection than that of older women.

Reaching young people

Reproductive health clinics have a role to play in providing quality preventive and curative services for young people, and should attempt to make their services acceptable and accessible to them. “Youth-friendly services” are private, respectful and confidential services based on young people’s needs and concerns, provided by technically competent staff, in physically acceptable and accessible places.

Young people need practical information and support in relation to issues that affect their lives (including sexual activity), as well as access to services and supplies. Education that focuses only on abstinence and fidelity leaves women and girls uninformed about other ways to reduce risk of infection and unable to negotiate safer sexual activities that minimize this risk. Barriers faced by young people in accessing services such as condoms and contraception are often due to attitudes of parents, providers and the community, including denial and discomfort about youth sexuality. These barriers need to be broken down. Outreach and peer education can help reach young people in different situations who may not have knowledge of, or easy access to, services.

In Cambodia the legal age of consent for medical services is 18 years old and above of consent for sex. Health care providers need to talk to parents or care givers to manage adolescents who are under the age of consent for medical treatment. Ideally, treatment or services should be permitted if the young person’s well-being is threatened.

4.3 KEY POPULATION AND OTHERS WITH MANY SEXUAL PARTNERS

Some people are more likely to acquire an STI because they change sexual partners frequently. The greater the number of sexual partners a person has, the greater the chances of becoming infected with an STI, and the greater the chance of passing it on to someone else. Interventions that successfully reach such people at high STI risk can have the greatest impact on community STI transmission. Thus, reaching these groups with high-quality preventive and curative services is essential for community control of STI. Services should be convenient, private and confidential.

5. STI/RTI Management In Pregnant Women And Newborns

STI/RTI prevention and management are as important during pregnancy as at any other time. A woman's sexual activity may change which either increase or decrease the risk of STI/RTI infection. A number of STIs, including syphilis, gonorrhoea, chlamydia, trichomoniasis, genital herpes and HIV, can cause complications during pregnancy and contribute to poor pregnancy outcomes.

Among endogenous infections, bacterial vaginosis is associated with preterm labour. Yeast infection is more common during pregnancy and, although it is not associated with any adverse pregnancy outcomes, the symptoms may be unpleasant and women should receive appropriate treatment. Upper genital tract infection may be a complication of spontaneous or induced abortion, or preterm rupture of membranes, or may occur following delivery, and may be life-threatening. Some STI/RTI-related problems in pregnancy are post abortion and postpartum infections, and congenital syphilis. Simple improvements in service delivery using available technology such as same day, on-site dual HIV-syphilis screening test in antenatal clinics, can lead to dramatic improvements in pregnancy outcome. Treatment of symptomatic bacterial vaginosis can reduce the risk of preterm labour, and prevention and effective management of postpartum and post abortion infections can reduce maternal morbidity and mortality.

Women of reproductive age should be educated about the importance of early antenatal care and HIV, STI/RTI screening. Couples should be counselled during pregnancy on symptoms of preterm labour, safer sex practices and avoidance of other partners during the pregnancy.

Antenatal clinic visits provide opportunities for preventing and detecting STIs/RTIs, and women should be encouraged to attend early in pregnancy.

5.1 INITIAL ASSESSMENT VISIT DURING PREGNANCY

A woman may first come to the antenatal clinic any time between the first trimester and the onset of labour. She may or may not return to the clinic before delivery. It is therefore important to make the most of the first visit, and some consideration of STIs/RTIs should be included in the assessment. The following key points are recommended as a minimal STI/RTI assessment at the initial antenatal visit:

- Ask the woman about symptoms of STI/RTI and whether her partner has urethral discharge or other symptoms. If the woman or her partner has symptoms, the initial one dose of Benzathine .

Penicillin G 2.4 MU intramuscularly shall be given as soon as possible before performing a second RPR test. The RPR test should be conducted at Family Health Clinic (FHC) where the woman could also receive her treatment before returning home. Treatment of her partner should also be encouraged and active assistance given if requested.

- Pregnant women with a history of spontaneous abortion or preterm delivery should be screened for bacterial vaginosis and trichomoniasis. Those who test positive should be treated (after the first trimester of pregnancy) with metronidazole, (see module 3-A) to reduce risk of adverse pregnancy outcome.
- Counselling and testing for HIV should be available on-site. Currently, Cambodia approved Alere HIV/Syphilis Dual test to screen HIV and Syphilis. If the test is reactive for HIV, she will be referred to HTS-ART for confirmatory test and referred to ART clinic if the test is confirmed positive. HTS-ART providers should advise women on how to reduce the risk of mother-to-child transmission (MTCT) and should pre-register to maternity hospital for safe delivery. In the latest HTS consolidated Guideline (HTS 2017), Alere HIV/Syphilis Dual test is approved to provide on STI site for all STI patients as well.
- Prevention of STIs (including HIV) should be discussed with the woman and her husband/partner in the context of ensuring a healthy pregnancy and protecting future fertility. The service package for HIV and Syphilis-exposed infants (HEI and SEI) should be promptly informed women including testing at birth and other testing schedules, ARV prophylaxis, Cotrimoxazole prophylaxis and other important following up should be done until the baby reached 18 month of age. Explain the importance of get SEI's treatment if the mother has exposed to high risk exposure (See SEI algorithm).
- Plans for delivery and the postpartum period should be discussed early in pregnancy. Infection with a viral STI such as HIV or HSV-2 may influence the birth plan. STI/RTI prevention needs should be discussed when considering options for postpartum family planning.

5.2 FOLLOW-UP ANTENATAL VISIT

When women return for follow-up antenatal visits, attention should be paid to STI/RTI prevention and detection since risk of infection may persist. As at the first visit, women should be asked about symptoms in themselves or their partners. Any symptomatic STIs/RTIs should be managed.

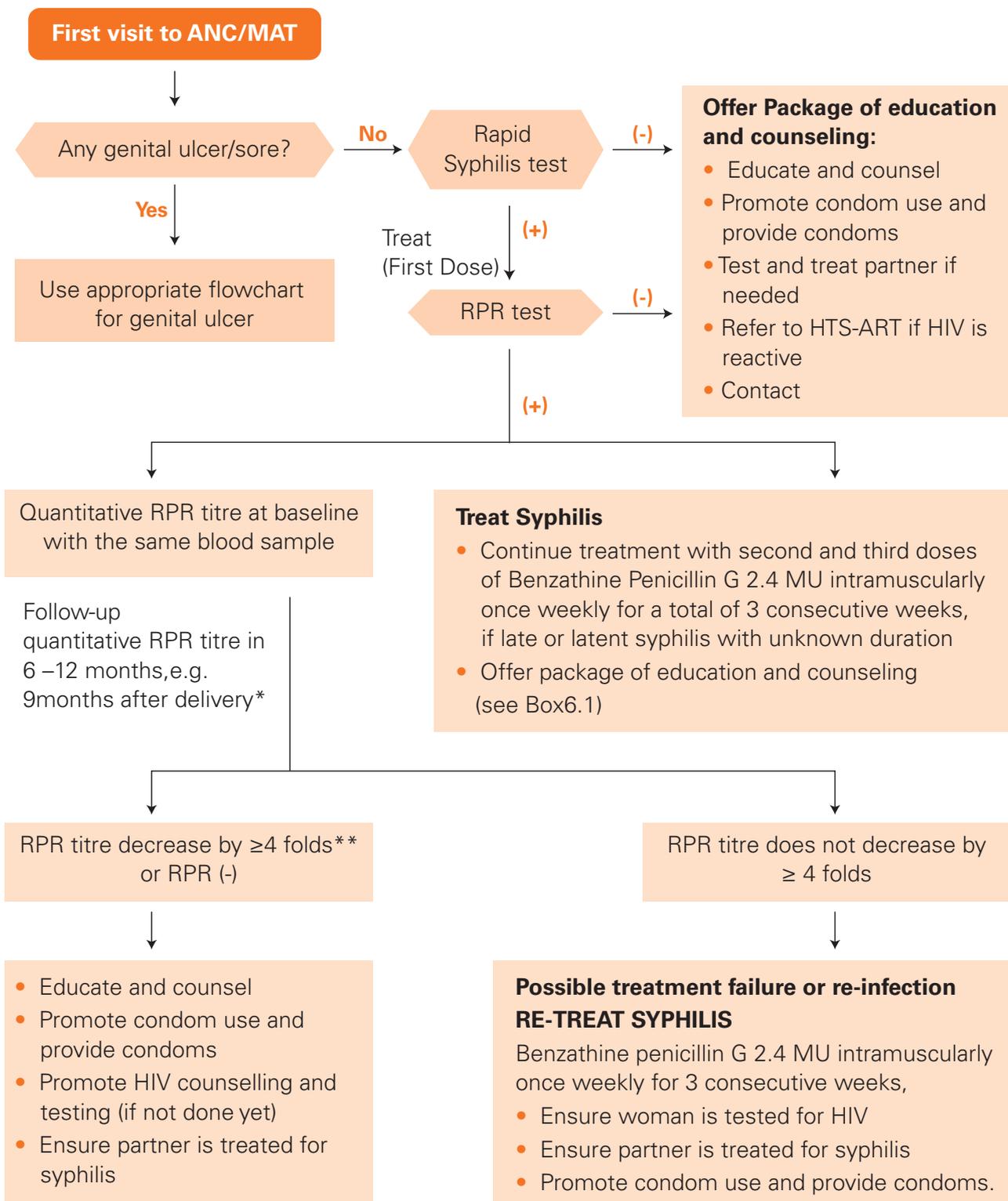
- Syphilis testing should be repeated in late pregnancy, if women have experienced of abortion, pre-mature, low birth weight, stillbirth/neonatal death. All pregnant women should be tested at least once during her current pregnancy, and a woman with treponemal reactive serology should receive one initial dose of Benzathine Penicillin G 2.4 MU intramuscularly before or during performing a second RPR test and the following treatment will be referred to syphilis treatment algorithm based on the RPR test result (see Figure 17).
- For PWs who are HIV reactive should be referred HTS-ART for confirmatory testing; if the confirmed test is positive she should be immediately referred to ART clinic for promptly treatment regardless of CD4 count and gestational age (PMTCT Guideline 2016). Health care providers should review the birth plan particularly the package for HEI and SEI, discuss options for infant feeding and postpartum contraception.
- Prevention of STIs/RTIs should be emphasized. The woman and her partner should understand that, regardless of previous treatment, an STI acquired in late pregnancy is capable of causing pregnancy complications and congenital infection. Condoms should be offered. Where partner treatment is indicated, it may be more readily accepted if offered as a precaution to ensure a safe delivery and healthy newborn.

5.3 LABOR AND DELIVERY

STI/RTI concerns during labour and delivery are few but potentially important. The objectives are to identify infection that may not have been detected during the antenatal period, and to intervene where possible to prevent and manage STI/RTIs in the newborn. Look for signs of infection. Most STI/RTIs are not emergencies and treatment can be delayed until after delivery.

- **Genital herpes** (primary HSV-2 infection) near delivery may be an indication for caesarean section since vaginal delivery carries a risk for the newborn of disseminated herpes, and a high risk of neonatal death. Where caesarean section is not possible or would be unsafe, transport to a referral hospital should be considered if delivery is not imminent. Caesarean delivery is not beneficial if more than six hours have passed since rupture of the membranes.
- **Genital warts**, even when extensive, are not an indication for caesarean delivery.
- **Manage HIV-infected** women (including administration of antiretroviral treatment) according to National protocols.

Figure 16: Syphilis Algorithm for Pregnant Women



*Mother comes back to health center or referral hospital for measles immunization of infant **e.g. from 1:16 to 1:4

Note: Every follow-up visit of the SEI, clinical signs of congenital syphilis should be screened and treat if symptom is positive.

5.4 PREVENTION AND MANAGEMENT OF STI/RTIS IN THE NEWBORN

5.4.1 NEONATAL EYE PROPHYLAXIS

All newborn babies, regardless of maternal signs or symptoms of infection, should receive prophylaxis against ophthalmia neonatorum due to gonorrhoea or chlamydial infection. The eye ointments and drops that may be used are listed below.

Prevention of ophthalmia neonatorum:

Instill one drop of the following in each eye within one hour of birth:

- **Tetracycline** ophthalmic ointment (1%) in a single application, OR
- Provide **iodine** drops 2.5% in a single application, OR
- **Silver nitrate** (1%) freshly prepared aqueous solution in a single application



5.4.2 CONGENITAL SYPHILIS

Global guidance on criteria and process for Validation (eMTCT HIV-syphilis 2017) define congenital syphilis (CS) as:

1. A live birth or fetal death at >20 weeks of gestation or >500 g (including stillbirth) born to a woman with positive syphilis serology and without adequate syphilis treatment ^(a)

OR

2. A live birth, stillbirth or child aged <2 years born to a woman with positive syphilis serology or with unknown serostatus, and with laboratory and/or radiographic and/or clinical evidence of syphilis infection (regardless of the timing or adequacy of maternal treatment).

Laboratory and radiographic evidence

Laboratory and radiographic evidence consistent with a diagnosis of congenital syphilis includes any of the following:

- a. Demonstration by dark-field microscopy or fluorescent antibody detection of *Treponema pallidum* in the umbilical cord, placenta, nasal discharge or skin lesion material or autopsy material of a neonate or stillborn infant;
- b. Analysis of cerebrospinal fluid (CSF) is reactive for Venereal Disease Research Laboratory (VDRL) test, or elevated CSF cell count or protein;
- c. Long bone radiographs suggestive of congenital syphilis (e.g. osteochondritis, diaphyseal osteomyelitis, periostitis);
- d. Infant with a reactive non-treponemal serology titre fourfold or more than that of the mother;
- e. Infant with a reactive non-treponemal serology titre less than fourfold more than that
- f. Infant with a reactive non-treponemal serology test of any titre AND any of the clinical signs listed below born to a mother with positive or unknown serology, independent of treatment ^(b);
- g. In settings where a non-treponemal titre is not available, an infant born to a mother with positive or unknown serology, independent of treatment, and whose 6-month examination demonstrates any of the early clinical signs listed below;
- h. For stillborn infants, maternal syphilis serostatus should be determined. Any case with a reactive maternal test should be considered a congenital syphilis case (i.e. a syphilitic stillbirth).

Clinical signs associated with congenital syphilis

Early clinical signs that may be presented in an infant/ older infant with congenital syphilis include:

- **For Infant:** non-immune hydrops, hepatosplenomegaly, rhinitis (snuffles), skin rash, pseudoparalysis of an extremity or failure to thrive or achieve developmental milestones.
- **For Older Infant:** an older infant or child may develop additional signs or symptoms such as frontal bossing, notched and pegged teeth (Hutchinson teeth), clouding of the cornea, blindness, bone pain, decreased hearing or deafness, joint swelling, sabre shins, and scarring of the skin around the mouth, genitals and anus swelling, sabre shins, scarring of the skin around the mouth, genitals and anus.

Notes:

- (a)** Adequate maternal treatment is defined as at least one injection of 2.4 million units of intramuscular benzathine benzylpenicillin at least 30 days prior to delivery.
- In pregnant women with late syphilis or unknown stage of syphilis, WHO recommends benzathine penicillin 2.4 million units intramuscularly once weekly for three consecutive weeks
 - A woman with a past history of syphilis diagnosis and for whom previous syphilis treatment can be confirmed should be evaluated for risk of reinfection. Those without physical (e.g. ulcer, unexplained rash) or laboratory evidence of syphilis (increasing non-treponemal titre) need not be classified as having current syphilis. However, women living in high-prevalence settings or who have personal or partner behavioural risk or whose partners were not treated for syphilis may warrant evaluation for reinfection later in pregnancy. An infant born to a woman with a documented history of adequate treatment for syphilis prior to the current pregnancy, with no physical or laboratory evidence of reinfection (e.g. increasing maternal non-treponemal titre), can be excluded from the country counts of congenital syphilis cases
- (b)** All neonates with reactive non-treponemal tests should have careful follow-up examinations and repeat non-treponemal tests every 2–3 months until the test becomes non-reactive. Infants with a non-reactive non-treponemal test at birth and whose mothers were reactive at birth should be retested at 3 months to rule out incubating syphilis. In an infant who was NOT treated because congenital syphilis was considered unlikely, non-treponemal antibody titres should decline by age 3 months and be non-reactive at 6 months. Any infant ≥ 6 months of age with a reactive non-treponemal serology titre should be considered a case of congenital syphilis. Syphilis-exposed infants should receive treatment according to WHO syphilis treatment guidelines

5.5 POSTPARTUM CARE

It is as important to be aware of signs of infection following delivery as during pregnancy. Postpartum uterine infection is a common and potentially life-threatening condition, and early detection and effective treatment are important measures to prevent complications. All women are vulnerable to infection following delivery, and retained blood and placental tissue increase the risk. Other risk factors for infection include prolonged labour, prolonged rupture of membranes and manipulation during labour and delivery.

Management of postpartum infection:

- Improving services for prevention and treatment of STI/RTI. Women should be examined within 12 hours following delivery. When they are discharged from the health care facility, women should be advised to return to the clinic if they notice symptoms, such as fever, lower abdominal pain, foul-smelling discharge or abnormal bleeding. They should be given information on care of the perineum and breasts, and instructed on the safe disposal of lochia and blood-stained pads or other potentially infectious materials. Health care providers should be alert to signs of infection including fever, lower abdominal pain or tenderness and foul smelling discharge.
- HIV-positive women may need continued care and support, including access to treatment and support in carrying out a substitute feeding plan.

If contraception was not discussed before delivery, it should be brought up early in the postpartum period. Planning for a suitable method should include consideration of need for STI/RTI protection. Dual protection should also be discussed with women who choose a long-term contraceptive method, such as a condom, an IUD, following delivery.

6. Management Of Asymptomatic STIS/RTIS

Many women and men with an STI/RTI do not have symptoms, however, or have minimal symptoms and do not realize that anything is wrong. They may visit a clinic for other reasons or not at all.

In women, silent asymptomatic infections can be more serious than symptomatic ones. Syphilis, gonorrhoea and chlamydia have serious consequences, yet are often asymptomatic.

STI services have an important role to play in detecting asymptomatic STI/RTI. Since many women attend health centres for family planning, antenatal services and postpartum care, there is an opportunity to identify women with an STI/RTI who would benefit from treatment.

STI services should reach out to men whenever possible. While men are more likely to have symptoms than women, asymptomatic STI is possible. More commonly, men may ignore symptoms if they are not severe. Health care providers can raise awareness about symptoms and encourage men to come for check-ups if they have symptoms.

Family Health Clinic (STI specific clinic) have capacity to screen for asymptomatic infections such as speculum, bimanual and laboratory examination to look for signs of cervical infection or PID, a Pap smear for early diagnosis of cervical cancer, and the screening tests for syphilis, HIV and Gonorrhoea.

6.1 STI/RTI SCREENING FOR WOMEN

Screening means laboratory testing for STI/RTI in person at risk, in the absence of symptoms, signs known STI/RTI exposure or other clinical evidence of infection. In addition, screening test does not always diagnose the illness; this is usually done on further investigation. Women particularly those who have risk/high risk of RTI/STI such entertainment workers (EWs) exposure should be routinely screened

Box indicates some guiding principles that could be applied for Entertainment Worker (EW):

1. An entertainment worker has a right to receive healthcare services and should never be denied treatment.
2. Just because a person is an entertainment worker, do not make assumptions about the person's health. Assumptions like "EWs are all HIV positive or all have STIs" lead to further stigma and discrimination if the broader community believes that EWs spread disease.
3. Never say or do anything to blame the victim/survivor of gender-based violence (GBV) for her physical or sexual assault. All kinds of people and not just EWs experience gender-based violence. It is never their fault. It is the fault of the perpetrator.

4. Clients or survivors who are EWs are here to receive necessary sexual assault services which are her/his right.
5. Healthcare providers should continuously reassure survivors that their information will not be shared with the police or local authority unless they agree to press charges against the perpetrator.
6. It is quite possible that a client of an entertainment worker may have played a role in the sexual assault. You should record the survivor's account of the assault as part of the history-taking without questioning or pressuring him or her to talk about her/his sex work if she does not want to. The survivor should be assured that it was not their fault that they were sexually assaulted.
7. All EWs are at high risk for encountering prejudice and ridicule as a result of reporting sexual assault.
8. Before referring EWs to external agencies for services, ensure that those services are actually welcoming to all EWs including male, female, transgender and gay

6.1.1 SYPHILIS

Syphilis remains a leading cause of perinatal mortality and morbidity in many parts of the world despite widely available and affordable technology for diagnosing and treating infection in pregnant women. Among pregnant women in the early stages of syphilis who are not treated, an estimated two-thirds of pregnancies end in abortion, stillbirth, or neonatal infection.

Indications and opportunities for screening

Screening for syphilis should be done at the first antenatal visit or at delivery setting, as early as possible in pregnancy. It can be repeated in the third trimester if resources permit, to detect infection acquired during the pregnancy. Women who do not attend antenatal clinic should be tested at delivery. Although this will not prevent congenital syphilis, it permits early diagnosis and treatment of newborns.

Women who have had a spontaneous abortion (miscarriage) or stillbirth should also be screened for syphilis; in many areas, identification and treatment of syphilis remove a major cause of adverse pregnancy outcome. Men and women with STI syndromes other than genital ulcer should be screened for syphilis. Screening is unnecessary for patients with ulcers who should be treated syndromically for both syphilis and chancroid without testing. Because of the serious complications of syphilis in pregnancy, the first priority should be to ensure universal antenatal screening.

Available screening tools and treatment

- HIV-Syphilis dual tests are recently purchased to screen HIV and Syphilis among pregnant women and key population (KP). Some referral hospitals and the national institute for public health have use venereal disease research laboratory (VDRL) tests for first test as well. For those who screened reactive with either dual test or VDRL are referred to Family Health Clinic for confirmatory testing.
- Dual HIV-Syphilis test and Treponemal tests (e.g. Treponema pallidum haemagglutination assay-TPHA), if available, can be used to confirm non-treponemal test results use as the first screening test.
- Rapid plasma reagin (RPR), non-treponemal tests are used to confirm for syphilis. RPR can be performed without a microscope. These tests detect almost all cases of early syphilis but false positives are possible.
- At FHC, the quantitative (RPR) titres are also used to evaluate the response to treatment.
- Patients with RPR positive results should be treated adequately with BPN*. The patients must be asked for a history of allergy to Penicillin.
- Sex partners should also be treated
- Their syphilis-exposed infant (SEI) should be tested at birth and evaluated the risk the newborns have gotten from their mothers. If the mothers are at high risk of syphilis infection; then the SEI must be given treatment immediately after born.
- High risk mothers is fall down with each of the four situation below:
 1. Mother had not treat syphilis; OR,
 2. Syphilis mother was treated syphilis within 30days of delivery; OR,
 3. Syphilis mother was treated with non-penicillin regimen (Ceftriaxone or Erythromycine);
 4. Titre not decline (≥ 4 folds)
- All neonates born to syphilis infected mothers must be performed first RPR test (RPR#1) at birth and performed titre as baseline. If the mothers present with high risk mentioned above, OR, infants' RPR titre is equal or/and greater than 4 folds of mother's titer, OR, infant with suspected clinical signs of congenital syphilis (CS)*; infant must be treated with the national protocol (See box xx below); otherwise no need to treat.
- All neonates born to syphilis infected mothers must be performed second RPR test (RPR#2) at 3 months of age and performed titre for follow-up. If the RPR titre ≥ 4 fold of Mother's titre; and SEI has not previously been treated for CS; treat SEI with national protocol (See box xx below); otherwise no need to treat.
- All neonates born to syphilis infected mothers must be performed third RPR test (RPR#3) at 6 months of age and performed titre for follow-up. If the RPR titre is still remain ≥ 4 fold of Mother's titre; and SEI has not previously been treated for CS; treat SEI with national protocol (figure 18 below) (See box 6.1); otherwise no need to treat.
- If treated for CS, RPR should be performed every 3 months until the titre becomes nonreactive or the titre has decreased fourfold; if not treated for CS, follow-up can be over

Box 6.1: The treatment regimen for Syphilis-positive mothers and SEI

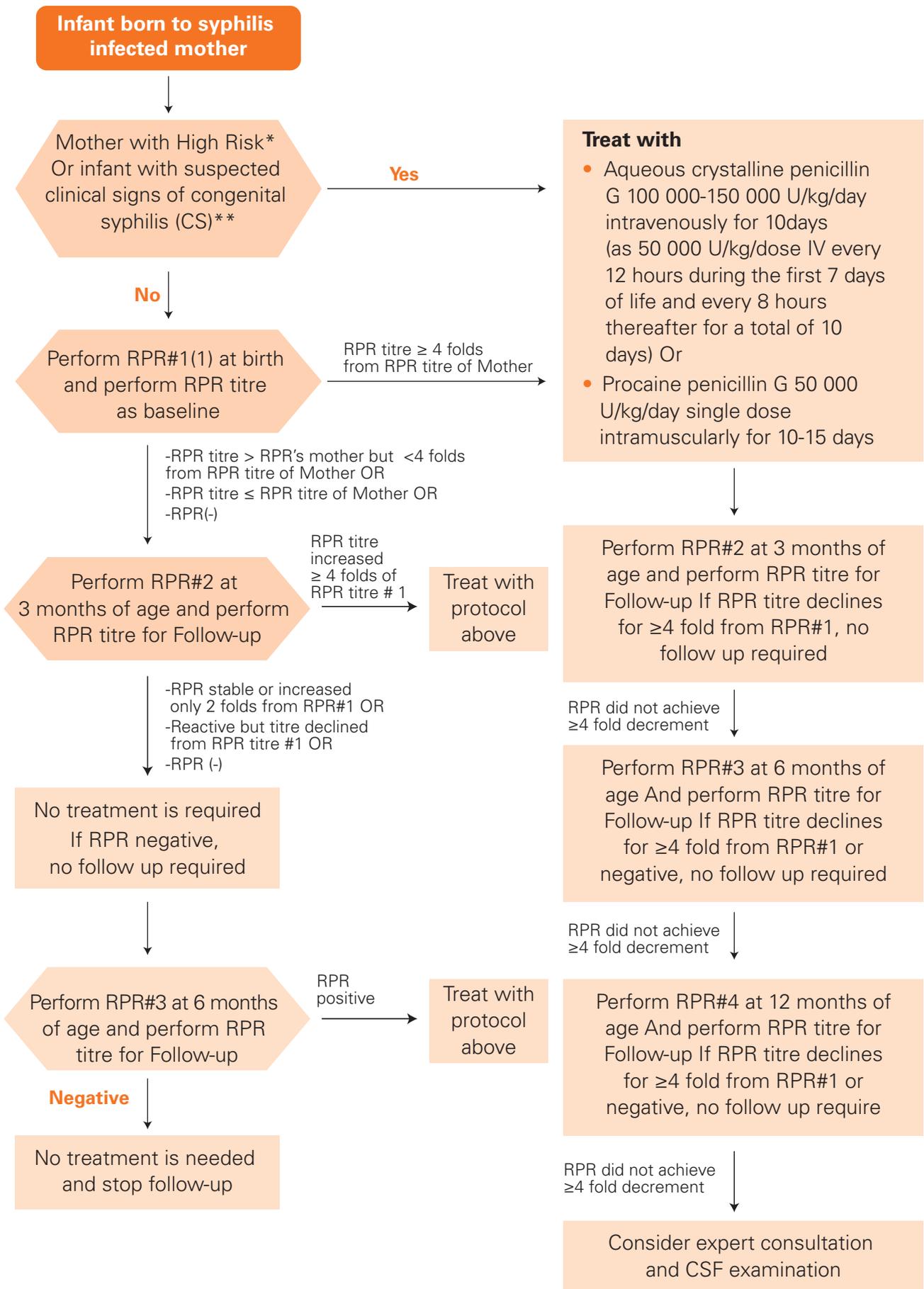
Syphilis-infected mothers	Syphilis-exposed infant (SEI)
<ul style="list-style-type: none">If late syphilis or latent syphilis with unknown duration: Benzathine Penicillin G 2.4 MU intramuscularly once weekly for 3 consecutive weeks,Early syphilis: single dose Benzathine Penicillin G 2.4 MU intramuscularly (see guidelines in case of penicillin allergy) For penicillin allergic patients, use: <ul style="list-style-type: none">Erythromycin 500 mg orally four times daily for 14 days orCeftriaxone 1 g intramuscularly once daily for 10–14 days for late syphilis or latent syphilis with unknown duration syphilis, use:<ul style="list-style-type: none">Erythromycin 500 mg orally four times daily for 30 days	<ul style="list-style-type: none">Aqueous Crystalline Penicillin G 100 000-150 000 U/kg/day intravenously for 10 days (as 50 000 U/kg/dose IV every 12 hours during the first 7 days of life and every 8 hours thereafter for a total of 10 days), * OR <ul style="list-style-type: none">Procaine Penicillin G 50 000 U/kg/day single dose intramuscularly for 10-15 days** *Reference from US-CDC 2015 **Reference from WHO 2018

Clinical Follow-Up of Syphilis-Exposed Infants (SEI)

All syphilis-exposed infants should have careful follow-up examinations every 3 months for 6 months, regardless of maternal or infant treatment.

- Infants with a reactive non-treponemal test at birth should have a repeat non-treponemal test at 3 and 6 months, regardless of maternal treatment. For infants who were NOT treated because congenital syphilis was considered unlikely, non-treponemal antibody titres should decline by age 3 months and be non-reactive at 6 months.
- Infants with a non-reactive non-treponemal test at birth and whose mothers may have had new syphilis (e.g. high titre, or new infection on repeat screening) during pregnancy should be retested at 3 months to rule out incubating syphilis.
- Any infant ≥ 6 months of age with a reactive non-treponemal serology titre should be considered a case of congenital syphilis and receive appropriate treatment. These cases should be counted towards the congenital syphilis case rate if not previously included

Figure 17: Management of Syphilis-Exposed Infant (SEI) Algorithm



(1) RPR1 infant at birth should be compared to RPR's titer mother at delivery. Mother should do RPR at delivery. If mother's RPR during delivery is not available, the last RPR mother test within 1 month can be used to compare.

- Infants with a non-reactive non-treponemal test at birth and whose mothers were reactive at birth should be retested at 3 months to rule out incubating syphilis. In an infant who was NOT treated because congenital syphilis was considered unlikely, non-treponemal antibody titres should decline by age 3 months and be non-reactive at 6 months. Any infant ≥ 6 months of age with a reactive non-treponemal serology titre should be considered a case of congenital syphilis. Syphilis-exposed infants should receive treatment according to WHO syphilis treatment guidelines.
- * **High Risk Mother defined** as 1. Mother not treated for syphilis; OR, 2. Mother treated for syphilis within 30 days of delivery; OR, 3. Mother treated with non-penicillin regimen; 4. Mother's titre not decline by ≥ 4 -folds.
- ** **Clinical signs associated with Congenital Syphilis (CS):** early clinical signs that may be present in an infant/older infant include:
 - **For infant:** non-immune hydrops, hepatosplenomegaly, rhinitis (snuffles), skin rash, pseudo-paralysis of an extremity or failure to thrive or achieve developmental milestones.
 - **For older infant:** frontal bossing, notched and pegged teeth (Hutchinson teeth), clouding of the cornea, blindness, bone pain, decreased hearing or deafness, joint swelling, sabre shins, scarring of the skin around the mouth, genitals and anus.

Management of anaphylaxis

Anaphylaxis may occur in the clinic as a result of allergy to medication, it occurs without warning. Anaphylaxis is a life threatening medical emergency.

Adrenaline must be immediately at hand whenever a vaccination or parenteral antibiotic is administered.

1. Signs and symptoms of anaphylaxis

The patient may be experiencing an anaphylactic reaction in the event of the following:

- Rapid onset wheeze – difficulty breathing
- Oedema – swelling of the face, lips or tongue
- Cyanosis – blue lips and fingers
- Rapid pulse
- Low blood pressure
- Rash – itchy, of rapid onset may be associated with the above

2. Immediate management of anaphylaxis

- Lay the patient on their left side.
- Establish airway - if breathing stops or the carotid pulse is not palpable begin cardio-pulmonary resuscitation.
- Call out for help

3. Administering adrenaline

Give adrenaline by deep intramuscular injection. Use a 1 ml syringe and 23G needle.

- Infants with a reactive non-treponemal test at birth should have a repeat non-treponemal test at 3 and 6 months, regardless of maternal treatment. For infants who were NOT treated because congenital syphilis was considered unlikely, non-treponemal antibody titres should decline by age 3 months and be non-reactive at 6 months.
- Infants with a non-reactive non-treponemal test at birth and whose mothers may have had new syphilis (e.g. high titre, or new infection on repeat screening) during pregnancy should be retested at 3 months to rule out incubating syphilis.
- Any infant ≥ 6 months of age with a reactive non-treponemal serology titre should be considered a case of congenital syphilis and receive appropriate treatment. These cases should be counted towards the congenital syphilis case rate if not previously included

Table 18: Administering adrenaline

Dose of Adrenaline = 0.01ml/kg*	
Age/Weight	Dose Dose Of Adrenaline (MI Of 1:1000) of Adrenaline (MI Of 1:1000)
1-2 years (approx 3 - 10 kg)	0.03 - 0.1 ml
2-3 years (approx 10 kg)	0.1 ml
4-6 years (approx 15 kg)	0.15 ml
7-10 years (approx 20 kg)	0.2 ml
11-12 years (approx 25 - 30 kg)	0.25 - 0.3 ml
12 - 14 years (approximately 40 kg)	0.4 ml
Adult	0.5 ml

** If possible weight the child or check the previous weight in the medical record, however, this should not delay urgent treatment.*

4. Further management after adrenaline commenced

- Start an intravenous infusion of saline
- Give 100% oxygen by face-mask at 8 litres/minute and maintain airway.
- Send for an ambulance if available. Admit to hospital for further observation and treatment.
- Monitor treatment and vital signs (blood pressure, heart rate, temperature, respiratory rate, Oxygen saturation) every 10-15 minutes and document vital signs. (Syphilis screening among pregnant women SOP, 2008, P.17).

6.1.2 VAGINAL INFECTIONS

Vaginal infections (yeast infection, bacterial vaginosis and trichomoniasis) are very common in women of reproductive age, are almost always symptomatic and rarely cause complications. In non-pregnant women, there is no need to look for asymptomatic cases. Asymptomatic women should not be treated for yeast or bacterial vaginosis on the basis of microscopy findings alone.

In pregnant women, however, bacterial vaginosis (BV) and trichomoniasis may cause complications such as pre-labour rupture of membranes and preterm delivery. Women at risk for these conditions should be screened regardless of symptoms.

- **Indications for screening:** Pregnant women with a history of spontaneous abortion or preterm delivery should be screened.
- **Available screening tools:** It can be detected by Gram stain microscopy of a vaginal smear or simple methods. Motile *Trichomonas* protozoa (*trichomonas*) can be seen on microscopic examination of a fresh wet mount of vaginal fluid in a drop of normal saline.
- **Recommended approach:** Pregnant women with a history of spontaneous abortion or preterm delivery should be screened for BV and trichomoniasis. Those who test positive should be treated (after the first trimester of pregnancy) with metronidazole, 500 mg three times a day for seven days, to reduce risk of adverse pregnancy outcome.

Women with symptomatic vaginal discharge in the second or third trimester should be treated (without screening) as above for BV, trichomoniasis, and yeast infection.

Non-pregnant women with abnormal vaginal discharge should be managed according to Flowchart of vaginal discharge.

6.1.3 CERVICAL INFECTIONS

Cervical infections are much less common than vaginal infections, especially among women who use STI services, and are usually asymptomatic. The cervix is the most common site of infection for gonorrhoea and chlamydia. Even if a woman is asymptomatic, it may be possible to detect signs of infection on careful speculum examination. Speculum examination may also reveal signs of other infections, including cervical ulcers and warts.

Indications and opportunities for screening:

- Screening may be done:
 - Any time a speculum examination is performed for other reasons; during pregnancy
 - People with frequent exposure to STI, such as EWs, should be screened regularly every quarter or if symptomatic

Available screening tools

- Careful speculum examination may detect many signs of cervical infections such as mucopurulent discharge, friability (easy bleeding), yellow discoloration of swab insert endocervical (positive swab test).
- Endocervical Gram-stain smear (available in Cambodia)
- Depending on laboratory resources, endocervical swab specimens can also be:
 - Culture for gonorrhoea
 - Tests for chlamydial infection are expensive
 - Polymerase chain reaction (PCR) is very accurate but very expensive
- **Recommended approach:** A careful speculum examination should be done to look for signs of cervical infection. Some asymptomatic internal ulcers and genital warts may also be detected on speculum examination. A swab should be collected from the cervical canal (endocervix). If the swab appears yellow (positive swab test), cervical infection is likely and the woman should receive treatment for gonorrhoea and chlamydia.

6.1.4 PELVIC INFLAMMATORY DISEASE

Upper genital tract infection or PID leads to serious and life-threatening complications including infertility and ectopic pregnancy, yet can often develop silently with few symptoms or none at all. Women with lower abdominal tenderness on examination should be managed for PID.

- **Indications for screening:** Screening should be performed any time a speculum or bimanual pelvic examination is performed, or when women have vague complaints of lower abdominal discomfort, back pain, spotting between periods, or pain during sexual intercourse; prior to trans-cervical procedures.
- **Available screening tools:** Careful abdominal and bimanual pelvic examination are the only tools for detecting silent PID.
- **Implementing screening:** Signs of upper genital tract infection include lower abdominal, cervical motion, uterine or adnexal tenderness. Women with these signs should be managed without delay using the lower abdominal pain flowchart.

6.1.5 CERVICAL CANCER SCREENING

Cervical cancer is a recognized complication of STI, related to infection with a few specific strains of human papilloma virus. Screening and treatment of early stages (cervical dysplasia) is effective in reducing morbidity and mortality from cervical cancer.

- **Indications for screening:** Indications for screening depend on resources. Where cytology services are well established, all women over 35 years old should be screened every five to ten years. Where cytology services are limited, the objective should be to screen all women once around the age of 40.

- **Available screening tool:** Cytology by Pap smear (Papanicolaou smear) and/or the visual inspection with acetic acid (VAI) and freezing are currently recommended.
- **Implementing screening:** Cervical cancer screening requires staff who can perform speculum examination and are trained in smear collection techniques, as well as availability of cytology services for reading smears. Women with a positive smear should be referred for further diagnosis and treatment.

6.1.6 HIV TESTING

All women should be encouraged to do voluntary HIV testing, especially those of reproductive age. HIV-Syphilis dual tests are available on FHC by finger prick testing. All HIV-reactive cases were referred to HTS-ART through case management assistant (CMA)/case management coordinator (CMC) and/or MCH/PMTCT coordinator for confirmatory testing. If the confirmatory testing is positive, the patients are accompanied to enroll at ART on the same day.

6.2 STI/RTI SCREENING FOR MEN

Clinicians should routinely ask sexually active men, MSM and TG about symptoms consistent with common STDs, including urethral discharge, dysuria, genital and perianal ulcers, regional lymphadenopathy, skin rash, and anorectal symptoms consistent with proctitis. Routine laboratory screening for common STDs is indicated for all sexually active men, MSM and TG.

Before performing screening, it is important note some guiding principles to be applied for MSM who also falls in this category:

1. It is never appropriate to deny treatment to any person because of their sexual orientation.
2. Because same-sex behavior is stigmatized in Cambodia, men who have sex with men and TG may not trust healthcare providers enough to share their personal history with them. To overcome this, healthcare providers should not be judgmental regarding a person's sexual orientation. This includes refraining from any verbal expressions of shock, disgust or disagreement.
3. Services should be provided in a sensitive manner and survivors should never be pressured to talk, but allowed to let their story unfold at their own pace.
4. Confidentiality regarding a client's sexual orientation should be strictly maintained. One should not discuss or mention it to the other staff members unless needed for treatment reasons.

The client or survivor of gender-based violence (GBV) is there to receive necessary sexual assault services which are his/her rights and should not be subjected to advice, prayers or 'cures' for his or her sexual orientation.

Before referring bisexual or gay men to external agencies for services, ensure that those services are actually welcoming to all sexual orientations and are familiar with service needs of MSM.

Below are guiding principles to be applied for TG who also falls in this category:

1. Because of stigma and discrimination, transgender victims of gender-based violence may be reluctant to report the crime or consent to the exam for fear of being exposed to inappropriate questions or abuse. If the victim does consent to a laboratory screening procedure, be especially careful to explain what you want to do and why before each step, and respect their right to decline any procedure.
2. Intake forms and other documents that ask about gender or sex should have options such as 'male/female/others.'
3. Healthcare providers should respect a client's or survivor's stated gender identity and use the appropriate names and term for that stated identity, remembering that gender identity may not match anatomy, including genitals.
4. Where possible, allow transgender individuals to request to be served by a healthcare provider of whichever sex they are most comfortable with.
5. TG individuals may have increased shame toward their body. Many experience gender dysphoria, clinically significant distress caused when a person's biological sex is not the same as the one with which they identify. This may include hatred of the parts of their body that don't 'fit' their identity. Reflect the victim's language when possible, and if you use medical language with TG clients or victims, make sure to inform them of why you are making this choice and that you are not disrespecting their preferred language.
6. Before referring transgender or intersex individuals to external agencies for services, ensure that those services are actually welcoming to transgender and intersex people. If not, they may be further victimized when they seek services.

The following screenings are recommendations as shown below:

Recommended tests	Patients' symptoms
Urethral or voided urine (first 5cc) Gram-stain smear	<ul style="list-style-type: none"> • If the patient has symptoms of urethritis or • If urethral discharge can be expressed or is spontaneously present or • If patient is a contact of women with cervicitis, PID
Syphilis screening	<ul style="list-style-type: none"> • patient has high risk behaviors
Additional, STI/RTI screening tests	<ul style="list-style-type: none"> • If rectal discharge is present or • If asymptomatic
Rectal culture or PCR or GeneXpert has a combined CTNG cartridge for N. gonorrhoeae and C. trachomatis	<ul style="list-style-type: none"> • if experienced of receptive rectal intercourse last year
Rectal Gram-stain	<ul style="list-style-type: none"> • if practices receptive anal intercourse
HIV screening test	<ul style="list-style-type: none"> • high risk exposure

7. Sexual Violence And STIs/RTIs

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”*.

Sexual violence is common. Both males and females are vulnerable in childhood, but women are much more at risk in adolescence and adulthood and transgender women as adults.

7.1 SEXUAL VIOLENCE—SOME STATISTICS

- Studies from different parts of the world have found that 7%-36% of girls and 3%-29% of boys suffer from sexual abuse in childhood, with a majority of studies reporting 1.5-3 times more sexual violence against girls than boys.
- The percentage of adolescents who have been coerced into sex can range from approximately 7% to 46% of females and 3% to 20% of males, depending on the country.
- Population-based studies report that between 6% and 46% of women have experienced attempted or completed forced sex by an intimate partner or ex-partner at some time in their life.
- Rape and domestic violence account for an estimated 5-16% of healthy years of life lost in women of reproductive age.
- STI has been found in up to 43% of people who have been raped, with most studies reporting rates between 5% and 15% depending on the disease and type of test used.
- Almost half of TG have experienced some type violence, including sexual violence.

It is important that health care providers have a high index of suspicion and awareness about sexual violence. Many individuals are reluctant to talk directly about abuse by their intimate partner. They may be ashamed to discuss it, or they may be afraid of future violence if the situation is exposed. Often, because they feel uncomfortable talking about sexual violence, 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.

7.2 MEDICAL AND OTHER CARE FOR SURVIVORS OF SEXUAL ASSAULT

All health facilities should have up-to-date policies and procedures for managing persons who have survived or experienced sexual violence that are in line with local law. Whether comprehensive services are provided on-site or through referral, providers need to be clear about the protocol to be followed and how to manage crisis situations. They should have the necessary supplies, materials and referral contact information in order to deal confidentially, sensitively and effectively with people who have experienced sexual violence.

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

- Essential medical care for any injuries and health problems
- Collection of forensic evidence
- Evaluation for STI and preventive care
- Evaluation of pregnancy risk and prevention, if necessary
- Psychosocial support (both at time of crisis and long-term)
- Follow-up services for all of the above

Survivors of sexual assault have experienced a traumatic event and should be rapidly evaluated to determine whether they need emergency medical, psychological or social intervention. It is important to remember that the trauma of the event may make parts of the examination difficult. Explain carefully the steps that will be taken and obtain written informed consent from the patient before proceeding with examination, treatment, notification or referral.

A qualified provider who has been trained in the required procedures should perform the examination and documentation of evidence. The examination should be deferred until a qualified professional is available, but not for longer than 72 hours after the incident. It is the patient's right to decide whether to be examined. Treatment can be started without examination if that is the patient's choice. For minors under the age of consent, local guidelines may dictate how to manage the person—usually parental consent is required. If at all possible, do not deny adolescents immediate access to medical services. Where facilities or referral for a more complete examination are not available, the following minimal information should be collected: date and time of assault; date and time of examination; patient's statement; and results of clinical observations and any examinations conducted. Such information should be collected or released to the authorities only with the survivor's consent. Be aware of legal obligations that will follow if the assault is reported and goes to legal proceedings. Ideally, a trained health care provider of the same sex should accompany the survivor during the history-taking and examination. A careful written record should be made of all findings during the medical examination. Pictures to illustrate findings may help later in recalling details of the examination.

7.3 MEDICAL MANAGEMENT

In the assault, and initial counselling. Emergency contraception and STI prophylaxis should be offered early to survivors of sexual violence. For many women, the trauma of the event may be aggravated and prolonged by fear of pregnancy or infection, and knowing that the risks can be reduced may give immense relief.

7.4 EMERGENCY CONTRACEPTION

Emergency contraceptive pills can be used up to 5 days after unprotected intercourse. However, the sooner they are taken, the more effective they are. Several regimens exist—using levonorgestrel or combined oral contraceptive pills. A second option for emergency contraception is insertion of a copper-bearing IUD within 5 days of the rape. This will prevent more than 99% of pregnancies. The IUD may be removed during the woman's next menstrual period or left in place for continued contraception. If an IUD is inserted, make sure to give full STI treatment as recommended in Treatment below. If more than 5 days have passed, counsel the woman on availability of abortion services (in most countries, post-rape abortion is legal). A woman who has been raped should first be offered a pregnancy test to rule out the possibility of preexisting pregnancy.

7.5 POST-EXPOSURE PROPHYLAXIS OF STI

Another concrete benefit of early medical intervention following rape is the possibility of treating the person for a number of STIs. STI prophylaxis can be started on the same day as emergency contraception, although the doses should be spread out (and taken with food) to reduce side-effects such as nausea. The incubation periods of different STIs vary from a few days for gonorrhoea and chancroid to weeks or months for syphilis and HIV. Treatment may thus relieve a source of stress, but the decision about whether to provide prophylactic treatment or wait for results of STI tests should be made by the woman. Treatment table 13 lists options that are effective whether taken soon after exposure or after the appearance of symptoms.

7.6 POST-EXPOSURE PROPHYLAXIS OF HIV

The possibility of HIV infection should be thoroughly discussed as it is one of the most feared consequences of rape. At present, there is no conclusive evidence on the effectiveness of postexposure prophylaxis (PEP) in preventing infection following sexual exposure to HIV, and PEP is not widely available. If PEP services are available, rape survivors who wish to be counselled on the risks and benefits should be referred within 72 hours. The provider should assess the person's knowledge and understanding of HIV transmission and adapt the counselling appropriately. Counselling should take into account the local prevalence of HIV and other factors (trauma, other STI exposure) that could influence transmission. If the person decides to take PEP, two or three antiretroviral drugs are usually given for 28 days. See the National Guideline on Post-Exposure Prophylaxis of HIV infection.

7.7 PROPHYLACTIC IMMUNIZATION AGAINST HEPATITIS B

Hepatitis B virus (HBV) is easily transmitted through both sexual and blood contact. Several effective vaccines exist although they are expensive and require refrigeration. If HBV vaccine is available, it should be offered to survivors of rape within 14 days if possible. Three intramuscular injections are usually given, at 0, 1 and 6 months (see instructions on vaccine package as schedules vary by vaccine type). Where infant immunization programmes exist, it is not necessary to give additional doses of HBV vaccine to children who have records of previous vaccination. Hepatitis immune globulin is not needed if vaccine is given.

7.8 TETANUS TOXOID

Prevention of tetanus includes careful cleaning of all wounds. Survivors should be vaccinated against tetanus if they have any tears, cuts or abrasions. If previously vaccinated, only a booster is needed. If the person has never been vaccinated, arrangements should be made for a second vaccination one month later and a third 6 months to one year later. If wounds are dirty or over 6 hours old, and the survivor has never been vaccinated, tetanus immune globulin should also be given.

7.9 REFERRAL TO SPECIAL SERVICES

Following the initial provision of care, referrals may be needed for additional services such as psychosocial support. 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. Referral for forensic examination should be made if this is desired but could not be adequately performed at the clinic visit. It is essential to arrange follow-up appointments and services during the first visit. The victim/survivor should be clearly told whom to contact if he/she has other questions or subsequent physical or emotional problems related to the incident. Adolescents in particular may need crisis support as they may not be able or willing to disclose the assault to parents or careers.

Table 19: Medical management Post-exposure prophylaxis of STI

A. STI presumptive treatment options for adults:		
Coverage	All single dose antibiotics are highly effective. Choose from each box (=3 or 4 drugs)	If patient is pregnant, breast-feeding or under 16 years old Choose one from each box
Syphilis	Benzathine Penicillin 2.4 million units by single intramuscular injection OR Doxycycline 100 mg orally twice a day for 14 days (in case of penicillin allergy only)	Benzathine Penicillin 2.4 million units by single intramuscular injection
Gonorrhoea/chancroid	Cefixime 400 mg orally as a single dose OR Ceftriaxone 250 mg by intramuscular injection	Cefixime 400 mg orally as a single dose OR Ceftriaxone 250 mg by intramuscular injection
Chlamydia/lymphogranuloma venereum	Azithromycin 1 g orally as single dose OR Doxycycline 100 mg orally twice a day for 7 days	Azithromycin 1 g orally as single dose OR Erythromycin 500mg orally 4 times a day for 7 days
Trichomoniasis	Metronidazole 2 g orally as a single dose OR Tinidazole 2 g orally as a single dose	Metronidazole 2 g orally as a single dose, or 400-500mg 3 times a day for 7 days

B. STI presumptive treatment options for children		
Coverage	All single dose antibiotics are highly effective. Choose from each box (=3 or 4 drugs)	Older children and adolescents
Syphilis	Benzathine Penicillin 50 000 units/kg of body weight by single intramuscular injection OR Erythromycin 12.5 mg/kg of body weight orally 4 times a day for 14 days	>45 kg, use adult protocol
Gonorrhoea/chancroid	Cefixime 8mg/kg of body weight as a single dose OR Ceftriaxone 125 mg by intramuscular injection, as single dose	>45 kg, use adult protocol
Chlamydia/lymphogranuloma venereum	Erythromycin 12.5 mg/kg of body weight orally 4 times a day for 7 days	12 years or older, use adult protocol
Trichomoniasis	Metronidazolec 5 mg/kg of body weight orally 3 times a day for 7 days	12 years or older, use adult protocol

8. STI/RTI Care And Treatment For People Living With HIV/AIDS (PLHIV)

Infection with HIV produces a spectrum of disease that progresses from a clinically latent or asymptomatic state to AIDS as a late manifestation. The pace of disease progression varies. In untreated patients, the time between infection with HIV and the development of AIDS ranges from a few months to as long as 17 years (median: 10 years). The majority of adults and adolescents infected with HIV remain symptom-free for extended periods, but viral replication is active during all stages of infection and increases substantially as the immune system deteriorates. In the absence of treatment, AIDS will develop eventually in nearly all HIV-infected persons.

Because of its effect on the immune system, HIV affects the diagnosis, evaluation, treatment, and follow-up of multiple other diseases and might affect the efficacy of antimicrobial therapy for some STDs.

All PLHIV should be routinely screened for STI syndromes at every visit at ART clinic. STI syndromes will be determined by the presence of the followings: urethral discharge, vaginal discharge, genital/anal ulcer, lower abdominal pain, genital wart and anal discharge. Asymptomatic infections are also common and behaviors including numbers of partners should guide need for exams along with symptoms.

Detection of HIV Infection

All persons who seek consultation and treatment for STIs should be screened for HIV infection. Screening should be routine, regardless of whether the patient is known or suspected to have specific behavioral risks for HIV infection. Because many STIs are asymptomatic, routine screening for curable STIs (e.g., syphilis, gonorrhea, and chlamydia) should be performed at least yearly for sexually active persons. Sex workers, MSM and TGs with multiple partners may need screening as often as every three months.

In non-emergent situations, the initial evaluation of HIV-positive patients usually includes the following:

- A detailed medical history, including sexual and substance abuse history; vaccination history; previous STDs; and specific HIV-related symptoms or diagnoses;
- A physical examination, including a gynecologic examination for women;
- Testing for *N. gonorrhoeae* and *C. trachomatis* (and for women, a Pap test and wet mount examination of vaginal secretions);
- Syphilis serology

Gonococcal and non-gonococcal infections

Gonococcal urethritis, chlamydial urethritis, and non-gonococcal, non-chlamydial such as mycoplasma genitalium (MG) urethritis might facilitate HIV transmission. Patients who have gonococcal infection and NGU and also are infected with HIV should receive the same treatment regimen as those who are HIV negative. For recurrent urethritis of PLHIV are commonly caused by MG (Unemo and Jensen. Nature Rev Urol. 2017).

Patients who have cervicitis and also are infected with HIV should receive the same treatment regimen as those who are HIV negative. Treatment of cervicitis in HIV-infected women is vital because cervicitis increases cervical HIV shedding. Treatment of cervicitis in HIV-infected women reduces HIV shedding from the cervix and might reduce HIV transmission to susceptible sex partners.

Trichomoniasis, Candidiasis and Bacterial Vaginosis

Patients who have trichomoniasis and also are infected with HIV should receive the same treatment regimen as those who are HIV negative. The incidence, persistence, and recurrence of trichomoniasis in HIV-infected women are not correlated with immune status.

Patients who have BV and also are infected with HIV should receive the same treatment regimen as those who are HIV negative. BV appears to be more persistent in HIV-positive women.

The incidence of VVC in HIV-infected women is unknown. Vaginal Candida colonization rates among HIV-infected women are higher than among those for seronegative women with similar demographic characteristics and high-risk behaviors, and the colonization rates correlate with increasing severity of immunosuppression. Symptomatic VVC is more frequent in sero-positive women and similarly correlates with severity of immunodeficiency. In addition, among HIV-infected women, systemic azole exposure is associated with the isolation of non-albicans Candida species from the vagina. Based on available data, therapy for VVC in HIV-infected women should not differ from that for sero-negative women. Although long-term prophylactic therapy with fluconazole at a dose of 200 mg weekly has been effective in reducing *C. albicans* colonization and symptomatic VVC, this regimen is not recommended for routine primary prophylaxis in HIV-infected women in the absence of recurrent VVC.

Pelvic Inflammatory Disease (PID)

Differences in the clinical manifestations of PID between HIV-infected women and HIV-negative women have not been well-delineated. In previous observational studies, HIV-infected women with PID were more likely to require surgical intervention. More comprehensive observational and controlled studies (published since the 2002 STD Treatment Guidelines, US-CDC) have demonstrated that HIV-infected women with PID had similar symptoms when compared with uninfected controls. They were more likely to have a tubo-ovarian abscess but responded equally well to standard parenteral and oral antibiotic regimens when compared with HIV-negative women. The microbiologic findings for HIV-positive and HIV-negative women were similar, except HIV-infected women had higher rates of concomitant *M. hominis*, candida, streptococcal, and HPV infections and HPV-related cytologic abnormalities. Whether the management of immunodeficient HIV-infected women with PID requires more aggressive interventions (e.g., hospitalization or parenteral antimicrobial regimens) has not been determined.

Syphilis

Unusual serologic responses have been observed among HIV-infected persons who have syphilis. The majority of reports have involved serologic titers that were higher than expected, but false-negative serologic test results and delayed appearance of sero-reactivity also have been reported. However, unusual serologic responses are uncommon, and the majority of specialists believe that both treponemal and nontreponemal serologic tests for syphilis can be interpreted in the usual manner for the majority of patients who are coinfecting with *T. pallidum* and HIV.

Compared with HIV-negative patients, HIV-positive patients who have early syphilis might be at increased risk for neurologic complications including ocular syphilis and might have higher rates of treatment failure with currently recommended regimens. The magnitude of these risks is not defined precisely but is likely minimal. No treatment regimens for syphilis have been demonstrated to be more effective in preventing neurosyphilis in HIV-infected patients than the syphilis regimens recommended for HIV-negative patients. Careful follow-up after therapy is essential.

- **Primary and Secondary Syphilis:** Treatment with Benzathine Penicillin G, 2.4 million units IM in a single dose is recommended. Some specialists recommend additional treatments (e.g., Benzathine Penicillin G administered at 1-week intervals for 3 weeks, as recommended for late syphilis) in addition to benzathine penicillin G 2.4 million units IM.

Because CSF abnormalities (e.g., mononuclear pleocytosis and elevated protein levels) are common in patients with early syphilis and in persons with HIV infection, the clinical and prognostic significance of such CSF abnormalities in HIV-infected persons with primary or secondary syphilis is unknown. Although the majority of HIV-infected persons respond appropriately to standard Benzathine Penicillin therapy, some specialists recommend intensified therapy when CNS syphilis is suspected in these persons. Therefore, some specialists recommend CSF examination before treatment of HIV-infected persons with early syphilis, with follow-up CSF examination conducted after treatment in persons with initial abnormalities.

HIV-infected persons should be evaluated clinically and serologically for treatment failure at 3, 6, 9, 12, and 24 months after therapy. Although of unproven benefit, some specialists recommend a CSF examination 6 months after therapy. HIV-infected persons who meet the criteria for treatment failure (i.e., signs or symptoms that persist or recur or persons who have fourfold increase in non-treponemal test titer) should be managed in the same manner as HIV-negative patients (i.e., a CSF examination and re-treatment). CSF examination and re-treatment also should be strongly considered for persons whose nontreponemal test titers do not decrease fourfold within 6–12 months of therapy. The majority of specialists would retreat patients with benzathine penicillin G administered as 3 doses of 2.4 million units IM each at weekly intervals, if CSF examinations are normal.

Penicillin-allergic patients who have primary or secondary syphilis and HIV infection should be managed according to the recommendations for penicillin-allergic, HIV-negative patients. The use of alternatives to penicillin has not been well studied in HIV-infected patients.

- **Latent Syphilis**
- **Diagnostic Considerations:** HIV-infected patients who have early latent syphilis should be managed and treated according to the recommendations for HIV-negative patients who have primary and secondary syphilis. HIV-infected patients who have either late latent syphilis or syphilis of unknown duration should have a CSF examination before treatment.
- **Treatment:** Patients with late latent syphilis or syphilis of unknown duration and a normal CSF examination can be treated with Benzathine Penicillin G, at weekly doses of 2.4 million units for 3 weeks. Patients who have CSF consistent with neuro-syphilis should be treated and managed as patients who have neurosyphilis (see Neurosyphilis).
- **Follow-Up:** Patients should be evaluated clinically and serologically at 6, 12, 18, and 24 months after therapy. If, at any time, clinical symptoms develop or non-treponemal titers rise fourfold, a repeat CSF examination should be performed and treatment administered accordingly. If during 12–24 months the nontreponemal titer does not decline fourfold, the CSF examination should be repeated and treatment administered accordingly.

Chancroid

HIV-infected patients who have chancroid should be monitored closely because, as a group, these patients are more likely to experience treatment failure and to have ulcers that heal more slowly. HIV-infected patients might require longer courses of therapy than those recommended for HIV-negative patients, and treatment failures can occur with any regimen. Some specialists prefer the Erythromycin 7-day regimen for treating HIV-infected persons.

Herpes simplex viral infection

Immunocompromised patients might have prolonged or severe episodes of genital, perianal, or oral herpes. Lesions caused by HSV are common among HIV-infected patients and might be severe, painful, and atypical. HSV shedding is increased in HIV-infected persons. Whereas antiretroviral therapy reduces the severity and frequency of symptomatic genital herpes, frequent subclinical shedding still occurs. Suppressive or episodic therapy with oral antiviral agents is effective in decreasing the clinical manifestations of HSV among HIV-positive persons. HIV-infected persons are likely to be more contagious for HSV; the extent to which suppressive antiviral therapy will decrease HSV transmission from this population is unknown. Some specialists suggest that HSV type-specific serologies be offered to HIV-positive persons during their initial evaluation, and that suppressive antiviral therapy be considered in those who have HSV-2 infection.

Recommended Regimens for Daily Suppressive Therapy in Persons Infected with HIV:

- **Acyclovir** 400 mg orally three times a day OR
- **Famciclovir** 500 mg orally twice a day OR
- **Valacyclovir** 500 mg orally twice a day

Recommended Regimens for Episodic Infection in Persons Infected with HIV:

- **Acyclovir** 400 mg orally three times a day for 5 days OR
- **Famciclovir** 500 mg orally twice a day for 5 days OR
- **Valacyclovir** 500mg orally twice a day for 5 days

Acyclovir, Valacyclovir, and Famciclovir are safe for use in immunocompromised patients in the doses recommended for treatment of genital herpes. For severe HSV disease, initiating therapy with Acyclovir 5–10 mg/kg body weight IV every 8 hours might be necessary.

If lesions persist or recur in a patient receiving antiviral treatment, HSV resistance should be suspected and such patients should be managed in consultation with an HIV specialist, and alternate therapy should be administered. All acyclovir-resistant strains are resistant to valacyclovir, and the majority are resistant to famciclovir.

Lymphogranuloma inguinale (LGV)

Persons with both LGV and HIV infection should receive the same regimens as those who are HIV negative. Prolonged therapy might be required, and delay in resolution of symptoms might occur.

Genital warts

No data suggest that treatment modalities for external genital warts should be different in the setting of HIV-infection. However, persons who are immunosuppressed because of HIV or other reasons might have larger or more numerous warts, might not respond as well as immunocompetent persons to therapy for genital warts, and might have more frequent recurrences after treatment. Squamous cell carcinomas arising in or resembling genital warts might occur more frequently among immunosuppressed persons, therefore, requiring biopsy for confirmation of diagnosis. Because of the increased incidence of anal cancer in HIV-infected homo- sexual men, screening for anal HSIL (high-grade squamous intraepithelial lesions) by cytology in this population is recommended by some specialists. However, evidence is limited concerning the natural history of anal intraepithelial neoplasias, the reliability of screening methods, the safety and response to treatments, and the programmatic considerations that would support this screening approach. Until additional data are generated on screening for anal SIL, this screening approach cannot be recommended.

MODULE 7

**MONITORING AND REPORTING ON STI/RTI
CASE MANAGEMENT**

1. Introduction

Sexually transmitted Infections (STIs) and reproductive tract infections (RTIs) remain a public health problem of major significance in most parts of the world. Failure to diagnose and treat STIs at an early stage may result in serious complications and sequelae, including infertility, ectopic pregnancy, and infant death. The presence of STIs substantially increases the risk of acquiring or transmitting the human immunodeficiency virus (HIV). Reproductive tract infection (RTI) not considered to be sexually transmitted (commonly vaginal yeast infection and bacterial vaginosis) are very common in women and there is evidence that BV may also be related to HIV acquisition. Treatment of these infections is important for patient health and well-being. Realizing its serious impact in society, NCHADS has taken a lead in improving the quality of STI/RTI management and has been working with other NGOs focusing mainly on the most at risk populations. In Cambodia, the STI/RTI management is an important component of public health activities. Given that most STIs/RTIs can be prevented and/or cured by an effective STI service delivery program, NCHADS supports 35 special STI/RTI services that are delivered to the high risk populations such as entertainment workers (EWs), MSM, TG and their clients. Services are made more effective and accessible.

2. Purposes

This module is to assess and improve the quality of STI service delivery in order to improve the diagnosis and management of STIs. The specific objectives of monitoring and supervision on STI/RTI service delivery are:

- To review the quality and availability of essential STI drugs and laboratory services
- To review the quality of record-keeping and data on STI patients
- To ensure that STI prevention and care services are clinically proficient and provide adequate coverage.

3. Implementation Process

Supervision should be conducted by a team composed of both laboratory and clinical experts from the provincial and/or national STI program. This tool should be used by provincial supervisor teams at least four times a year (national supervisor teams at least two time a year) . The supervision team should conduct site visits to monitor the quality of STI care provided to low risk and high-risk patients, including the clinic set up, clinic records, and clinical staff interviews. Supervisory visits are intended to encourage staff to improve the quality of care they provide, so the supervisor team should take care not criticize or blame the supervisees, but rather suggest ways in which they could do things better.

Training of supervisors is important, to ensure that they understand how to be supportive rather than judgmental or faultfinding. Supervisor performance can be assessed through observation of staff work. It can also be done in a more formal manner, and this is recommended, through an annual meeting that provide an opportunity to:

- Praise achievements
- Find solutions to the problems and difficulties encountered
- Identify training needs.

4. Supervision Tool

The STI service delivery supervision and monitoring tool includes measures to assess:

- Accessibility and clinic facilities
- Adequacy of staffing and supply
- Staff's skill and performance
- Documentation and record keeping

The checklist is completed through use of methods such as:

- Interviewing clinicians and other clinical team members
- Observing the consultation, examination, treatment and counseling activities
- Inspecting the equipment and supplies
- Observing the collection of laboratory specimens, procedures, test results and interpretation

5. Assessment Of Documentation Of Medical And Laboratory Records Checklist For Monitoring And Supervision On Family Health Clinic (STI Clinic)

Name of province.....	Name of clinic.....
Name of operational health district (OD):.....
Date of supervision.....	Supervision team leader:.....
Supervision team members	Clinic staff participating:
1.....	1.....
2.....	2.....
3.....	3.....

No.	Items	Yes	No	Remark if "No"
A.	Part I (Management)			
1	Accessibility			
1.1	Number of days per week the clinic normally sees clients:			
1.2	What is the time operating of the clinic? <ul style="list-style-type: none"> • Morning only • Morning and afternoon 	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	
2	Staff			
2.1	In total how many staff work at this STI clinic?..... MD;.....MA:.....Nurse:.....Midwife:..... Other:.....			
2.2	How many providers have been trained on STI/RTI case management?			
	<ul style="list-style-type: none"> • Total number who received initial training certificate: • Total number who received refresher training certificate:..... 			

No.	Items	Yes	No	Remark if "No"
3	Physical Facility			
3.1	Is there space for? <ul style="list-style-type: none"> • Waiting room/area • Private, clinical examination space • History taking, education and counseling space 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
4	Infection Control			
4.1	How is the overall state of cleanliness? (see Annex) <ul style="list-style-type: none"> • Exceptionally clean and hygienic • Average • Poor • Very poor 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
4.2	Are there the following dedicated waste disposal containers? <ul style="list-style-type: none"> • Medical sharps safety box • Infectious waste bin • Non-infectious waste bin 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
5	Information Education Communication (Iec) Materials & Condom			
5.1	Are IEC material available (wall chart, leaflet, booklet, etc...)?			
5.2	Are quantity of IEC material enough for distribution			
5.3	Are condom supply freely available?			
6	Record Keeping And Documentation			
6.1	All paper records of clinical or personal data are kept in a safe (locked) place?			
6.2	All electronic records or databases protected by password or other means?			
6.3	Does clinic staff fill quarterly reports correctly?			
6.3	Are the quarterly reports sent to Data Management Unit (DMU) on time?			

No.	Items	Yes	No	Remark if "No"
7	Request The Patient Ledger Book Or Register And Record The Following Figures For The Last Quarter:			
7.1	Total number of KP visited at Family health clinics <ul style="list-style-type: none"> Total number of first visits for EWs:..... Total number of follow up visits for EWs:..... Total number of first visits for MSMs:..... Total number of follow up visits for MSMs:..... Total number of first visits for TGs:..... Total number of follow up visits for TGs:..... Total number of first visits for PWIDs:..... Total number of follow up visits for PWIDs:..... 			
7.2	<ul style="list-style-type: none"> Total number of low-risk female patients:..... Total number of male patients:..... 			
8	Review Patient Files Of Diagnosed STI/RTIS In The Last Quarter (Randomly 10 Files/Site)			
8.1	For High Risk Women (entertainment workers)			
8.1.1	A. Numbers at first visit <ul style="list-style-type: none"> Treat for vaginitis only Treat for cervicitis only Treat for both vaginosis and cervicitis..... Treat for PID..... Treat for anal discharge..... Treat for anal/genital ulcer..... Treat for anal/genital warts..... Treat for syphilis (based on RPR positive)..... Treat for Presumptive treatment for GC+CT..... Treat for others..... specify the most common symptom; 			
8.1.2	B. Numbers at follow Up visit <ul style="list-style-type: none"> Treat for vaginitis only..... Treat for cervicitis only..... Treat for both vaginosis and cervicitis..... Treat for PID..... Treat for anal discharge..... Treat for anal/genital ulcer..... Treat for anal/genital warts..... Treat for syphilis (based on RPR positive)..... Treat for others..... specify the most common symptom;..... 			

No.	Items	Yes	No	Remark if "No"
8.2	For Low Risk Women Numbers total visit <ul style="list-style-type: none"> • Treat for vaginitis only..... • Treat for cervicitis only..... • Treat for both vaginitis and cervicitis..... • Treat for PID..... • Treat for anal discharge..... • Treat for anal/genital ulcer..... • Treat for anal/genital warts..... • Treat for others..... specify the most common symptom;			
8.3	For General Men Numbers total visit <ul style="list-style-type: none"> • Treat for urethral discharge..... • Treat for anal discharge..... • Treat for anal/genital ulcer..... • Treat for anal/genital warts..... • Treat for Scrotal swelling..... • Treat for Inguinal bubo..... • Treat for others..... specify the most common symptom;			
8.4	For MSM Numbers total visit <ul style="list-style-type: none"> • Treat for urethral discharge..... • Treat for anal discharge..... • Treat for anal/genital ulcer..... • Treat for anal/genital warts..... • Treat for Scrotal swelling..... • Treat for Inguinal bubo..... • Treat for syphilis (based on RPR positive)..... • Treat for Presumptive treatment for GC+CT..... • Treat for others..... specify the most common symptom;			
B.	Part II (Clinical Management)			
9	Examination And History Taking			
9.1	Observe whether the provider welcomes clients	<input type="checkbox"/>	<input type="checkbox"/>	
9.2	Assess whether the client is assured of privacy and confidentiality	<input type="checkbox"/>	<input type="checkbox"/>	
9.3	Does the provider have a good relationship with the client?	<input type="checkbox"/>	<input type="checkbox"/>	

No.	Items	Yes	No	Remark if "No"
10	Clinical & Examination Process			
10.1	Observe whether the provider uses the standard medical history form	<input type="checkbox"/>	<input type="checkbox"/>	
10.2	In the consultation, room is there an examination table and chair?	<input type="checkbox"/>	<input type="checkbox"/>	
10.3	Is a proper hand washing facility available?	<input type="checkbox"/>	<input type="checkbox"/>	
10.4	Are there current national STI/RTI management guidelines/job aids/SOPs in the clinic?	<input type="checkbox"/>	<input type="checkbox"/>	
10.5	Are sterile speculums available?	<input type="checkbox"/>	<input type="checkbox"/>	
10.6	Is light source for speculum exam available?	<input type="checkbox"/>	<input type="checkbox"/>	
10.7	Are anoscope/proctoscope available?	<input type="checkbox"/>	<input type="checkbox"/>	
10.8	Assess clinician clinical examination skills	<input type="checkbox"/>	<input type="checkbox"/>	
10.9	Does the general examination perform properly?	<input type="checkbox"/>	<input type="checkbox"/>	
10.10	Does the oral cavity examination perform properly?	<input type="checkbox"/>	<input type="checkbox"/>	
10.11	Does the genital examination perform properly? <ul style="list-style-type: none"> • Positioning • Inguinal area • Genitalia • Anus 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
10.12	Has speculum examination been done with: <ul style="list-style-type: none"> • Procedure explained to the client properly? • Use speculum correctly? 	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	
10.13	Has anoscope examination been done with: <ul style="list-style-type: none"> • Procedure explained to the client properly? • Use anoscope correctly? 	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	
10.14	Has specimen collection been done with: <ul style="list-style-type: none"> • Client informed about the tests to be performed? • Vaginal smear collected correctly? • Cervical smear collected correctly? • Urethral smear collected correctly? • Anal smear collected correctly? • Bimanual examination performed correctly? 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

No.	Items	Yes	No	Remark if "No"
10.15	<p>Are the clinical consumables below available?</p> <ul style="list-style-type: none"> • Disposable gloves • Syringe disposable 10ml • Needle disposable, 21Gx1/2" • Cotton wool (roll of 500g) • Alcohol 70oc Antiseptic pH vaginal test • Sterile cotton swab for men • Sterile cotton swab for women • Disposable tongue depressor • Condoms • Standard medical history for women • Standard medical history for men • Glass plain tubes • Needle safety box 	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	
10.16	<p>Are the clinical equipment available?</p> <ul style="list-style-type: none"> • Gynecological examination table • Examination table for men • Revolving stool, adjustable height • Carriage dressing • Sterilize hot air • Clinical thermometer • Stethoscope & Sphygmomanometer • Drum sterilizing cylindrical • Speculum vaginal bivalves • Forceps • Forceps jar • Scissors • Solution cup • Tray cafeteria • Kidney basin • Electro-cauterization • Light source • Anoscope • Garbage can 	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	

No.	Items						Yes	No	Remark if "No"		
11	Sti Diagnosis										
11.1	In general, how are EWs managed in clinic? <ul style="list-style-type: none"> • Presumptive (asymptomatic, symptomatic, risk assessment) • Etiological (laboratory approach) 						<input type="checkbox"/>	<input type="checkbox"/>			
11.2	In general, how are MSMs managed in clinic? <ul style="list-style-type: none"> • Presumptive (asymptomatic, symptomatic, risk assessment) • Etiological (laboratory approach) 						<input type="checkbox"/>	<input type="checkbox"/>			
11.3	In general, how are TGs managed in clinic? <ul style="list-style-type: none"> • Presumptive (asymptomatic, symptomatic, risk assessment) • Etiological (laboratory approach) 						<input type="checkbox"/>	<input type="checkbox"/>			
11.4	In general, how are GP's men and women managed in clinic? <ul style="list-style-type: none"> • Syndromic approach • Etiological (laboratory approach) 						<input type="checkbox"/>	<input type="checkbox"/>			
12	Sti Diagnosis And Treatment Evaluation										
12.1	Review charts and complete the information below for 10 most recent clients evaluated for an STI.										
Patient	Clinical diagnosis given	Correct diagnosis		Correct treatment		PITC for HIV		Partner notification		Are the critical data entry fields complete?	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

No.	Items	Yes	No	Remark if "No"
13	Partner Notification/Follow Up			
13.1	Are there health card for key populations cards available in the clinic?	<input type="checkbox"/>	<input type="checkbox"/>	
13.2	Are there partner notification cards available in the clinic?	<input type="checkbox"/>	<input type="checkbox"/>	
13.3	Are Patient's referral slip (ANC, VCT, birth spacing, safe abortion, etc.) available in the clinic?	<input type="checkbox"/>	<input type="checkbox"/>	
13.4	Did the clinician offer partner notification & treatment?	<input type="checkbox"/>	<input type="checkbox"/>	
13.5	Did the clinician provide education on drug therapy/side effects?	<input type="checkbox"/>	<input type="checkbox"/>	
13.6	Did the clinician explain condom use?	<input type="checkbox"/>	<input type="checkbox"/>	
13.7	Did the clinician offer HIV testing? <ul style="list-style-type: none"> • HIV tested in STI clinic • referred to VCT for HIV test 	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	
C	PART III (LABORATORY)			
14	Laboratory Technician			
14.1	How many laboratory staff work on STI diagnosis? :.....			
14.2	How many lab technicians have been trained on STI/RTI lab management conducted by NCHADS? Total number who received initial training certificate..... Total number who received refresher training certificate:			
15	Laboratory Procedure And Tests			
15.1	Have the following tests been done correctly: <ul style="list-style-type: none"> • Normal saline/ KOH ? • Gram stain or Methylene blue of vaginal/cervical smear? • Gram stain of urethral smear? • Gram stain of anal smear? • RPR test qualitative method? • RPR test quantitative method? • TPPA/TPHA test? • Treponemal rapid test? • Finger prick test? 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
16	Sti Lab Quality Control (Refer To Lab Unit)			
17	Review Lab Records Of Diagnosed Sti/Rtis In The Last Quarter			
17.1	Is a logbook for STI diagnostic testing available?	<input type="checkbox"/>	<input type="checkbox"/>	
17.2	Are the critical fields in the laboratory STI logbook correctly filled out?	<input type="checkbox"/>	<input type="checkbox"/>	

No.	Items	Yes	No	Remark if "No"	
D	PART III : Number of case referred to other services in last quarter				
18	Family Health Clinic →	refer to HTS :cases.		
		refer to pre-ART/ART :cases.		
		refer to ANC :cases.		
		refer to family planning :cases.		
	Family Health Clinic ←	refer from HTS :cases.		
		refer from pre-ART/ART :cases.		
		refer from ANC :cases.		
		refer from family planning :cases.		
E	PART IV: Management of STI/RTI drugs, material & equipment and consumables				
19	STI Drugs:				
19.1	Visit the pharmacy and ask the health care provider in charge of drugs the following:				
	Drugs	Is it currently in stock		Has the drug run out at any time in past 3 months?	State the time and reasons for drug running out
		Yes	No		
	Cefixime (200mg)				
	Ceftriaxone (1g)				
	Spectinomycin (2g)				
	Azithromycin (500mg)				
	Doxycycline (100mg)				
	Erythromycin (250mg)				
	Metronidazole (250mg)				
	Clotrimazole (500mg)				
	Nystatin (200000UI)				
	Ciprofloxacin (500mg)				
	Cotromoxazole (960mg)				
	Benzathine PN 2.4UI inj				
Acyclovir (200mg)					
Podophyllin (25%)					

6. Quarterly Report Of STI/RTI Care & Treatment At Family Health Clinic (Based On Laboratory Approach)

Month:..... No of Quarter:..... Year:

Name of Clinic:..... OD:..... Province:.....

Number of visits for patients		Month 1	Month 2	Month 3
Total number of visits for male patients	<u>Total of male</u>			
	<u>Total of MSM/TG</u>			
Total number of visits for low risk female patients				
Total number of first visits for Entertainment Workers (EWs)				
Total number of follow up visits for Entertainment Workers (EWs)				
Total number of visits for partners who were notified and treated.	<u>Male partners</u>			
	<u>Female partners</u>			
Total number of EWs identified by EW networks ⁶				
Total number of MSM/TG identified by MSM/TG networks				

Number of clients referred to other services	Month 1	Month 2	Month 3
Total number of clients referred to HTS-ART (VCCT)			
Total number of clients referred to ART services (HIV infected patients)			
Total number of clients referred to ANC services (pregnant women)			
Total number of clients referred to Family Planning (FP) services			

⁶ EW/MSM/TG networks consist outreach teams, Mekar (entertainment manager), peer facilitators, peer educators.

Number of clients referred from other services	Month 1	Month 2	Month 3
Total number of clients referred from HTS-ART (VCCT)			
Total number of clients referred from ART services			
Total number of clients referred from ANC services			
Total number of clients referred from Family Planning (FP) services			

Men (new cases)								
Syndrome	Age group						Total	
	<15		15-49		≥ 50			
	Men	MSM/ TG	Men	MSM/ TG	Men	MSM/ TG	Men	MSM/ TG
Urethral discharge								
Anal discharge								
Ano-Genital Ulcers								
Ano-Genital warts								
Scrotum swelling								
Inguinal bubo (LGV)								
Syphilis (RPR+)								
Presumptive treatment for GC+CT								
Total new cases of men								

Low Risk Women (new cases)							
Syndrome	Age group						Total
	<15		15-49		≥ 50		
Vaginal discharge							
<u>Vaginitis</u>							
<u>Cervicitis</u>							
<u>Vaginitis + cervicitis</u>							
Anal discharge							
Pelvic Inflammatory Disease (PID)							
Ano-Genital ulcers							
Ano-Genital warts							
Total new cases of LRW							

Low Risk Women (new cases)							
Syndrome	Age group						Total
	<15		15-49		≥ 50		
First Visit	Vaginal discharge						
	<u>Vaginitis</u>						
	<u>Cervicitis</u>						
	<u>Vaginitis + cervicitis</u>						
	Anal discharge						
	Pelvic Inflammatory Disease (PID)						
	Ano-Genital ulcers						
	Ano-Genital warts						
	Syphilis (RPR +)						
	Presumptive treatment for GC+CT						
	Total new cases of^{1st} LRW						

Low Risk Women (new cases)								
Syndrome		Age group						Total
		<15		15-49		≥ 50		
Follow up Visit	Vaginal discharge							
	<u>Vaginitis</u>							
	<u>Cervicitis</u>							
	<u>Vaginitis + cervicitis</u>							
	Anal discharge							
	Pelvic Inflammatory Disease (PID)							
	Ano-Genital ulcers							
	Ano-Genital warts							
	Syphilis (RPR +)							
	Total new cases of FU visit							

7. Quartely Report Of Syphilis Screening For Pregnant Women

		By age group						
Syphilis testing		<15		15-49		≥ 50		Total
Follow up Visit	Total number of pregnant women at ANC got RPR test							
	<u>RPR test (+)</u>							
	Total of pregnant women (RPR+) treated for syphilis infection							
	Total number of RPR quantitative test							
	<u>Titre as baseline</u>							
	<u>Titre as follow up</u>							
	Total of pregnant women's partner treated for syphilis							

Date Reported	/	/
Report Completed by		
Report Approved by		

NOTE:

OD: Operational District

EWs: Entertainment Workers

MSM: Men who have sex with men

HTS: HIV Testing Service

ANC: Antenatal Care

FP: Family Planning

8. Quarterly Report Of STI/RTI Laboratory

Month:..... N° of Quarter:..... Year:

Name of Clinic:..... OD:..... Province:.....

Endocervical smear	Total number	WBC< 10	WBC 10-25	WBC>25
		GNID** (-)	GNID**(+)	If performed by Gram Stain
Urethral smear	Total number	WBC<5	WBC≥5	
		ICD*(-)	ICD*(+)	If performed by Methylene Blue
		GNID**(-)	GNID**(+)	If performed by Gram Stain
Anal smear	Total number	WBC< 5	WBC≥5	
Vaginal smear Wet preparation	Total number	Trichomonas vaginalis		
		(-)	(+)	
		Budding yeast/hyphae		
		(-)	(+)	
		Clue cells		
		(-)	(+)	

Vaginal smear Gram stain	Total number	BV		
		Nugent score: 0-3	Nugent score 4-6	Nugent score ≥7
		Budding yeast/hyphae		
		(-)	(+)	
RPR test	Total number	Qualitative		
		RPR (-)	RPR (+)	
TPHA/TPPA/ Rapid test	Total number	(-)	(+)	

Date Reported	/		/	
Report Completed by				
Report Approved by				

* ICD : Intra-cellular Diplococci , ** GNID : Gram Negative Intracellular Diplococci

9. Quarterly Report Of STI/RTI Care & Treatment At Health Center

Month:..... N° of Quarter:..... Year:

Name of Clinic:..... OD:..... Province:.....

Number of visits for patients		Month 1	Month 2	Month 3
Total number of visits for male patients				
Total number of visits for female patients				
Total number of visits for partners who were notified and treated.	Male partners			
	Female partners			

Women (new cases)							
Syndrome	Age group						Total
	<15		15-49		≥ 50		
Vaginal discharge							
Vaginitis							
Vaginitis + cervicitis							
Anal discharge							
Pelvic Inflammatory Disease (PID)							
Ano-Genital ulcers							
Ano-Genital warts							
Total new cases of FU visit							

Men (new cases)							
Syndrome	Age group						Total
	<15		15-49		≥ 50		
Urethral discharge							
Anal discharge							
Ano-Genital ulcers							
Ano-Genital warts							
Total new cases of FU visit							

Number of clients referred from other services	Month 1	Month 2	Month 3
Total number of STI/RTI patients referred to HTS-ART (VCCT)			
Total number of STI/RTI patients referred to ANC services			
Total number of STI/RTI patients referred to Family Planning (FP) services			

NOTE:

OD : Operational District

STI : Sexually Transmitted Infections

RTI : Reproductive Tract Infections

VCCT : Voluntary Confidential Counseling and Testing

ANC : Antenatal care

FP : Family Planning

Reference

1. Laboratory test for STD management. NCHADS, Ministry of Health of Cambodia (2005)
2. Guidelines for implementation of STI services. NCHADS, Ministry of Health of Cambodia (2001)
3. National Guidelines on STD syndromic case management (revised edition). NCHADS, Ministry of Health of Cambodia (2003)
4. National Guidelines on STD case management in sex workers. NCHADS, Ministry of Health of Cambodia (2003)
5. Sexually transmitted and other reproductive tract infections. A guide to essential practice, World Health Organization (2005)
6. Standard Operating Procedures (SOP) for STI clinic. NCHADS, Ministry of Health of Cambodia (2006)
7. National Policy and Strategies for prevention and care on STIs/RTIs. NCHADS, Ministry of Health of Cambodia (2006)
8. Standard Operational Procedures (SOP) for syphilis screening among pregnant women in Kingdom of Cambodia, NCHADS, NMCHC, Ministry of Health of Cambodia (2008).
9. Concept note for scaling up syphilis screening among pregnant women from 2010 to 2015, NCHADS, Ministry of Health of Cambodia (2010).
10. National Guidelines on STD case management based on syndromic case management, speculum examination and laboratory. NCHADS, Ministry of Health of Cambodia (2010)
11. STI Sentinel Surveillance (SSS). NCHADS, Ministry of Health of Cambodia (2011)
12. Sexually Transmitted Diseases Treatment Guidelines. Department of Health and Human Services Centers for Disease Control and Prevention. US-CDC (2015)
13. Strategic Plan for HIV/AIDS and STI Prevention and Control in the Health Sector 2016-2020. NCHADS, Ministry of Health of Cambodia (2016)
14. Integrated HIV Bio-Behavioral Surveillance (IBBS 2016) among Female Entertainment Workers, NCHADS, Ministry of Health of Cambodia (2016).
15. Guideline for the Treatment of Chlamydia trachomatis, World Health Organization (20016)
16. Guideline for the Treatment of Neisseria gonorrhoeae,, World Health Organization (20016)
17. Guideline for the Treatment of Treponema pallidum (syphilis), World Health Organization (20016)
18. Estimations and Projections of HIV/AIDS at Sub-National level in Cambodia, NCHADS, Ministry of Health of Cambodia (2017).
19. Elimination of Mother-to Child Transmission of HIV and Syphilis, Global guidance on criteria and processes for validation, World Health Organization (2017)

Designed and Printed Supported by:



USAID
FROM THE AMERICAN PEOPLE



PEPFAR
U.S. President's Emergency Plan for AIDS Relief

fhi360
THE SCIENCE OF IMPROVING LIVES

LINKAGES
*Across the Continuum of HIV
Services for Key Populations*