The United Republic of Tanzania

Ministry of Health, Community Development, Gender, Elderly and Children

National Guidelines for Management of Sexually Transmitted and Reproductive Tract Infections

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National AIDS Control Programme and
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Abbreviations

ACC	AIDS control coordinator
ANC	antenatal care
ARS	anorectal syndrome
b.i.d	twice a day
DHIS	District Health Information System
DHS	Demographic and Health Survey
DMO	district medical officer
FP	family planning
GUD	genital ulcer disease
GUS	genital ulcer syndrome
HBV	hepatitis B virus
HCV	hepatitic C virus
HMIS	Health Management Information System
HPV	human papillomavirus
HSV	herpes simplex virus
HSV-2	herpes simplex virus 2
HTA	high-transmission area
HTC	HIV testing and counselling
IM	intramuscular
IPC	infection prevention and control
IUCD	intrauterine contraceptive device
IV	intravenous
KVP	knowledge, attitudes, and perception
KVP	key and vulnerable populations
LAP	lower abdominal pain
M&E	monitoring and evaluation
MOHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
MTUHA	*Mfumo wa Takwimu wa Uendeshaji wa Huduma za Afya* (Health Management Information System)
MVA	manual vacuum aspiration
o.d	once a day
ON	opthalmia neonatorum

PEP	post-exposure prophylaxis
PHE	peer health educator
PID	pelvic inflammatory disease
PMTCT	prevention of mother-to-child transmission
PO	orally
q.i.d	four times a day
ROM	rupture of membrane
RTI	reproductive tract infection
SDI	sexually transmitted diseases diagnostics initiative
STI	sexually transmitted infection
t.i.d	three times a day
TCA	trichloroacetic acid
UDS	urethral discharge syndrome
UTI	urinary tract infection
VDS	vaginal discharge syndrome
VIA	visual inspection with acetic acid
WHO	World Health Organization

Foreword

Sexually transmitted infections (STIs) and other reproductive tract infections (RTIs) are highly prevalent in many communities worldwide. These infections cause considerable morbidity, increase the risk of acquiring HIV infection, and are costly to the individual and the society. From January to October 2017, 412,810 unique episodes of STI/RTI were reported by various health facilities in Tanzania; the number of episodes was an increase from the 208,384 reported in 2004 (HIV/AIDS Surveillance Report). In 2011, 39,698 antenatal care (ANC) attendees were tested for syphilis; among these women, 993 women tested positive, resulting in an overall syphilis prevalence rate of 2.5% for this group. This rate is a significant decline from the 7.3% from 2004 when 1,265 out of 17,323 ANC attendees tested positive for syphilis.

Since the publication of the 2007 *National Guidelines for Management of Sexually Transmitted and Reproductive Tract Infections*, new advances have occurred and new challenges have been observed in delivering STI/RTI services in Tanzania. Global, regional, and national evidence show the need to revise these guidelines. These revised guidelines—*National Guidelines for Management of STIs and RTIs*—integrates the new updates to reduce the national rate of STI/RTI.

National Guidelines for Management of STIs and RTIs is a result of the involvement of a substantial number of experts from within and outside Tanzania; they reviewed the content to ensure that the revised recommendations are based on the best available evidence and favourable public health outcomes. There is no doubt, therefore, that well-coordinated and effective prevention and management of STIs/RTIs should be given high priority.

The *National Guidelines for Management of STIs and RTIs* will assist all planners, managers, and service providers to prevent, diagnose, and manage STIs/RTIs in Tanzania. These guidelines can also be used as a reference manual and as a reminder to health care workers of the need to consider STIs/RTIs when providing other reproductive health services. Service providers can use the guidelines herein as a self-education tool to prevent, diagnose, and treat STIs/RTIs. *National Guidelines for Management of STIs and RTIs* can also be used for pre-service and in-service education and as a resource for new and evidence-based recommendations.

I urge all users of *National Guidelines for Management of STIs and RTIs* to provide feedback on the appropriateness of its content; this information will help make it a living document.

Mpoki

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Permanent Secretary—Health

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Section 1. Sexually–Transmitted and Reproductive Tract Infections—Basics

Section 1 presents the aetiology, clinical presentation, and management of complications of sexually transmitted and reproductive tract infections (STIs/RTIs). It also reviews knowledge and skills that health care providers should possesses to detect and prevent STIs/RTIs.

Chapter 1. Introduction

Overview

This chapter introduces basic facts about STIs/RTIs (see Box 1.1) and HIV/AIDS, emphasizing their aetiologies, transmission modes, symptoms, signs, and common complications. It also provides information on the public health importance of STIs, particularly the prevalence of STIs/RTIs in Tanzania, impact of STIs/RTIs on the socioeconomic relationship between STIs/RTIs and HIV/AIDS, and barriers to controlling the prevalence of STIs/RTIs at the community level.

Box 1.1. Key points

- RTIs can be categorized by how they are acquired and spread. Some RTIs are caused by organisms normally present in the reproductive tract (endogenous infection), transmitted during sexual contact (STI), or transmitted during invasive medical procedures (iatrogenic infection).
- STIs/RTIs are among the most important causes of maternal and perinatal morbidity and mortality. Serious complications of STIs/RTIs—such as ectopic pregnancy, pelvic inflammatory disease (PID), preterm labour, miscarriage, stillbirth, and congenital infection—may lead to chronic disability, such as infertility, or death. Increased risk of HIV acquisition and transmission is another consequence of having an STI/RTI.
- Reducing the burden of STIs/RTIs requires efforts from both health care facilities and the community.
- Effective prevention and case management practice by health care providers reduces the STI/RTI burden in several ways. Effective treatment reduces STI transmission in the community. Practice of safe and appropriate clinical procedures mean fewer iatrogenic infections.
- Community education and outreach services are needed to promote infection prevention and use of health care services, further reducing disease transmission within the community.

Notes: pelvic inflammatory disease (PID), reproductive tract infection (RTI), sexually transmitted infection (STI)

What Are STIs/RTIs?

Definition of STIs

STIs predominantly result from an individual having unprotected sexual contact with a person who has an STI.

Definition of RTIs

RTIs occur in the genital tract and 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 RTIs (yeast infection, bacterial vaginosis). Medical interventions may provoke iatrogenic infections in several ways: endogenous organisms from the vagina or sexually transmitted organisms in the cervix may be pushed into the upper genital tract during a transcervical procedure, causing serious infection of the uterus, fallopian tubes, and other pelvic organs. Organisms from outside the body can also be introduced into the genital tract during medical procedures if infection control is poor. In men, STIs are much more common than endogenous or iatrogenic infections. These different categories of infections are included together in *National Guidelines for Management of STIs and RTIs* for several reasons:

- Prevention of STIs/RTIs and their complications requires a common approach within reproductive health services.
- Clinical presentation of some STIs/RTIs overlaps, especially in women. Symptoms noticed by patients, and even the clinical signs found by health care providers, are often similar, making the distinction between sexually and nonsexually transmitted RTIs difficult.

- In reproductive health settings, such as in antenatal care (ANC) and family planning clinics, nonsexually transmitted RTIs are usually more common than STIs. Varying approaches are needed to manage these infections so that appropriate care is provided, and stigma is minimized. Health care providers should recognize that labelling a condition as an STI may be inaccurate and may have serious social consequences for the individual or couple.

Types of STIs/RTIs

Table 1.1 lists the types, origins, mode of transmission, and common examples of STIs/RTIs.

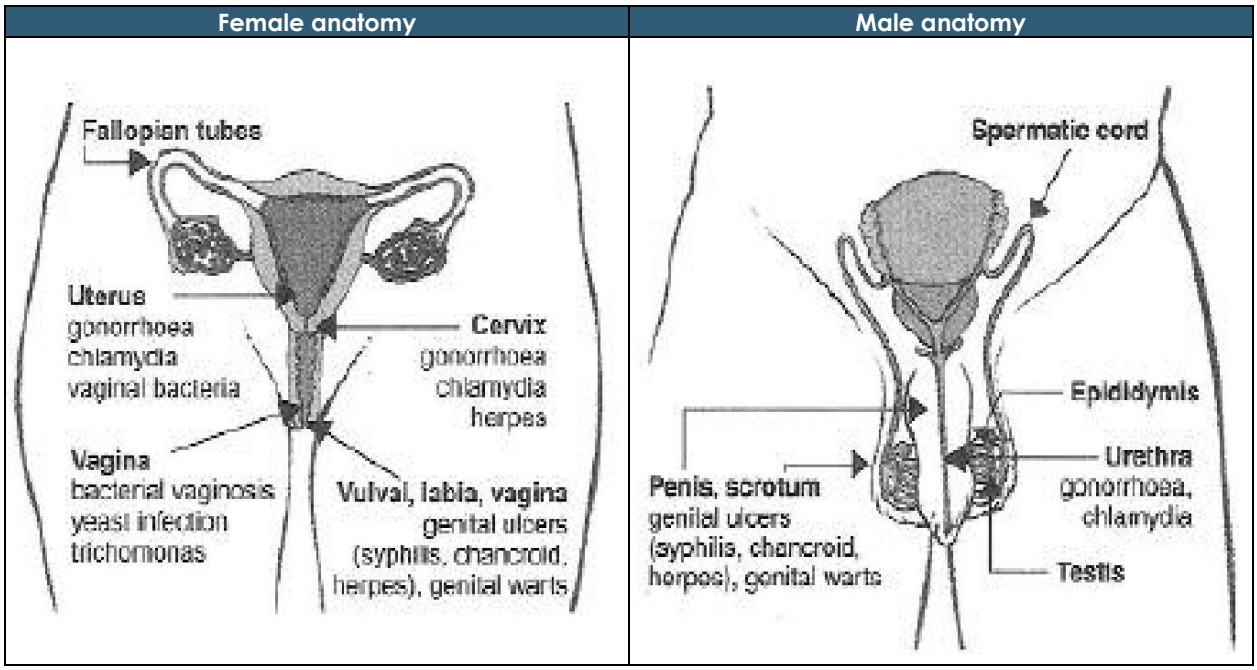
Table 1.1. Type of STIs/RTIs

Type of STI/RTI	Origin	Mode of transmission	Common examples
Endogenous	Organism normally found in vagina	Usually not transmitted from person to person, but factors that can affect the immune system can cause overgrowth, which can lead to symptoms	• Yeast infection • Bacterial vaginosis
Sexually transmitted	Sexual partner with an STI	Unprotected sexual contact with infected partner(s)	• Gonorrhoea • Chlamydia • Syphilis • Chancroid • Trichomoniasis • Genital herpes • Genital warts • HIV • Scabies • Pubic lice • Hepatitis B, C, and D
Iatrogenic	**Inside or outside the body:** • Endogenous (vagina) • STI (cervix or vagina) • Contamination from outside	• Through medical procedures • Following examination or intervention during pregnancy, childbirth, postpartum period, breastfeeding, or family planning (e.g., intrauterine contraceptive device insertion) and gynaecology settings: – infection may be pushed through the cervix into upper genital tract – Contaminated needles or other instruments – Contact with infected blood or blood products – Transfusion with infected blood	• PID after abortion or other transcervical procedures • Also due to complications and infections occurring during pregnancy and postpartum period • Congenital syphilis • Ophthalmia • neonatorum • Herpes genitalis • HIV Infection • Hepatitis B • Hepatitis C

Notes: family planning (FP), pelvic inflammatory disease (PID), sexually transmitted infection (STI)

Figure 1.1 below shows sites where STIs/RTIs manifest in male and female reproductive organs; organisms that cause an STI/RTI are also shown.

Figure 1.1. Location of STIs/RTIs



Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Public Health Importance of STIs/RTIs

STIs/RTIs remain a public health problem of major significance in many countries. Failure to diagnose and treat STIs/RTIs at an early stage may produce serious complications and consequences, including infertility, foetal wastage, ectopic pregnancy, anogenital cancer, premature delivery, and neonatal and infant infections. STIs are also known to enhance the spread of HIV infection. Some RTIs are caused by organisms normally present in the reproductive tract or are introduced during sexual contact or invasive medical procedures. These RTIs are commonly wrongly labelled as STIs, leading to unnecessary stigmatization of women and disharmony among couples.

World Health Organization estimates that over 357 million episodes of curable and incurable STIs annually occur worldwide; nonsexually transmitted RTIs are even more common. Tanzania health facilities reported162,101 STIs. Various factors facilitate the transmission of STIs/RTIs, and they are listed in Box 1.2. Each year, 10%–20% of the sexually active population contracts STIs. In 2011, the surveillance of HIV and syphilis infections among ANC clinic attendees showed an overall prevalence of syphilis as 2.5%.[1] STIs/RTIs are responsible for serious sequelae in women, men, and neonates. Some of the common ones are listed below:

- PID in women
- Ectopic pregnancy
- Infertility in men and women
- Urethral stricture in men

[1] Manyahi J, Jullu BS, Abuya MI, et al. 2015. Prevalence of HIV and syphilis infections among pregnant women attending antenatal clinics in Tanzania, 2011. *BMC Public Health*. 15(1):501.

- Stillbirth
- Congenital heart defects in children
- Blindness in children
- Cancers

Also, STIs/RTIs facilitate sexual acquisition and transmission of HIV infection. Impact of STIs on socioeconomic status include increased cost for health services, reduced economic productivity, relationship problems, stigma and discrimination. Furthermore, STIs/RTIs affect the success of other health programmes. The control of STIs/RTIs is a public health priority. Therefore, having a comprehensive STI/RTI control and prevention programme is vital.

Box 1.2. Factors that facilitate transmission of STI/RTI

Risky sexual behaviours
- Having multiple partners
- Changing partners
- Practicing unsafe sex (condoms are not used due to dislike, unavailability, unaffordability, cultural/religious beliefs, myths)
- Alcohol and drug abuse resulting in impaired decision-making about sexual matters

Socioeconomic
- Occupation (professions that force persons to be away from their sexual partners for a long time)
- Sex work and transactional sex: exchanging sex for money, materials, and favours
- Lack of information on sexually transmitted infections

Cultural
- Female genital mutilation
- Rituals such as cleansing, widow inheritance

Biological
- Age (adolescent/youth is at most risk)
- Gender (females are more likely to be infected than males)

Political
- War and political instability, which creates mobility and migration that adversely influence changes in sexual behaviour

Iatrogenic
- Infections are more common where there are many STIs and where health care providers do not have the training or supplies to perform procedures safely
- Postpartum and postabortion infections are more common where safe services and follow-up care are not available

Endogenous
- Yeast infection and bacterial vaginosis are common worldwide—influenced by environmental, hygienic, hormonal, and other factors

Medical
- Resistance to common medicines used to treat STIs
- Poor adherence to medicine for an STI, i.e., not completing full course of treatment

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Several common STI syndromes are caused by infections that primarily affect the reproductive tract; some are sexually transmitted and others are not (see Table 1.1). The table does not include HIV and hepatitis B and C, which are not clearly linked to one distinct syndrome. Some can easily be cured using antibiotics or other agents while others are incurable. Understanding what is treatable and what is not enables the provision of effective care and good advice to affected patients.

Most STIs are symptomatic and may present with one or more of the following: painful micturition, vaginal discharge, urethral discharge, anal discharge, sore throat and discomfort in swallowing for throat infections, abdominal pain, genital ulceration, genital itching, swelling of inguinal lymph nodes, and scrotal swelling.

However, a number of individuals can be infected without symptoms, and asymptomatic individuals can infect their sexual partner(s).

Health Consequences of STIs/RTIs

Boxes 1.3–1.5 describe the complications of upper genital tract infection in women, relationship between STIs/RTIs and HIV, and some barriers and possible solutions to controlling STIs/RTIs at the community level.

Box 1.3. Complications of upper genital tract infection in women

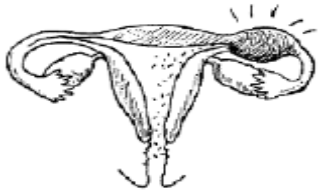
Some of the most serious consequences of STIs/RTIs in women occur when an infection of the lower genital tract (cervix or vagina)—or outside organisms—reach the upper genital tract (uterus, fallopian tubes, ovaries, and surrounding structures). Infection may become generalized and life threatening, resulting in tissue damage and scarring, which may cause infertility, chronic pelvic pain, and increase the risk of ectopic pregnancy.

Infertility often follows untreated PID in women and epididymitis and urethral scarring in men. In fact, complications of an RTI are the most important, preventable causes of infertility in regions where childlessness is most common. Repeated, spontaneous abortions and stillbirths often due to RTIs—such as syphilis—are important reasons why couples are unable to have children.

Upper genital tract infection can develop at any time, but women are more vulnerable immediately following childbirth or abortion. Complications of abortion and postpartum infections are major causes of maternal morbidity and mortality—and are largely preventable.

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

Figure below shows site of ectopic pregnancy:



Notes: pelvic inflammatory disease (PID), reproductive tract infection (RIs), sexually transmitted infections (STIs)

Box 1.4. Relationship between STIs/RTIs and HIV	
HIV is transmitted in the same way as other STIs; prevention of STIs also reduces sexual transmission of HIV. **Effective treatment** of STIs decreases the amount of HIV in genital secretions and makes HIV transmission less likely. Many STIs/RTIs increase the risk of acquiring HIV and transmitting it to others—for example, by as much as 50–300 times per contact when a genital ulcer is present.	**HIV transmission is more likely when STIs/RTIs are present for several reasons:** • HIV can easily pass through breaks in the skin or mucous membranes and attach to white blood cells that are present in inflamed genital tissue and discharges. • Large amounts of HIV are found in ulcers and genital fluids (semen, cervical secretions) of people with certain STIs.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Most of the serious health problems caused by STIs/RTIs are preventable. Communities with good access to effective prevention and treatment services have lower rates of STI/RTI-related complications than communities where access to effective prevention and treatment services are poor, disrupted, or not used. Reducing the burden of STIs/RTIs requires more than good clinical management of individual patients; however, accelerating the prevention of STIs/RTIs in the community is essential. Box 1.5 lists some important barriers in controlling STIs/RTIs at the community level.

Box 1.5. Some barriers and possible solutions to STI/RTI control at the community level	
What is the problem?	**What can be done?**
Poverty and labour migration separate families and lead to risky sexual behaviour.	Institute economic and social policies that reduce family separations may reduce the risk and vulnerability to STIs/RTIs.
Low status of women limits economic options and leads to risky sexual behaviour. Women may exchange sex for money or for other forms of support. Low status also means having little control over decisions and less ability to negotiate with partners.	Institute educational and employment opportunities for girls to reduce the economic pull toward sex work and reduce the risk of acquiring STIs—all the while empowering women.
Poor health care services have little to offer for the prevention and care of STIs/RTIs.	Improve health care services for better prevention and care.
People do not have easy access to health care facilities.	Reduce barriers—such as cost, distance, limited clinic hours, and long waiting times—to enable better access to care.
People do not use health care facilities (poor health-care-seeking behaviour).	Promote better awareness of the symptoms and complications of STIs/RTIs—and improved health care services—to convince more people to use the services.
Low level of condom use is present because of limited access to condoms, inadequate knowledge about condom use, and beliefs against condom use.	Create community awareness, and educate on the proper way to use condoms—and to use them consistently.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

STIs/RTIs Intervention Strategies

The components of a comprehensive, national STI/RTI control strategy should include the following:

- Training service providers

- Conducting effective primary prevention of STIs/RTIs at health facility and community levels
- Promoting appropriate behaviour to seek care for STIs/RTIs
- Conducting effective case management
- Conducting contact management
- Routinely preventing ophthalmia neonatorum
- Ensuring the availability and accessibility of medicines
- Conducting STI/RTI case finding and screening
- Implementing interventions that target key populations, such as sex workers
- Monitoring and evaluation (M&E)

Some countries have greatly reduced the prevalence and transmission of common STIs/RTIs by addressing social and cultural factors. Throughout Africa, there are many examples of projects that have successfully promoted condom use.[2,3] Consistent condom use levels as high as 86% were seen in a study of mediated condom distribution in Mombasa, Kenya.[4]

Box 1.6. Effective STI control in sub-Saharan Africa

- In an intervention that provided free condoms and STI services to sex workers in Kinshasa, Zaire, condom use increased and HIV and STI prevalence decreased.[5]
- A randomized trial among sex workers in Madagascar demonstrated that the addition of clinic-based counselling to peer education reduces STI prevalence.[6] The counselling intervention lasted for about 15 minutes and covered risk assessment; information on STI, HIV, and dual protection; condom negotiation skills; and promotion of a "no condom, no sex" policy. After 6 months, more than one-half of the sex workers in the intervention arm reported 100% condom use with clients in the prior month. An increase in condom use with partners was also noted, though levels remained low. A reduction in STIs among sex workers, compared to the control group, showed that the impact of promoting consistent condom use with sex workers can be further heightened with more intensive counselling about risk reduction.
- Several long-term studies of sex workers found that declines in high-risk behaviour and HIV incidence occurred over time, possibly due to the ongoing risk-reduction counselling provided as part of the study's activities.[7,8] This adds to other evidence that shows the effectiveness of condom use promotion initiatives.

Note: sexually transmitted infection (STI)

Role of Health Facilities in Reducing the Burden of STIs/RTIs

There are a number of challenges in providing effective STI/RTI services to people who need them (see Chapter 2, Figure 2.1). A significant proportion of people with an STI/RTI do not seek treatment because they are asymptomatic or have mild symptoms. Others who have symptoms may prefer self-treatment through pharmacies or traditional healers. Even those who come to a clinic

[2] Rekart ML. 2005. Sex-work harm reduction. *Lancet*. 366:2123–2134
[3] Shahmanesh M, et al. 2008. Effectiveness of interventions for the prevention of HIV and other sexually transmitted infections in female sex workers in resource poor setting: a systematic review. *Tropical Medicine and International Health*. 13:659–679.
[4] Luchters S, et al. 2008. Impact of five years of peer-mediated interventions on sexual behavior and sexually transmitted infections among female sex workers in Mombasa, Kenya. *BMC Public Health*. 8:143.
[5] Laga M, et al. 1994. Condom promotion, sexually transmitted diseases treatment, and declining incidence of HIV-1 infection in female Zairian sex workers. *Lancet.* 344:246–248.
[6] Feldblum PJ, et al. 2005. Results of a randomised trial of male condom promotion among Madagascar sex workers. *Sexually Transmitted Infections*. 81:166–173.
[7] Yadav G, et al. 2005. Associations of sexual risk taking among Kenyan female sex workers after enrollment in an HIV-1 prevention trial. *Journal of Acquired Immune Deficiency Syndromes*. 38:329–334.
[8] Baeten JM, et al. 2000. Trends in HIV-1 incidence in a cohort of prostitutes in Kenya: implications for HIV-1 vaccine efficacy trials. *Journal of Acquired Immune Deficiency Syndromes*. 24:458–464.

may not be properly diagnosed and treated. In the end, only a small proportion of people with an STI/RTI may be cured and avoid reinfection. These guidelines help health facilities respond to STIs/RTIs more effectively and promote early treatment-seeking behaviour in the community. Health facilities should do the following:

- Integrate STI/RTI services with other service delivery points within the facility, such as CTC, outpatient department, reproductive and child health, TB/HIV, and cervical cancer screening.
- Ensure that there is proper recordkeeping of and reporting on all STI/RTI services provided.
- Collaborate with existing civil society organizations and other stakeholders in promoting STI/RTI services in the community.
- Ensure that STI/RTI medicines are available and dispensed according to national guidelines and facility flow charts.

Role of Health Care Providers in Reducing the Burden of STIs/RTIs

Many challenges can be addressed by making the most of opportunities to promote prevention, improve health-seeking behaviour, and detect and manage existing infections. Health care providers should do the following:

- Raise awareness in the community about STIs/RTIs, and elaborate how they can be prevented, especially among populations who may be at high risk.
- Equally treat all clients who seek STI/RTI services, regardless of sexual orientation (i.e., female sex workers, men who have sex with men, transgender, etc.).
- Conduct outreach services targeting key and vulnerable populations (KVPs)—including female sex workers, men who have sex with men, and transgender people—who are important in the STI/RTI transmission networks in the community and have the greatest stigma in accessing health services.
- Promote early use of health services to cure STIs/RTIs and prevent complications. Teach people how to recognize early symptoms and when and where to seek care.
- Promote safer sexual practices, including consistent and correct condom use, fewer partners, and delaying sexual debut.
- Detect infections that are not obvious. Ask about symptoms and look for signs of STIs/RTIs when clients visit clinics for family planning or other services. Screen for asymptomatic infections when possible.
- Prevent iatrogenic infections by following standard precautions, using aseptic technique, and ruling out or treating cervical infections before performing transcervical procedures.
- Effectively manage symptomatic STIs/RTIs. Follow syndromic management guidelines to manage STI/RTI cases.
- Counsel patients on staying uninfected after treatment. Encourage them to comply with treatment, assist with partner notification and treatment, and reinforce prevention.
- Adhere to respective medical ethics and other standard operating procedures in providing STI services.

A combined strategy of effective community interventions and improved clinical services can have a large impact on reducing STIs/RTIs and their complications. Better clinical services increase the number of people who are cured. More effective prevention in the community, especially when it reaches those at highest risk, can reduce the overall burden of STIs/RTIs. The combination of strategies benefits everyone.

Chapter 2. Detection (Diagnosis) of STIs/RTIs

Overview

A significant proportion of women and men with STIs/RTIs do not have symptoms or have minimal symptoms and do not realize that anything is wrong. They may visit a clinic for other reasons or not at all. Yet identifying and treating such patients prevents the development of complications for the individual patient and helps reduce the transmission of STIs/RTIs in the community.

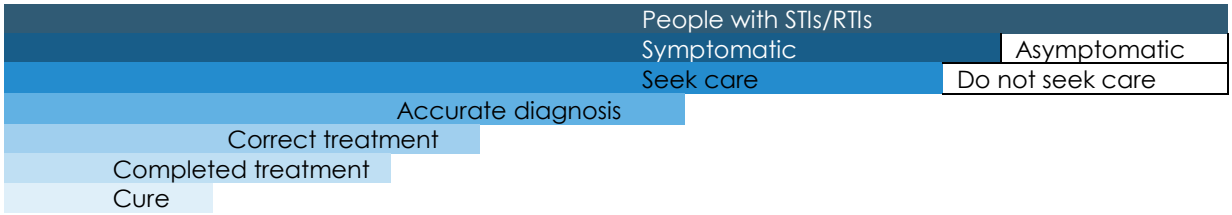
Some people with STIs/RTIs have symptoms and seek treatment while others do not (see Figure 2.1). Promoting symptom recognition and early use of appropriate health care services is an important way of reducing the burden of STIs/RTIs. Box 2.1 provides key points covered in this chapter.

Box 2.1. Key points

- Health care providers should know how to identify people with signs or symptoms of STIs/RTIs or people at risk of acquiring STIs/RTIs.
- Screening for syphilis is an effective strategy for preventing congenital syphilis and is part of the essential package of antenatal care.
- Women with previous spontaneous abortions, stillbirths, or preterm deliveries should be screened for bacterial vaginosis and trichomoniasis, in addition to syphilis.
- Every opportunity should be taken to detect cervical infections through a careful speculum examination and, when possible, laboratory tests.
- Visual inspection with acetic acid for early detection of initial lesions of cervical cancer should be done in sexually active women. This should be done every 3 years for women who are not infected with HIV and yearly for women who are infected with HIV.
- HIV testing and counselling (HTC) services should be offered to clients with STIs/RTIs, in line with the national guidelines for HTC.
- Uncircumcised male clients with STIs/RTIs, discovered during HTC, should be offered voluntary medical male circumcision service according to relevant national guidelines.
- Herpes simplex virus is a major cause of genital ulcer disease.

Notes: HIV testing and counselling (HTC), reproductive tract infections (RTIs), sexually transmitted infection (STIs)

Figure 2.1. Barriers to STI/RTI control—challenges in finding people with an STI/RTI



Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

In men and women, asymptomatic infections can be more serious than symptomatic ones. Syphilis, gonorrhoea, human papillomavirus (HPV), genital herpes, and chlamydia have serious consequences yet are often asymptomatic (see Chapter 1). Even PID frequently has mild or no symptoms.

Reproductive health services play an important role in detecting an asymptomatic STI/RTI. Because many women attend reproductive health clinics for family planning, ANC services, and postnatal care, these clinic visits are opportunities for identifying women with STIs/RTIs who would benefit from treatment. Measures should also be taken to detect STIs/RTIs in men who come for other health services. This chapter presents some strategies for identifying STIs/RTIs in patients who come to the clinic for other reasons. Tables 2.1 and 2.2 give some examples of these approaches.

Table 2.1. Examples of detection and treatment strategies for STIs/RTIs

Method	Examples: no missed opportunities
History taking	Ask about STI/RTI symptoms or concerns at each health facility visit.
Clinical screening	Perform general examination, including speculum and bimanual, to look for signs of STI/RTI not noticed by the client. Perform VIA for early detection of cervical cancer lesions.
Laboratory screening	Conduct serological screening for syphilis. Conduct microscopy of genital discharge. Provide testing and counselling for HIV.
Presumptive treatment on basis of risk criteria	Treat partners of STI/RTI patients as survivors of sexual violence. Treat women having a transcervical procedure.
Periodic presumptive treatment of STIs/RTIs	Treat sex workers due to high level of exposure (hot spots).
Combination strategies	Presumptively treat vulnerable populations at first visit, followed by regular visits for speculum and bimanual examination and Gram stain of cervical smear.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI), visual inspection with acetic acid (VIA)

SCREENING FOR SPECIFIC STIs/RTIs

Clinical screening identifies the possible presence or absence of an infection in individuals without signs or symptoms. Individuals may be presymptomatic or have unrecognized symptomatic disease. As such, screening tests are somewhat unique in that they are performed on persons who seem in good health.

Table 2.2 provides some common screening tests that can be performed: syphilis tests, gonorrhoea culture, and Gram stain. Visual inspection with acetic acid (VIA) can detect more than 80% of silent infections. Other tests detect fewer asymptomatic cases, but may still be useful if health care providers understand their limitations. It is better to detect 40%–60% of women with cervical infection, using speculum examination, than none at all.

Table 2.2. Examples of screening options for STIs/RTIs

Infection/condition	Screening method	Number detected in 100 cases[a]	Comment
Syphilis	Treponemal specific serological screening tests[b]	99.5	Treatment for patients who test positive
Cervical infection (gonorrhoea and/or chlamydia)	Gram stain, culture for *Neisseria gonorrhoea*	95	Accurate—requires laboratory with CO_2 jars, incubator, and culture media

Infection/condition	Screening method	Number detected in 100 cases[a]	Comment
	Chlamydia test[c]	60–70	Expensive—misses many cases (false negatives)
	Chlamydia polymerase chain reaction	95	Very expensive—advanced technology
	Clinical examination	30–40	Inexpensive—misses many cases (false negatives)
Initial cervical cancer lesions	VIA for early detection of cervical lesions	90	Effective for early detection and prevention of cervical cancer

[a] Sensitivity under ideal conditions and depending on stage of disease—field performance usually lower

[b] SD BIOLINE Syphilis 3.0 test

[c] For example, enzyme-linked immunosorbent assay or direct immunofluorescence tests

Note: visual inspection with acetic acid (VIA)

It is important to keep in mind some issues that may come up when screening or presumptively treating for STIs/RTIs. Patients who have come to the clinic or health facility for other reasons may not be prepared to hear that they have an infection, especially one that is sexually transmitted. They may become even more upset if they are told that they have to inform their sexual partner. Such situations must be handled carefully to avoid losing the patient's trust and damaging the clinic's reputation in the community. It is important to remember that no screening test is 100% accurate—many are much less so. Most importantly, health care providers should avoid labelling problems as sexually transmitted if they are not. A more cautious approach, and one that is often more acceptable to patients and their partners, is to explain that many symptoms are nonspecific; treatment can then be offered as a precaution to prevent complications, preserve fertility, and protect pregnancy. These and other counselling issues are covered in Chapter 3.

Syphilis

Syphilis is associated with serious complications. More importantly, 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 this infection in pregnant women. An estimated two-thirds of pregnancies in women who are in the early stages of syphilis and have not received treatment will end in abortion, stillbirth, or neonatal infection. Coinfections of syphilis and HIV infections may alter the clinical presentation and treatment modalities for syphilis.

Indications and Opportunities for Screening

- Screening for syphilis during pregnancy should be done at the woman's first ANC visit or as early as possible. It can be repeated in the third trimester, if resources permit, to detect infection acquired during the pregnancy.
- Women who do not attend ANC clinics should be tested at delivery. Although this will not prevent congenital syphilis, it will permit early diagnosis and treatment in newborns.
- Women who have had spontaneous abortions (miscarriages) or stillbirths should also be screened for syphilis; in many areas, identification and treatment of syphilis removes a major cause of an adverse pregnancy outcome.
- Men and women with STI/RTI syndromes other than genital ulcer should be screened for syphilis. Screening is unnecessary inpatients with ulcers; these patients 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.
- Screening for syphilis should also be done in all women with histories of abortion or preterm delivery.
- Other opportunities to screen for syphilis include family planning, voluntary medical male circumcision, and ANC services; any time a speculum examination is performed; and in all male partners of females with STIs/RTIs, and vice versa.

Available Screening Method

- SD BIOLINE Syphilis 3.0 test is preferred for syphilis screening. This test detects almost all cases of early syphilis (see Table 2.2).

Recommendations

Syphilis testing should be done on site to maximize the number of patients who receive their results and treatment. Ideally, the following should be done:

- Patients should receive their test results the same day—before they leave the clinic.
- Patients with reactive (positive) results should be treated immediately (see Chapter 8 for treating syphilis in pregnancy).
- All patients must be asked about an allergy to penicillin (for effective substitutes, see Chapter 8).
- Sex partners of persons positive for syphilis should also be treated, without prior testing.

Partner counselling should stress the importance of treatment and STI/RTI prevention in maintaining a healthy pregnancy. Same-day, onsite syphilis screening and treatment has shown to greatly increase the number of women effectively treated and reduce the incidence of congenital syphilis, as shown in Box 2.2.

Box 2.2. Benefit of improved antenatal syphilis screening

A cross-sectional study of pregnant women who attended ANC clinics at Bugando Medical Centre revealed that the seroprevalence of syphilis at delivery was 2.3%. Syphilis seropositivity among pregnant women was associated with HIV infection ($p < 0.001$), uncircumcised male partner ($p < 0.011$), and woman's alcohol intake ($p < 0.001$)—while only syphilis positivity was found significantly associated with HIV infection. Among those who did not test for syphilis at ANC, 1.8% were positive at delivery.

The decrease in syphilis seroprevalence has been observed in other studies done in Mwanza.[9] The syphilis seroprevalence of 1.8% among women who did not test at ANC clinics was also lower than the 8% previously reported in Mwanza.[10]

An operational research study—conducted between 2009 and 2010 in clinics in Peru, Tanzania, and Zambia to estimate the cost-effectiveness of introducing treponemal-based rapid syphilis testing to screen for maternal syphilis in clinics for ANC and preventing mother-to-child transmission of HIV—found the prevalence of maternal syphilis to be 1.2% in Peru, 10.0% in Tanzania, and 12.4% in Zambia. Cases of maternal syphilis for every1,000 ANC clinic attendees were estimated to be 13, 52, and 90 in Peru, Tanzania, and Zambia, respectively. In the absence of ANC syphilis screening programmes, no cases would be treated, whereas mass treatment would treat 11, 48, and 70 cases, respectively, assuming that there would be no treatment supply shortages.[11]

[9] Kumogola, et al. 2010. Trends in HIV & syphilis prevalence and correlates of HIV infection: results from cross-sectional surveys among women attending ante-natal clinics in Northern Tanzania.
[10] Watson-Jones, et al. 2002. Syphilis in pregnancy in Tanzania. Impact of maternal syphilis on outcome of pregnancy.
[11] Terris-Prestholt F, et al. 2015. The cost-effectiveness of 10 antenatal syphilis screening and treatment approaches in Peru, Tanzania and Zambia.

Note: antenatal care (ANC)

Syphilis screening in ANC clinics should be evaluated regularly to estimate the proportion of women who are tested, diagnosed, and effectively treated. Two simple indicators can be easily calculated each month using data from clinic records:

Screening coverage **% =** $\dfrac{\text{Number of pregnant women tested x 100}}{\text{Number of women coming for first ANC visit}}$

Treatment coverage **% =** $\dfrac{\text{(Number of syphilis test—reactive women treated) x 100}}{\text{Number of women with reactive tests}}$

Vaginal Infections

Vaginal infections (yeast infection, bacterial vaginosis, and trichomoniasis) are very common in women of reproductive age, are almost always symptomatic, and may cause complications. In women who are not pregnant, 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 and trichomoniasis may cause complications such as premature rupture of membranes and preterm delivery. Women at risk of these conditions should be screened regardless of symptoms.

Indications for Screening

- Pregnant women with symptoms suggestive of vaginal infection or women with histories of spontaneous abortion or preterm delivery should be screened.

Available Screening Methods (see Annex 3)

- Bacterial vaginosis can be detected by Gram-stain microscopy of a vaginal smear or by simple bedside methods (see Annex 3).
- Motile *Trichomonas* protozoa (trichomonads) can be seen on microscopic examination of a fresh, wet mount of vaginal fluid in a drop of normal saline.
- Microscopy for yeast cells is useful in the diagnosis of vaginal candidiasis.

For Urethral Discharge

- Bacterial—Gram-stain/amine test
- *Trichomonas*—wet preparation in microscopy for males with urethral infection

Recommended Approach

- 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—500 mg two times a day for 7 days—to reduce risk of adverse pregnancy outcome.
- Women with symptomatic vaginal discharge in the second or third trimester should be treated as above—without screening—for bacterial vaginosis, trichomoniasis, and yeast infection (see Flow Chart 13 in Chapter 9).

- Women who are not pregnant and have abnormal vaginal discharge should be managed according to Flow Chart 2 in Chapter 8.

Cervical Infections

Cervical infections are much less common than vaginal infections, especially among women who use reproductive health 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, as described in Table 2.3. Speculum examination may also reveal signs of other infections, including cervical ulcers and genital warts.

Indications and Opportunities for Screening

Screening may be done during pregnancy or at any time a speculum examination is performed. People with frequent exposure to STIs/RTIs, such as sex workers, should either be screened regularly or offered periodic presumptive treatment for STIs/RTIs (see Chapter 4).

Available Screening Methods

- Careful speculum examination may detect some (not all) cervical infections (see Table 2.3).
- Testing the culture for gonorrhoea is accurate and not expensive or technically difficult to set up in established laboratories (see Table 2.2).
- Laboratory tests for chlamydial infection are expensive and miss many infections (see Table 2.2). Polymerase chain reaction is very accurate but very expensive.

Recommended Approach

- Conduct a speculum examination to look for signs of cervical infection (see Table 2.3). Speculum examination skills are reviewed in Annex 1. Some asymptomatic internal ulcers and genital warts may also be detected through speculum examination.
- Collect specimen from the cervical canal (endocervix) using a swab. If the swab appears yellow when held up against white paper (positive swab test), cervical infection is likely, and the woman should receive treatment for gonorrhoea and chlamydia.
- Depending on laboratory resources, endocervical swab specimens can also be cultured for gonorrhoea (see Table 2.2), tested for chlamydial infection (see Table 2.2), and screened for HPV infection.

Table 2.3. Clinical criteria for cervical infection

Screening method	Signs	Management
Speculum examination detects some cases of cervical infection	Mucopurulent discharge (not clear, yellowish discharge from endocervix)	**When any of these signs are present, patient should be treated for both gonorrhoea and chlamydia:**
	Friability (easy bleeding) when the cervix is touched with a swab	**Friability (easy bleeding):**

	Positive swab test (yellow discoloration of swab inserted in endocervix)	suspect cervical cancer, and refer for management of cervical cancer **Note:** At least one-half of the women with cervicitis do not have these signs, and some women with these signs do not have gonorrhoea or chlamydia.

Screening is one way to detect cervical infection, and it should not be limited to women with vaginal discharge. Cervical infection is usually asymptomatic and women without vaginal discharge are as likely to have gonorrhoea, chlamydia, or HPV infections as women with discharge. Despite lack of symptoms, consequences can be severe if an infection reaches the upper genital tract and the cause is gonorrhoea or chlamydia and HPV.

Pelvic Inflammatory Disease (PID)

Upper genital tract infection or PID leads to serious and life-threatening complications, including infertility and ectopic pregnancy, yet it can often develop silently with few or no symptoms. Women with lower abdominal pain and tenderness on examination should be managed for PID.

Indications for Screening

Screening should be performed as described below:

- 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
- Before transcervical procedures

Available Screening Methods

Careful abdominal and bimanual pelvic examinations are the only methods for detecting silent PID.

Implementing Screening

Bimanual pelvic examination skills are reviewed in Annex 1. Signs of upper genital tract infection include lower-abdominal, cervical-motion, and uterine or adnexal tenderness. Women with these signs should be managed without delay using the lower abdominal pain flow chart (see Flow Chart 3 in Chapter 8).

Cervical Cancer Screening

Cervical cancer is a recognized complication of STI/RTI, related to infection with a few specific strains of HPV. Screening and treatment of early stages (cervical dysplasia) is effective in reducing morbidity and mortality from cervical cancer. There is an effective vaccine that protects against some, but not all, subtypes of HPV associated with cervical cancer.

Indications for Screening

Cervical cancer screening with VIA is indicated for all sexually active women aged 30–50 years. Women who are HIV negative should be screened every 3 years, and women who are HIV positive should be screened every year. Where cytology services are well established, all women over 50 years old should be screened every 5–10 years. Where cytology services are limited, the objective should be to screen, at least once, all women around 40 years of age.

Available Screening Methods

VIA and visual inspection with Lugol's iodine followed by cryotherapy have been incorporated into the cervical cancer prevention services in existing reproductive health services. VIA is an attractive alternative to cytology-based screening in low-resource settings. Scaling up programmes, through development of referral linkages with high-level health facilities, will facilitate the extension of cervical cancer prevention services to targeted populations in both urban and rural areas.
The Pap test is one of the most reliable and effective cancer screening tests available, but it is costly. However, it is still recommended for use in all women who are between 21 and 65 years old. Screening for cervical cancer is also an opportunity to look for signs of other cervical infections. Cervical cancer screening requires staff who have been trained according to the national guidelines (refer to the Tanzania Service and Delivery Guideline for Cervical Cancer Prevention and Control). HPV subtyping can be done using serology and polymerase chain reaction.

HIV Testing and Counselling (HTC)

Testing for HIV infection has several potential benefits, from promoting prevention to improving access to care and treatment, including the prevention of mother-to-child transmission (PMTCT) (see Chapter 7). HIV testing and counselling (HTC) should be offered to all STI/RTI clients and should always be conducted by trained health care providers. Health care providers must respect the patient's right to privacy, confidentiality, informed consent, and the receipt of correct test results; providers should connect clients to follow-up services. Current approaches for HTC include client-initiated, provider-initiated, and community-based services (refer to national HTC guidelines).

Indications for Screening

In all communities, HTC services should be available as follows:

- As part of routine ANC or linked to those services
- For anyone who wants to know their HIV status (including partners of pregnant women)
- For all patients presenting for STIs/RTIs services
- For all patients accessing TB services
- For all patients presenting for other health services (provider-initiated testing and counselling [PITC])

Available Screening Methods

There are many HIV tests available. Diagnosis of HIV infection using a single HIV test is not recommended; a proper diagnosis requires confirmation through approved HIV testing algorithms. In adults and children older than 18 months, an HIV diagnosis is commonly made when HIV antibodies are detected through rapid tests or enzyme immunoassays. MOHCDGEC and WHO recommend confirmatory testing with a second test, based on a different test principle/antigen, before the client is notified of a positive result.

Implementing Screening

HTC should be available on site or through referral to clients with an STI/RTI. HTC includes pre-test counselling, the HIV test—according to the national algorithm—and post-test counselling and referral for care and treatment if indicated. HTC should be done after obtaining the client's consent.

HIV testing should never be done based on the request of another person, and results should only be given in person to the client.

Chapter 3. STI/RTI Education, Counselling, Contact Referral, and Management

Overview

This chapter recognizes health education and counselling as an important strategy in managing STIs/RTIs. The chapter guide health care providers in planning, conducting, and evaluating client education and counselling sessions within health facilities. Important preventive measures—such as drug compliance, contact referral and management, counselling, and proper condom use—are also highlighted.

People may be at risk of acquiring an STI/RTI because of their behaviour, yet this behaviour may be difficult to change because of factors or circumstances—which include 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/RTI transmission but also support in making changes in their lives. Health care providers can help by providing the following:

- Health education during clinic visits
- Counselling to support people in changing behaviour
- Community education to raise awareness about STIs/RTIs and help change negative ideas and attitudes that may be barriers to experiencing a healthy sexuality

There is a difference between health education and counselling, as shown in Box 3.1. Health education is the provision of essential information related to the prevention or treatment of STIs/RTIs and need not take much time. The content of a health education session is usually similar for each client. Counselling, on the other hand, requires time to establish trust, assess the person's individual situation, and relay prevention information based on the person's lifestyle and psychosocial environment. Busy health care providers rarely have time to adequately counsel every patient with an STI/RTI; therefore, clinic-based interventions are the subject of this chapter and outlined in Table 3.1. Chapter 5 addresses education at the community level.

Box 3.1. Key points

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

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Table 3.1. Steps in client education and counselling

Health education			Counselling
To raise awareness	**For prevention**	**As part of STI/RTI management**	
Talk about STIs/RTIs and complications.	Promote correct and consistent condom use.	Emphasize compliance with treatment.	Discuss risk and vulnerability.
Explain 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.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Privacy and Confidentiality

Privacy and confidentiality are essential in all aspects of patient care—history taking, physical examination, education, and counselling. This is especially true for potentially stigmatizing conditions such as an STI/RTI. All patients have a right to privacy and confidential services, but some—such as adolescents, sex 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 judgemental or disapproving and 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 their privacy and confidentiality are not respected or service providers are critical and judgemental.

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 to provide such privacy and confidentiality. The space where interviews, examinations, and counselling take place should be separated from waiting rooms, so 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 respect whether or not an STI/RTI is detected or suspected, regardless of age or marital status. Where health care providers are likely to know patients' extended families or neighbours, 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.

General Skills for STI/RTI Education and Counselling

Box 3.2 lists some skills that health care providers should develop in order to educate and counsel patients. Many of these skills are also useful for history taking and examination. Education and counselling often start early in the consultation, when the health care provider asks the patient 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. Counselling should be based on an individual's needs and concerns and should be

related to practical steps they can take to reduce their risk of acquiring infection and developing complications.

Box 3.2. Skills for education and counselling
• Warmly welcome your patient by name, and introduce yourself. • Assure your client that their privacy and confidentiality will be respected. • Sit close enough to be able to comfortably and privately talk to the client. • Make eye contact with the patient, and look at the patient as they speak. • 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." • Ask 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 the client repeat the most important information. • Do not move in and out of the room. • Do not encourage other providers to interrupt. • Do not write notes continuously as the patient is speaking. • Do not make judgemental comments or negative facial expressions.

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 3.3 includes a checklist of essential information that should be provided during patient education. In addition, consider the following:

- If a client has come for family planning services, they should be offered information about STIs/RTIs: 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 an STI (dual protection).
- If the patient is pregnant, she needs to understand the importance of preventing STIs/RTIs in pregnancy and of detecting syphilis, HIV, and other infections that could endanger her or the pregnancy.
- Patients who come to the clinic with symptoms of an STI/RTI should be urged to follow recommended treatment, discuss prevention, and, if the infection is sexually transmitted, refer their partners for treatment (see Chapter 8).

More specific advice on integrating education and preventive counselling into family planning and ANC visits are in Chapters 6 and 7.

Box 3.3. Selected areas to emphasize in an STI health education session	
Area	**Content**
Nature and complications of STI	• Explain that STI is contracted through sexual contact. • Discuss symptoms, signs, and possible complications of the STI. • Explain that the condition is curable.

Box 3.3. Selected areas to emphasize in an STI health education session	
Area	**Content**
Need for medication compliance	• Explain exactly how the medication should be taken. • Explain that treatment can only be effective if the medication is taken as prescribed. • If possible, let patient take the first dose of medicine in front of you.
Need to return for follow-up	• Explain that persistence of symptoms indicates treatment failure or reinfection. • Explain the importance of returning to the clinic to adjust the treatment (note that follow-up visits are recommended for all STIs or syndromes).
Importance of partner referral	• Explain that the patient's sexual partner(s) is likely to be infected as well. • Explain why it is also important to treat the sexual partner(s). • Discuss with the patient the modalities of partner referral, and assure confidentiality.
Prevention	• Make client aware about risky sexual behaviours. • Make client aware about the high prevalence of STIs and HIV in the community. • Explain that even partners who look healthy can be infected. • Discuss safer sex practices with the client. • Demonstrate proper condom use. • Discuss with the client any constraints they report in adopting safer sex practices and possible ways to overcome the constraints.
Advantage of regular medical assessment	• Make the client aware that asymptomatic STIs are common or that the client might overlook symptoms and signs. • Explain that regular medical assessments will help identify and treat these conditions.
Referral to related services	• Make client aware of what expertise or services exist in the community for help or advice about related problems. • Explain to the client the need to visit a referral site when indicated.

Note: sexually transmitted infection (STI)

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 STI prevention, using flip charts 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, such as 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 the important points at the end of the visit, and offer patients a chance to ask questions.

Client Education about Safer Sex

We know that certain behaviours increase the risk of acquiring or passing on an STI. Some of these involve unprotected sexual contact with body fluids in the vagina, mouth, or anus. With others, such as sex workers, it may be hard for the person to use condoms or other prevention methods. As shown in Box 3.4, safer sex 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, and couples can talk about sex together to learn different ways of pleasing each other.

Box 3.4. What is safer sex?

Safer sex is any sexual activity that reduces the risk of passing an STI—such as HIV—from one person to another. Safer sex does not allow semen, vaginal fluid, or blood to enter the body orally or through the vagina, anus, or any open sore or cut. Some safer sex practices include the following:

- Use a condom correctly every time you have sex.
- Reduce the number of sex partners. Stick to one faithful, uninfected partner.
- Try massaging, rubbing, touching, dry kissing, hugging, or masturbating instead of having intercourse (i.e., try nonpenetrative sex).
- Keep away from "dry sex" because it can cause disruption of the vaginal mucosa and cause bruises on the penis, which may facilitate HIV transmission.
- Anal sex is not safer sex.
- If you have anal sex, always use a condom.
- DO NOT have intercourse or oral sex if you have or your partner has genital sores or an abnormal discharge.

Notes: sexually transmitted infection (STI)

Client Education Following STI/RTI Treatment

Clients who are being treated for an STI/RTI need additional information to ensure that they complete their treatment and avoid reinfection. Box 3.5 summarizes essential information for clients who are being treated for STIs/RTIs.

Box 3.5. Client education as a part of an STI/RTI case management

- Encourage clients to seek treatment from their clinic or doctor. Discourage clients from self-medicating or from getting medication from unlicensed sources.
- Encourage clients to complete their course of treatment. Stopping treatment too early, or as soon as symptoms disappear, is a common reason for treatment failure. Discourage the client to share medicines with others.
- 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 treatment of partner(s) when appropriate (see Chapter 8). 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 (see Box 3.4) and condom use and may require more in-depth counselling.

Notes: pelvic inflammatory disease (PID), reproductive tract infection (RTI)

Counselling

Health care providers have an important role to play in supporting clients adopt effective prevention strategies. Counselling is a more in-depth process than health education and requires more time. Because of this, in busy clinics, it may be logical to have a person specifically assigned to counsel patients. Such a person may provide other services, such as HTC. Effective counselling must deal with issues of risk and vulnerability, as shown in Box 3.6.

Box 3.6. Elements of effective counselling

- Try to understand how a person's situation may increase risk and vulnerability. Understand there may be circumstances in a person's life that are difficult to change (for example, alcohol use, sex work for survival) and may make safer sex difficult.
- Provide information. Give patients clear and accurate information on risky behaviours, the dangers of STIs, and specific ways to protect themselves.
- Identify barriers. What keeps someone from changing their 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 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/partner becomes angry or refuses to use condoms).

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

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

- Preventing pregnancy may be the main concern for young, single clients who may be unaware of their risk of STI (see Box 3.7). Education about risks for STIs may increase motivation to use condoms for dual protection or delay onset of sexual activity.
- Persons 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 healthy pregnancies can be motivated to prevent infection to reduce the risk of congenital infection.
- Pregnancy prevention is not an issue for some people. However, a woman who has undergone tubal ligation, is postmenopausal, or is currently pregnant may still be at risk of acquiring an STI and requires advice on prevention.

Box 3.7. Special considerations for counselling young people

Box 3.7. Special considerations for counselling 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 to discuss problems with. • Be sensitive to the possibility of sexual violence or coercion. Sex with much older partners—or coerced sex—may be more likely and may carry a higher risk of acquiring an STI, such as HIV. • 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 taking sexual risks. • It may be useful to involve peers in education. • Check that the adolescent can afford the 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 that follow-up visits are offered at times that are convenient for the young person.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Contact Notification, Referral, and Management

The contact referral or partner notification in STI/RTI control and prevention is of paramount importance. The concept of contact referral and treatment is based on the following facts:

- Each client with an STI must have been infected by a sexual partner who should also be treated.
- Each client with an STI/RTI is a potential source of infection to the sexual partner(s) until the treatment is completed; therefore, this partner(s) should be treated.
- A client treated for their STI/RTI is cured but not immune to the infection. This means that this client can be reinfected if the sexual partner(s) still has the STI/RTI—a reason why the partner(s) should be treated.

Notifying the client's sexual partner(s) breaks the chain of STI/RTI transmission and reduces the chance of the client becoming reinfected. For practical purposes, we define the STI/RTI client as an index case because they are the first person diagnosed with an STI in the given network of partnerships. We define their sexual partner(s), who could be the source of the infection or who could have been infected by the index case, as contact.

The objectives of contact referral include the following:

- Identify the number of contacts of the index case.
- Notify contacts about the need for medical assessment.
- Treat contacts according to their STI/RTI symptoms and signs (syndrome) or according to the diagnosed STI/RTI syndrome of the index case.
- Provide health education to contacts.

Identification of the Number of Contacts

As mentioned above, contacts are all sexual partners of the client who could be the source of the infection for the client's current STI/RTI episode or who could have become infected by the client. It is, therefore, important to consider the timeframe during which these events could have happened. Approximate incubation period of an STI/RTI vary and depend on several factors, such as the strain of the causative agent and immunity of the infected individual. It is, therefore, advised that the index client's sexual partner(s) be regarded as a contact(s) for referral.

Identifying the number of contacts critically depends on the information provided by the client. The STI/RTI service provider should be sensitive about the questions asked and should assure confidentiality. It is not important for the service provider to know the names of the contacts. The service provider should also resist any attempt to speculate about which contact could be the potential source of infection.

Types of contact referral and notification

The client referral system should be used because of its low cost and practical nature. It is also the method recommended by WHO.

- The STI/RTI service provider gives the client (index case) a referral card for each contact named. Each referral card contains the register number of the index case.
- The client informs each contact by sharing the referral card and explaining the importance of attending medical assessment and treatment.
- The contact presents the referral card to the service provider when visiting the clinic for treatment.

Observe the following principles of contact notification and referral: confidentiality, no coercion in approach, and non-judgmental attitude.

A successful contact referral system will also depend on the following:

- Good explanations given to the index case by the STI/RTI service provider on the importance of contact treatment
- Good collaboration on the part of the index case
- Good explanation given by the index case to the contacts about the importance of medical assessments
- User-friendly clinic hours

Contact Management

The STI/RTI service provider should show appreciation to the client for responding positively to the request to attend the clinic and should explain the reason for the invitation. History taking, clinical examination, and diagnosis follow the same procedure as for any other client. Contact should be managed as follows:

- Contact with STI/RTI syndrome—treat the contact according to the STI/RTI syndrome of the client plus other diagnosed STI/RTI syndrome.
- Contact without signs or symptoms—treat according to equivalent syndrome of client.

Before discharge, health education is provided. Contacts with STI/RTI syndromes are regarded as contact index cases. They should be asked to refer their own contacts.

Risk and Vulnerability

Few people are able to simply 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 behaviours that influence STI/RTI 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—things that 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 STI/RTI management (see Table 3.2).

Table 3.2. How individual risk may influence reproductive health decisions and STI/RTI prevention, detection, and management

	High risk	Low risk
Contraceptive choice (Chapter 6)	Women with multiple sexual partners should use condoms, alone or in addition to another contraceptive method.	Dual protection may not be needed for couples who are in a stable, mutually monogamous relationship.
STI/RTI detection (Chapter 2)	Priority for STI/RTI screening (where available) should be for people with multiple partners or other risks. Women over 35 years old should be given priority for cervical cancer screening because they are at higher risk.	Apart from syphilis testing in pregnancy, asymptomatic patients without obvious risks do not need to be screened for STI/RTI.
STI/RTI management (Chapter 8)	An adolescent with vaginal discharge, and whose boyfriend has a discharge, should receive additional treatment for cervical infection, 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 of STI and should be treated for common vaginal infections (see Flow Chart 2 in Chapter 8).
Counselling (Chapter 3)	Counselling should address specific risk behaviours and factors.	Women with no apparent risk do not require lengthy counselling (and may not welcome it).
Partner treatment (Chapter 8)	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.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Unfortunately, there is no perfect way to evaluate a person's risk. Table 3.3 may help providers manage clients through clinical skills, knowledge of the community, and the client's own risk assessment. By addressing real issues, clients may be able to find solutions that will work for them.

Table 3.3. Factors to consider in assessing risk

Prevalence of STI in the community or social network	**STI prevalence is often higher among the following groups of people:** • Sex workers, clients of sex workers, and partners of either • People who engage in risky sexual behaviour for money, gifts, or favours but may not consider themselves sex workers or at risk • Migrant workers and other people in occupations involving frequent travel and separation from family • Adolescents and young adults
Information collected from patient	**Increased exposure may be suggested by a patient who has the following:** • Multiple sexual partners • A recent new sexual partner • 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 they 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 they think that they may be at risk of an STI. Asking about risk may open the door to more questions and discussion, or a client may simply acknowledge being at risk even when they decline to discuss the details.

Note: sexually transmitted infection (STI)

Supporting Behaviour Change

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

Health care providers can use their counselling skills to support women and men adopt safer sex practices that meets their needs. Box 3.8 gives some pointers that may be useful in helping clients negotiate safer sex.

Box 3.8. Negotiation for safer sex

Negotiating for safer sex is similar to negotiating for other things that are needed. Thinking about how to negotiate successfully in other areas will help. A way to begin is for one person to decide what they want and what they are 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
Having 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 having safer sex with a partner may make it easier.

Condom negotiation is one example. Box 3.9 suggests some responses to common objections that partners may raise when asked to use condoms.

Box 3.9. Help women with condom negotiation skills

If he says:	Try saying:

Box 3.9. Help women with condom negotiation skills	
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. I am not ready to be pregnant.
Condoms are for prostitutes.	Condoms are for everyone who wants to protect themselves.
Why do you want to use one?	NO CONDOM, NO SEX!

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. The next section looks at ways of getting these messages across in the community and within reproductive health clinic settings.

Section 2. Improving Services for Prevention and Treatment of STIs/RTIs

Section 2 provides advice on addressing STIs/RTIs through the reproductive health clinic. It also looks at ways of reaching men, adolescents, and others who do not typically use reproductive health services.

Chapter 4. Preventing STIs/RTIs and Their Complications

Overview

This chapter recognizes prevention as an important strategy in STI/RTI management. It gives guidance on the best approaches in STI/RTI prevention. Condom use, promotion, negotiation, and demonstration are also discussed.

As described in Chapter 1, STIs/RTIs spread in several ways:

- Sexual transmission—Many infections of the reproductive tract are sexually transmitted; the higher the rate of transmission in the community, the more the complications.
- STIs/RTIs related to medical procedures—Infection with, and complications of, an STI/RTI may develop following medical procedures or following gynaecological interventions or following an examination or intervention during pregnancy, childbirth, the postpartum period, and family planning procedures (e.g., IUCD insertion).
- Endogenous infections—Some RTIs result from overgrowth of organisms that are normally present in the vagina. These RTIs may also lead to complications.

For maximum impact on prevention and control of STIs/RTIs and their complications, each of the above areas needs to be addressed (see Box 4.1).

Box 4.1. Key points

- A comprehensive approach to managing STIs/RTIs includes prevention of sexually transmitted, iatrogenic, and endogenous infections.
- STI prevention means reducing exposure—by using condoms and reducing numbers of sexual partners. Condoms must be used correctly and consistently to prevent STIs.
- Adolescents should receive support, which aligns with national policies and laws, to make proper decisions about their sexual and reproductive health rights.. The risk of iatrogenic infection can be reduced by adhering to standard infection control procedures in health services.
- Where STIs are common, the risk of iatrogenic complications following a transcervical procedure may be reduced by giving a full course of antibiotic treatment for cervical infection, if such an infection cannot be reliably ruled out.
- Conduct retrospective surveillance to monitor prevalence of STIs; if it is high (i.e., at hotspots), offer periodic presumptive treatment to sex workers.
- Female sex workers in hotspot areas should be screened for STIs. Those found to have STIs should be treated, and those with no STIs should be offered periodic presumptive treatment on a quarterly basis with other preventive services.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

How to Prevent Transmission of STIs/RTIs

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

- Provision of comprehensive sexuality education, including life skills, for young people
- Delaying early sexual activity for adolescents
- Decreasing the number of sexual partners
- Correctly and consistently using condoms

STI/RTI prevention also involves the following:

- Prompt recognition of and effective treatment for STIs when they do occur. This not only reduces the probability of complications for the individual but also prevents new STI and HIV infections in the community. The sooner an STI is cured, the lesser the chance it will be transmitted to other people.
- Promotion of safer sexual behaviour that prevents exposure to STIs—i.e., consistent and correct condom use, limit sexual partner to one monogamous relationship, and replace high-risk penetrative sex with low-risk nonpenetrative sex
- Promotion of health-seeking behaviours. This may include early recognition of signs and symptoms of STIs, avoiding self-medication, seeking health care from competent service providers as soon as an STI is suspected, and informing partners when an STI is diagnosed.
- Increasing access to STI services by increasing the number of STI service delivery points
- Targeting key populations groups, such as sex workers

Provision of Comprehensive Sexuality Education, Including life Skills for Young People

Adolescents can avoid STIs and pregnancy, when they are particularly vulnerable to both, by receiving proper comprehensive sexuality education to help them delay sexual activity until they are older. Delay of sexual activities and provision of comprehensive sexuality, including life skills, are perhaps most important for young girls who may face severe social and health consequences if they become pregnant or develop an STI. Bodies of adolescent girls are particularly vulnerable to cervical infections that can lead to PID, infertility, and ectopic pregnancy. Adolescents should know that they can get support and confidential information on pregnancy and STI prevention methods, including condom use, when they decide to become sexually active.

Comprehensive sexuality education and adolescent reproductive health should be addressed in schools. This education will enable youths to understand their bodies and learn how to protect themselves from getting STIs and unwanted pregnancies by delaying their sexual debut.

Decreasing the Number of Sexual Partners

Limiting the number of sexual partners can help reduce exposure to STIs. For example, people in mutually monogamous relationships (where both partners have no other sex partners) have no risk of STIs if both are free of infection. Sexual abstinence is another way to avoid the risk of STIs (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 STIs when they follow one another in rapid succession ("serial monogamy"). Couples who are separated from each other for long periods of time may also require other strategies. Men and women whose jobs involve travel, such as migrant workers and mobile populations, are more likely to have multiple partners and return home with STIs. Whatever the circumstances, both women and men with multiple partners, or whose partners have multiple partners, need reliable protection from STIs.

Condom Use, Promotion, Negotiation, and Demonstration

Condom is a sheath worn over the genitalia to prevent the of exchange of sexual fluids. Condoms are made of latex, polyurethane, or animal intestine. They were used for the first time in ancient Egypt for decoration and later used by Italians for pregnancy protection. The promotion of proper and consistent use of condoms is a cornerstone in STI/HIV prevention and control. The condom strategy requires the following:

- Condoms have to be easily accessible and available in sufficient numbers.
- Myths and misconceptions must be addressed adequately through promotion and advocacy efforts.
- Negotiating skills are strengthened so that each individual, whether female or male or young or old, has the capacity, rights, and opportunity to use a condom for self-protection or refuse sex.

Condoms must be consistently and correctly used to provide maximum protection. **Consistent use means using a condom from the start of each act of sexual intercourse to its finish.**

Male Condoms

Many studies have proven that latex condoms are highly effective in protecting against STIs and HIV infection. The most compelling evidence originates from studies of couples in which one is infected with HIV and the other is not—i.e., a discordant couple. Besides sexual abstinence or the restriction to nonpenetrative sex techniques, the use of latex condoms during vaginal, anal, or oral sexual intercourse is the most reliable and widely available method for STI and HIV prevention. In addition, condom use has minimal negative side effects.

To correctly use a condom, the user must abide by the following advice (also see Figure 4.1):

- Use a new condom for each act of intercourse. Do not wash or attempt to reuse a condom.
- Check for expiry date and potency of the condom before its use.
- Tear (open) the condom package carefully using the instructions on the package.
- Do not use your teeth or other sharp objects to open the package as it may tear the condom.
- Handle the condom carefully to avoid damaging it with fingernails, teeth, or other objects.
- Put on the condom when the penis is erect and before any sexual contact (vaginal, anal, or oral) with the partner.
- Hold the tip of the condom and unroll it on to the erect penis, leaving space at the tip of the condom without trapping air in its tip.
- Ensure adequate lubrication during intercourse.
- Withdraw from the partner after ejaculation, while the penis is still erect, by holding the condom firmly against the base of the penis to prevent slippage.
- Dispose of the used condom properly.

Figure 4.1. Instructions for using a male condom

Female Condoms

Female condoms (see Figure 4.2) are becoming more widely available and have this advantage for women: their use is more within their control than the use of male condoms. Female condoms are currently on the market under various names—e.g., Lady Pepeta and Care. They are made of polyurethane plastic, which is sturdier than latex. Unlike latex male condoms, which are weakened by oil-based lubricants, the female condom may be used with any type of lubricant without affecting its strength. It is prelubricated, but users may add more lubricant if needed. Female condoms offer a similar level of protection as male condoms. 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 limitations. The device protrudes from the vagina and thus requires the acceptance of the male partner. The female condom 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 underway. Vaginal microbicides (chemicals that kill organisms that cause RTIs) are being tested for their safety and effectiveness in protecting against STI and HIV; other barrier methods, such as the diaphragm, are also being tested.

For proper storage of both male and female condoms, observe the following:

- Condoms should be protected from direct sunlight, moisture, and excessive heat.

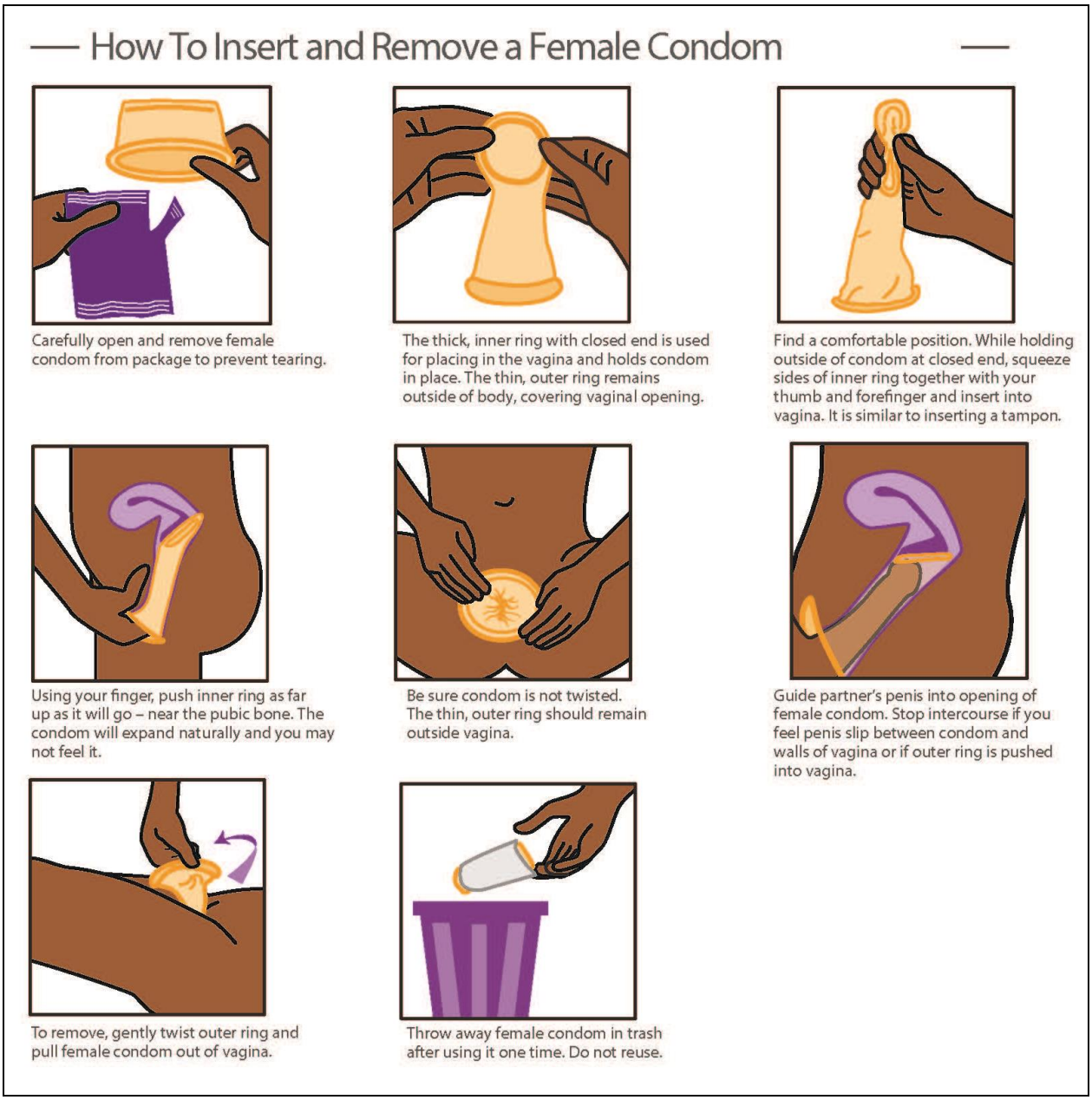
- Do not keep your condom in a tight pocket, in your wallet, or in your car for a long period of time, as it might be too hot—thereby making the condom ineffective.
- Do not use condoms that are dry, dirty, brittle, sticky, melted, or otherwise damaged.
- Condoms should be used before the expiry date or within 5 years of their manufacture date.

For proper condom disposal, do one of the following:

- Throw it in a pit latrine (water-filled toilets are easily clogged by condoms).
- Burn it in a fire.
- Bury it in the ground.

Used condoms should not be left around where children or animals can reach them.

Figure 4.2. Instructions for using a female condom



Condom Promotion and Negotiation Techniques

Promotion of condoms should be based on facts. The development of a rational self-risk assessment is an important first step. It should include the following:

- Awareness of the high STI/HIV prevalence in the local community
- Understanding that penetrative sex is the major transmission route of an STI
- Understanding that unprotected penetrative sexual intercourse is the key risk behaviour

Addressing Misconceptions and Myths About Condoms

Condom promotion should address common misconceptions and myths about the condom itself (see Table 4.1).

Table 4.1. Examples of common misconceptions about condoms and how to counteract them

Misconceptions	Facts
Condoms break a lot and are not reliable.	They are electronically retested for safety by the Tanzania Bureau of Standards before being sold for use by the general public. When properly and consistently used, condoms can prevent HIV and other STIs.
Condoms reduce sexual pleasure.	They improve performance in males who have premature ejaculation.
Most condoms are made too small for most men.	Most condoms can be stretched around a person's head.
Condoms contain HIV.	Condoms do not contain the HIV virus. In contrast, condoms prevent the spread of HIV and other STIs if used properly. HIV cannot survive in nonliving things, including condoms.
Condoms fall off and get lost in the woman's body.	If the penis is withdrawn while still erect and while holding the base of the condom, the condom will not slip off. If for some reason it does, it can be removed using one's finger.
Condoms irritate the genitalia.	Clients who feel irritation in their genitalia should seek advice from a health care provider.

Note: sexually transmitted infections (STIs)

Further, condom promotion should be sensitive toward social, cultural, and religious norms and values. Condom promotion should not be offending: the STI service atmosphere should not be an obstacle to the client using the most reliable protective tool in a sexual encounter. The protection of human life is one of the highest and most accepted values in every society, culture, or religion. Condoms are a powerful tool to protect the individual's life—and the lives of that individual's partner—against the deadly HIV and other STIs.

Finally, condom promotion has to address the reality of the different roles women and men have in relationships. When it is the man who finally has to put on the condom, the man dominates, most of the time, in decisions on sexual issues. This situation puts women in a particularly vulnerable position. The female condom has been invented to overcome this situation.

With male clients, the discussion should, therefore, focus on the following:

- His own risk to become infected during unprotected penetrative sex
- His responsibility for the safety of his partner
- His responsibility for his long-term partner, spouse, and family as applicable
- His willingness to accept a decision from his partner not to engage in unprotected penetrative sex

With female clients, STI/RTI service providers should strengthen their negotiation skills, which include the following:

- Choose the best moment to discuss condom use. Both partners should feel comfortable; it is usually better to discuss before sexual activity begins and things get passionate.
- Keep an open mind, being prepared to listen to partner's concerns.
- Prepare rational responses to all arguments that the partner may use against her (this will increase self-confidence).
- Find strength in numbers. Millions of condoms are used every year in Tanzania. Let the partner(s) know that the man of today cares about himself and others—and that he is doing it with condoms now.
- Be assertive rather than aggressive. She should try to persuade rather than intimidate.
- Avoid sexual activities when she or her partner is drunk.
- Be confident and firm. Establish her personal limits in advance—what she will and will not do—so that her health and well-being are always foremost and cannot be compromised.
- Have enough condoms readily available.
- Identify friends or family members with whom she can openly share her experiences.

In addition to providing health education during sessions with individual clients, the STI service provider can promote condoms in the following ways:

- Have informal discussions with community members about STIs and HIV prevention.
- Be a resource person at locally organized seminars or special events.
- Collaborate and support local peer health educators (PHEs) or other key actors involved in condom distribution or sale.
- Encourage owners to display educational materials in drug stores, bars, hotels, etc.
- Encourage local artists to make art, theatre, music, etc., to sensitize the community.
- Approach business people and ask them to stock and distribute condoms.

Every service provider ensures that condoms are available at places where STI services are provided. The physical demonstration of a condom, using a model, is an essential part of health education. Clients should be provided with a sufficient number of condoms.

How to Prevent Iatrogenic RTIs

As discussed in Chapter 1, many STI/RTI-related complications occur when sexually transmitted, endogenous, or other organisms reach the upper genital tract. The most effective way to prevent STI/RTI-related complications, such as infertility and ectopic pregnancy, is to prevent upper genital tract infections from occurring (see Table 4.2). This involves the following:

- STI prevention and management (Chapters 4 and 8)
- Good ANC and safe delivery practices (Chapters 7 and 9)
- Safe performance of transcervical procedures (Chapter 4)
- Good postabortion care and management of complications (Chapter 9)

Interventions that reduce the spread of STIs/RTIs or prevent an existing infection from reaching the uterus are key for preventing complications. During most days of a menstrual cycle, cervical mucous 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 transcervical procedures. Nonsexually transmitted organisms from the vagina or from outside the body may also cause PID if they are pushed into the uterus.

Table 4.2. Preventing upper genital tract infection, infertility, and ectopic pregnancy

Intervention	Methods to prevent infection and complication
STI prevention	• Counsel on delaying sexual activity • Counsel on reducing numbers of sexual partners • Counsel on using condoms correctly and consistently • Provide presumptive preventive treatment
STI management	• Detect and treat STIs early
Safe delivery practices	• Use aseptic techniques • Manage postabortion infection effectively
Safe transcervical procedures	• Use aseptic technique • Rule out infection before procedure
Postabortion care	• Use aseptic technique • Manage postpartum infection effectively

Note: sexually transmitted infection (STI)

Safe Performance of Transcervical Procedures

Infection can reach the uterus through medical procedures that pass instruments through the cervix (transcervical procedures). Manual vacuum aspiration, dilatation and curettage, insertion of an IUCD, and endometrial biopsy are examples of such procedures. The risk of infection following a transcervical 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, there is minimal risk of introducing infection to the upper genital tract.

However, women who harbour pathogens such as *N. gonorrhoea* or *C. trachomatis* in their cervix are at increased risk of upper genital tract infection after a transcervical procedure compared with uninfected women. Upper genital tract infection following transcervical procedures can be reduced by doing the following:

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

Reducing Risk of Infection in Clinical Practice

Appropriate infection prevention procedures and aseptic techniques (see Box 4.2) provide protection against transmission of infection.

Box 4.2. 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 perform high-level disinfection of 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 the "no-touch" technique. This means avoid contaminating the uterine sound or other instruments by inadvertently touching the vaginal wall or speculum blades.

Notes: Refer to Annex 2 for details of disinfections and standard precautions.

Treatment of cervical infections

While infection prevention procedures can reduce the chance of introducing infection from the outside, they do not prevent existing gonorrhoea or chlamydial infection from being carried into the uterus during transcervical procedures. When cervical infection is present, even sterile instruments passed through the endocervix can become contaminated and carry bacteria into the upper genital tract.

A safe approach to avoid spreading infection to the upper genital tract is to rule out or treat any cervical infection that may be present—before performing a transcervical procedure (see Chapter 2 and Annex 1). Bear in mind that cervical infection can be asymptomatic in some women. In resource-poor settings where the prevalence of cervical infection is high and the provider is unable to rule out infection, a full curative dose (presumptive treatment) of antibiotics effective against gonorrhoea and chlamydia may be considered (see Chapter 8).

After a transcervical procedure, all women should be counselled to contact a health care provider immediately if, in the next few weeks, they develop symptoms suggestive of infection—such as fever, low abdominal pain, or abnormal vaginal discharge.

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 of the following:

- Pregnant women and women using oral contraceptives may frequently get yeast infections because of changes in vaginal acidity (pH).
- Certain medical conditions—e.g., diabetes—may increase the risk of yeast infections, and this may be the case in women with a history of long-term use of steroids.

Less commonly, recurrent yeast infections may signal 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 infections:

- Douching can disrupt the normal flora of the vagina and cause an 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.

Periodic Presumptive Treatment for STI

The recommended regimen and dosage is cefixime 400mg and azithromycin 1g, single dose, every 3 months

Chapter 5. Promoting the Prevention of STIs/RTIs and Use of Services

Overview

As noted in Chapter1, communities with good access to effective prevention and treatment services have lower rates of STIs/RTIs and related complications than communities where services are poor, disrupted, or not used by people at risk of infection. This chapter looks at what can be done to reach more people in need of STI/RTI services and convince them to use existing reproductive health services. This involves the following:

- Reducing barriers in utilizing STI/RTI services
- Raising awareness about STIs/RTIs and promoting use of services
- Reaching groups that do not typically use reproductive health services

Box 5.1. Key points

- A public health approach in preventing and controlling STIs/RTIs includes reducing barriers to services, raising awareness in the community, promoting services, and reaching out to people who typically do not use reproductive health services.
- Services should be accessible and acceptable so that people do not hesitate to use them if they have concerns about STIs/RTIs.
- The community should be made aware of STIs/RTIs and related complications, and early use of services should be promoted.
- The role of untreated STIs/RTIs in infertility, pregnancy complications, and HIV infection should be emphasized to encourage use of prevention and care services.
- Men should be encouraged to participate in STI/RTI prevention. Special services or referrals may need to be developed to address STIs/RTIs in men.
- Services need to reach young people who are often at high risk of STIs/RTIs and related complications but who are often reluctant to attend clinics.
- Finding ways to reach vulnerable groups at highest risk of infection, such as sex workers and their clients, is key for reducing the prevalence of STIs.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Reducing Barriers in Utilizing STI/RTI Services

The first step in increasing the use of services is to remove barriers that keep people away. Talking with clients and community members can often identify such barriers. People may avoid reproductive health care services because of accessibility barriers, such as the following:

- **Laws, policies, culture, religious beliefs, and regulations:** Do they place restrictions on young people or women using services, or do they require a parent's or husband's permission?
- **Location:** Can people easily reach the clinic? Mobile or satellite clinics can extend the reach of clinical services.
- **Hours:** Are the clinic's operating hours convenient for working people, students, and others? Special clinic sessions in the evenings or on the weekends may make it possible for some people to attend when they otherwise could not.
- **Cost:** Can people afford the clinic fees and additional costs for laboratory tests and medicines? Costs deter people and, in the end, the cost to the community will be high if high rates of STIs/RTIs and related complications remain.

In addition, there may be barriers to the acceptability of services, including the following:

- **Stigma:** People are often afraid to use services because of critical or judgemental attitudes of staff. Nonrespectful treatment by providers deters many adolescents from using health care services. Reproductive health services are often designed or perceived to be exclusively for women or adults and, therefore, discourage men or adolescents from using them.
- **Lack of privacy:** Young people particularly worry that information about their health or sexual behaviour will not be treated as confidential. Steps can be taken to ensure privacy during clinic visits and to keep information confidential (see Chapter 3).
- **Poorly managed health care facility:** Do people have confidence in the clinic and its staff and feel that the quality of the services they receive is good? Improving services builds such confidence.
- **Inadequate laboratory reagents, medical supplies, and STI/RTI drugs:** Can people get the tests and treatment they need onsite? If not, they may decide to go directly to a pharmacy for treatment in order to save time and money.
- **Incompetent and unfriendly health care providers:** Do people feel welcomed by clinic staff? Do they have confidence in health care providers?

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

Raising Awareness and Promoting Services

Even when accessibility and acceptability barriers to clinic attendance have been removed, some people may not use the facilities because they are not aware that anything is wrong with their health. Therefore, prevention efforts, as well as promotion of clinic services for STI/RTI detection and treatment, must 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 by doing the following:

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

Messages should emphasize the benefits of prevention and of early treatment over later treatment (see Box 5.2). Health care providers can contribute to a public health approach to STI/RTI control and help reduce the burden of disease in the community by reaching all groups of people and convincing them of the value and importance of early use of STI/RTI services.

Box 5.2. Messages to promote use of services for prevention and early treatment of STIs/RTIs	
People in the community should be aware of STIs/RTIs and know how to prevent them and seek early treatment.	**Prevention is better than cure**—The most effective strategy is to prevent an infection by reducing exposure to it (delaying initiation of sex, reducing number of partners, and/or using condoms correctly and consistently).
	Early treatment is better than late treatment—When an STI/RTI does occur, early identification and treatment can eliminate infection before it causes complications or spreads to other people.
	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 yet more expensive than those applied earlier.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Reaching Groups Who Do Not Typically Use Reproductive Health Services

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 controlling STIs in the community as it is for managing individual patients. If key sectors of the population are ignored, such as men or adolescents, community control of STIs will be very difficult to achieve. Other groups—such as sex workers and their clients, migrants, and mobile workers—may be at high risk of STIs yet may not know about health services or feel comfortable using them. Outreach to these groups strengthens the community control of STIs.

Factors that Increase Risky Sexual Behaviour

Sexual behaviour is influenced by a variety of factors. Some factors and circumstances, which tend to increase the risk of acquiring or transmitting STIs, including HIV, include the following:

Occupation—Labour such as commercial sex work, long distance truck driving, uniformed (army) and migrant labour, or other work with a high level of mobility, including camping, is a factor.

War and political instability—These conditions create insecurity and mobility, which adversely influence sexual behaviour (e.g., refugees).

Biological—STI is commonly acquired through vaginal intercourse. It is easier for a woman to be infected by a man than for a man to be infected by a woman in this way. This is because women have a larger surface area exposed during penetrative sex.

Age—Young people are prone to acquiring STIs, including HIV, during sexual intercourse due to their genital immaturity. They are especially at high risk when they engage with older people who belong to a cohort with high prevalence of STIs and HIV.

Economic situation—Poverty forces individuals to exchange sex with various kinds of materials, money, and favour. It also weakens negotiating capacities and disrupts families. Women, in particular, are more drawn into this circle without having other options to improve their income.

Alcohol and other abusive drugs—The capacity for rational decision-making is reduced, and the tolerance for risky behaviour increases.

Social factors—Lack of sex education in schools, from family members, or at other social institutions increases the vulnerability of individuals exposed to other influencing factors. Women are particularly vulnerable due to their disadvantaged socioeconomic status and usually limited rights, including sexual rights in relationships with men. For men, sexual behaviour is influenced by their socialization and role expectations or failure in fulfilling them (see Box 5.3).

Vulnerable groups—Vulnerable groups at risk of STIs include adolescents, youths, commercial sex workers and their clients, rape survivors, prisoners, refugees, and camping and high-transmission area residents and visitors. Other vulnerable groups that STI services address are pregnant women and children. Infected pregnant women with STIs, including HIV, are likely to transmit the infection to their newborns.

Box 5.3. Reaching men

Men may be more receptive to STI prevention messages if they understand that these infections threaten their health and fertility and may endanger the lives of their wives, girlfriends, and children.	**Objectives for reproductive health programmes or workplace interventions for men include the following:** • Encourage men to regularly seek medical attention to manage their STIs—discourage self-treatment (see Box 5.4). • Encourage men 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 create awareness among men about STI prevention, especially use of condoms in commercial and casual sex encounters. This reduces the chance of infecting others.

Note: sexually transmitted infection (STI)

Box 5.4. Self-treatment

Many people find ways to treat themselves for an STI without going to a doctor or clinic. Self-treatment is especially common among men and young people, who may buy antibiotics directly from a pharmacy without a prescription. Also, sex workers and their clients often take antibiotics or other treatments in the belief that these will prevent an infection.

Self-treatment should be discouraged for several reasons. First, ineffective drugs are often sold by people with minimal training (such as pharmacy sales assistants). Second, 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, health care providers' attitude, or perceived lack of privacy. Improving and promoting clinic services can restore confidence and reduce the amount of self-treatment.

Note: sexually transmitted infection (STI)

Adolescents and Youths

An adolescent is a person aged 10–19 years and is in the transitional period between childhood and adulthood. A youth is an individual aged 15–24 years. Young people are those aged 10–24 years. Adolescence is a time of remarkable physical, emotional, psychological, cognitive, and social growth.

Rationale for Adolescent Sexual and Reproductive Health Programme

- It reduces HIV infection among youths aged less than 24 years because more than half of the new HIV infections occur among this age group.
- It reduces prevalence of STIs among young people. Highest rates of STIs are reported among young people, especially females, aged 15–19 years old.
- It reduces risks and problems related to adolescent pregnancies, abortions, and early childbearing.
- It empowers young people to avoid gender-based violence that includes sexual abuse and exploitation.
- It aims at increasing the age of a young person's sexual debut.

Reasons that influence adolescents and youths to become at risk of contracting STIs are as follows:

- Young people have inadequate knowledge about sexual and reproductive health.
- There is a limited scope and coverage of sexual and reproductive health/STI information, education, and services that cater to the comprehensive needs of young people—according to their stage of development and circumstance in different setting. In addition, sexual and reproductive health/STI services do not reach out to young men.
- Young people lack life skills (self-esteem, assertiveness) to make appropriate health choices.
- There is of a masculine culture that encourages sexual activity at a young age, multiple partners, and not using condoms.
- Some cultural practices discourage women from acquiring information about sexuality.
- Education campaigns and clinics for STIs have primarily targeted older men and sex workers.
- Social stigma discourages women from seeking treatment or information about STIs.
- There are inadequate recreation services, such as sports, to engage young people.
- Young people tend to have more partners and shorter relationships, so there is more opportunity for STIs to spread.
- Young people 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 or in exchange for goods such as school supplies, food, or clothes).
- Young people 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.
- Young people may feel uncomfortable using family planning or other reproductive health services for fear of critical and judgemental responses from staff.
- They may not be aware of places to go to receive private and confidential services.
- Majority of young people are unable to afford health services.

In some societies, adolescent girls are expected to marry at an early age and have little or no sexual experience before marriage. However, they may still be at risk of infection because their husbands may have had previous partners or may have more than one partner. Young girls who have older sexual partners are at much greater risk of acquiring some infections (especially incurable infections such as HIV, herpes simplex virus 2 [HSV-2], and HPV) and are more likely to be in relationships 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.

Reproductive health clinics play a role in providing quality preventive and curative services to young people and should attempt to make services acceptable and accessible to youth. Such youth-friendly services are private, respectful, and confidential; they are based on young people's needs and concerns and are provided by technically competent staff in physically acceptable and accessible places. These services need to be acceptable to the local community, and young people should be involved in planning and monitoring the services.

Box 5.5 includes some things to consider when improving young people's access to STI/RTI prevention and treatment, as well as and some important messages that should be passed on to them. 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 risks of infection, making them unable to negotiate safer sexual activities that minimize their risk.

Making services acceptable and accessible to adolescents means that the services provide prevention and care for a group in whom the likelihood of risk-taking is high. These services have great potential to avert infections and preserve a pleasurable, healthy sexual life. 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 or easy access to services.

In some countries, the legal age of consent for medical services is different from the age of consent for sex. Health care workers need to clarify the legal status in relation to managing 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. However, in a small number of countries, providing any care to adolescents or unmarried females is illegal. Community groups should advocate for chang in such policies. In Tanzania, all persons (women, men, and adolescents)—irrespective of their parity and marital status—have the right to access reproductive health information and services, including family planning.

Adolescents and youths are not a homogenous group; they have different vulnerabilities, and they can be reached in various settings (school, out of school, etc.).

Box 5.5. Reaching young people

Box 5.5. Reaching young people	
In school Integrate sexual and reproductive health, including HIV, in selected curriculum. **Out of school** Health facilities have national standards that provide directives to all implementers on how to provide youth-friendly sexual and reproductive health and STI services through various service delivery points (public, private, nongovernmental organization, faith-based organization, community) that will ensure that services provided are convenient to youth and guarantee privacy and confidentiality. The range of friendly sexual and reproductive health and STI services include the following: family planning methods as well as emergency contraception and condom promotion; information, education, and advice on sexual and reproductive health and STIs; ANC, labour, and delivery; postnatal care; postabortion care; nutrition; and referral. All these services should be encouraged to build capacity of young people so that they make better, informed choices as they grow.	**Safer behaviours that should be encouraged for young people include:** • Delaying onset of sexual activity • Abstaining from sexual practices until marriage • Learning how to consistently and correctly use condoms for dual protection (prevent unplanned pregnancies and STIs) • Limiting the number of sexual partners • Avoiding high-risk sexual practices (especially unprotected vaginal or anal sex) with any partner • Recognizing symptoms of STIs and seeking early treatment

Notes: antenatal care (ANC), sexually transmitted infection (STI)

High-Transmission Areas

While it is clear that risky sexual behaviour is a national concern for all sexually active individuals, the special situation of high-transmission areas (HTAs) is that there exists a concentration of factors that facilitates the transmission of STI, including HIV. This puts individuals, particularly women who are living and/or working in HTAs, at the highest risk.

Control of STIs, including HIV, at HTAs involves targeted interventions that have to address the particular situation of individuals living and working in HTAs. This does not mean that people from surrounding areas should be excluded from such interventions. Links between HTAs and surrounding communities are so close that a clear-cut border between the two seems theoretical. Interventions and related services to control STIs, including HIV, at HTAs should be open to everybody. This is also important to avoid those being targeted from experiencing discrimination and stigmatization. Following these ground rules, the special attention given to people at highest risk at HTAs aims to control STIs, including HIV, not only among this group but also among members of surrounding communities.

Groups Vulnerable to STIs/RTIs

Some people are more likely to acquire an STI because they frequently change sexual partners. The greater the number of sexual partners a person has, the greater the chance the person has of becoming infected with an STI—and the greater the chance the person will pass the infection to someone else. Interventions that successfully reach such people at high risk of STIs can have the greatest impact on infection transmission at the community level (see Box 5.6). Thus, reaching these groups with high-quality preventive and curative services is essential for the community control of STIs (see Table 5.1). Effective outreach, peer education, resource centres, and clinical services for sex workers have been

developed using mobile clinics or by reserving special times at regular clinics. Furthermore, studies have shown the effectiveness of periodic presumptive treatment given to sex workers—leading to a reduction in STI prevalence among these individuals and bridge populations in intervention areas. Such services have contributed to reducing community prevalence of STIs (see Box 5.6).

Box 5.6. Reaching sex workers and their clients	
Explanation	**Activity**
Barriers to controlling STIs among sex workers include poor access to effective prevention and care and difficult social conditions that reduce a sex worker's ability to insist on condom use. Services should be convenient, private, and confidential. Outreach should be organized to reach sex workers who do not have easy access to services. Peer education is key in supporting sex workers to demand safer conditions. Health workers should support legal and social efforts to reduce harassment and facilitate provision of preventive and curative services as a public health benefit.	**STI/RTI services for sex workers should include the following:** • Supply of condoms and promotion of consistent and correct use of condoms • STI screening • STI treatment for those with symptoms or exposure • Periodic presumptive treatment for asymptomatic STIs • Use of condoms as dual protection for prevention of unplanned pregnancies and STIs/RTIs

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Table 5.1. Comprehensive STI control services for key and vulnerable populations

Key and vulnerable population	Comprehensive STI services should include:
Sex workers	• Supply of condoms and promotion of consistent and correct use • HIV testing and counselling • STI screening • STI treatment for those with symptoms or exposure • Periodic presumptive treatment for asymptomatic STIs • Targeted information, education, and communication • Sexual and reproductive health, including preventing mother-to-child transmission of HIV • Post-exposure prophylaxis in cases of rape and sexual assault
People who use drugs (PWUD)/people who inject drugs (PWID)	• Sterile needles/syringes and associated injected equipment—alcohol swabs, sterile water, tourniquet, etc. • Medication-assisted therapy • Condoms and water-based and promotion of consistent and correct use • HIV testing and counselling • Presumptive STI screening • Targeted information, education, and communication • Sexual and reproductive health • Basic health care: TB, viral hepatitis, injection site care
Men who have sex with men (and people who identify as transgender)	• Condoms and promotion of consistent and correct use • HIV testing and counselling and linkage to care • Presumptive STI screening and treatment • Targeted information, education, and communication (through peers, mobile phones, internet, etc.) • Male sexual health • Post-exposure prophylaxis in cases of rape and sexual assault

Key and vulnerable population	Comprehensive STI services should include:
Prisoners and prison staff	• Bleach/decontamination for safer injection, tattooing • Personal hygiene kits to prevent disease transmission • Targeted information, education, and communication • Presumptive STI screening and treatment • Voluntary HIV testing and counselling • Basic prison health care: prevention and management of TB, viral hepatitis prevention interventions, hepatitis B vaccination, etc. • Post-exposure prophylaxis in the event of rape/sexual assault

Note: sexually transmitted infection (STI)

Other Groups

STIs are often more common among certain groups, such as displaced and migrant populations, uniformed forces, prisoners, and street children (see Box 5.7). Efforts to reach these groups with effective preventive and curative services are likely to benefit the community at large.

Postmenopausal women may or may not use reproductive health services yet may continue to be sexually active and vulnerable to infection. In addition, women who are not at risk of pregnancy, including those who have chosen permanent contraception, may be less motivated to use condoms; it may also be more difficult for them to negotiate condom use with their partners. Counselling these women about condom use to protect against STIs should remain an important part of any health consultation. Screening for some STI/RTI-related conditions (such as cervical cancer) is also important for older women.

Children are also vulnerable to STIs, and infection may be misdiagnosed since STIs often present differently before puberty. It is also becoming clear that sexual abuse of children is more common in many societies than previously realized. Such children should be referred to services that can provide effective, sensitive care.

HIV Pre Exposure prophylaxis (PrEP) use for HIV prevention

PrEP is the use of antiretroviral drugs (ARVs) by HIV-uninfected persons to prevent acquisition of HIV. Several clinical trials have demonstrated the efficacy of PrEP in MSM, HIV serodiscordant heterosexual couples, heterosexual men and women, transgender women, and PWID. The efficacy of PrEP has varied widely across trials, and it is affected heavily by adherence to daily doses of Tenofovir/Emtricitabine (TDF–FTC).

Effectiveness of PrEP has been shown in open-label studies and demonstration projects. Across all clinical trials and demonstration projects, PrEP was provided as part of a package of HIV prevention interventions, including repeat HIV testing, promotion and provision of condoms, screening and management of sexually transmitted infections, adherence support and risk-reduction counselling.

PrEP is now adopted policy in several countries and recommended by WHO and PEPFAR as an additional prevention choice for people at substantial risk of HIV infection (where the incidence of HIV is greater than 3 per 100 person-years) as part of combination HIV prevention approaches.

However, PrEP does not prevent STIs/RTIs and hence consistent use of condoms is strongly recommended among PrEP clients.

Box 5.7. Salient messages—all key and vulnerable populations

1. Key and vulnerable populations (KVPs) with symptomatic STIs/RTIs should be properly examined—including anal and oral examinations for those practicing anal and/or oral sex—and treatment provided according to national guidance for the syndromic management approach. Examination of KVPs will not be complete without anorectal examinations.
2. Community-based interventions ensure that the benefits of interventions for managing STIs/RTIs are sustained and risks of reinfection are minimized.
3. Training is required for health care workers to manage STIs/RTIs among KVPs.
4. KVP-related health care issues should be integrated in pre-service training curricula for various cadres of service providers.
5. KVP-friendly services should be provided for the successful management of STIs/RTIs.
6. Health care providers should be respectful and sensitized to the need of patients, and they should be nonjudgemental.
7. Health care providers should provide active referral and linkages and integrate services to facilitate access to comprehensive health care for KVPs who have STIs/RTIs.
8. Health care providers should counsel KVPs with STIs/RTIs on compliance with treatment, risk-reduction activities, and condom use.
9. Health care providers should give follow-up appointments to reassess all STI/RTI syndromes.
10. Among KVPs, women with lower abdominal pain, fever, missed period, abnormal vaginal bleeding, recent delivery, miscarriage, or abortion should be referred to an inpatient department.
11. Neonates with ophthalmia neonatorum should be reexamined 3 days after starting treatment, and their parents should be treated for discharge syndrome.
12. Health care providers should offer KVPs with STI/RTIs counselling and testing for HIV infection.

Notes: key and vulnerable population (KVP), reproductive tract infection (RTI), sexually transmitted infection (STI)

Chapter 6. STI/RTI Assessment During Routine Family Planning Visits

Overview

The family planning visit is an opportunity to prevent not only unwanted pregnancies but also infections (dual protection). It is also a chance to detect some silent STIs/RTIs and offer treatment to symptomatic women who may not otherwise use health services. How can this best be done? While STI/RTI prevention should be mentioned at each family planning visit, it should be recognized that concern about STIs/RTIs is usually not the main reason for a client's visit to the clinic. Most women attend family planning clinics to obtain contraception, and health care providers should mention STI/RTI issues in a way that addresses the client's priorities. There are a few issues to keep in mind with family planning clients:

- In routine provider-client contacts in a family planning clinic, it is difficult to assess an individual's level of risk to an STI/RTI. Therefore, when meeting family planning clients, it may be useful for health care providers to keep in mind that all sexually active individuals are potentially at risk of contracting an STI/RTI.
- Consistent and correct use of condoms is highly effective for preventing both pregnancies and STIs/RTIs; it is the only single method that provides effective dual protection.
- Women with a current STI/RTI are eligible for most contraceptive methods; however, the infection should be treated appropriately, and steps should be taken to prevent future infections.

For these reasons, careful attention to the client's needs for both contraception and STI/RTI protection is essential. Some clinics use simple tools to assess a client's risk of an STI/RTI—e.g., self-administered risk-assessment questionnaires or asking simple questions (such as Does your partner have a urethral discharge? and Do you have multiple partners?). This type of assessment may be useful, but a woman may still be at risk even if she does not report any risky behaviour or risk factors. Many women are at risk of STIs/RTIs because of their partners' behaviour, not their own, and are often not aware of their risk. They may be in a steady relationship that they believe is monogamous. Providers should be sensitive to these issues in discussing risk of infection with women who may see no need for dual protection (see Box 6.1).

Box 6.1. Key points

Box 6.1. Key points

- STI/RTI prevention and concerns should be discussed with all family clients at each visit. Dual protection against pregnancy and STI/RTI should be promoted at every opportunity.
- Condoms can provide highly effective dual protection if correctly and consistently used; this is the only single method currently available.
- For intrauterine contraceptive devices (IUCD), experts distinguish between women at increased risk of contracting an STI/RTI and those at very high likelihood of being exposed to gonorrhoea or chlamydia. The former includes, for example, women living in an area where STIs are common; the latter group includes, for example, sexually active young women who report having a partner (current or previous) experiencing urethral discharge. WHO and MOHCDGEC recommend that while there is no justification to deny an IUCD to a woman simply because she lives in an area where STIs/RTIs are common, IUCD use would not be recommended for those with a high individual likelihood of exposure to gonorrhoea or chlamydia.
- Women with a high individual risk of acquiring HIV, or those already infected with HIV, should not use spermicides. They should not use diaphragms with spermicide unless other more appropriate methods are unavailable or unacceptable. Spermicides may provide possible protection against bacterial STIs, but they offer no protection against viral STIs and HIV. They may actually increase the risk of HIV infection.
- Women should be asked about symptoms of common STIs/RTIs; women with symptoms should be managed using the syndromic approach.
- Ask about symptoms in the partner. Women with symptomatic partners should be treated, and treatment for the partner should be arranged.
- Screening for STIs/RTIs should be done whenever it is justified through a blood test; a careful speculum and bimanual examination should be done to identify many silent STIs/RTIs.
- Risk assessment may help identify some women who need special attention with regard to STIs/RTIs, but a risk assessment result of negative does not mean that a woman is not at risk.

Notes: intrauterine contraceptive devices (IUCD); Ministry of Health, Community Development, Gender and Children (MOHCDGEC); reproductive tract infection (RTI); sexually transmitted infection (STI); World Health Organization (WHO)

Integrating STI/RTI Assessment into Routine Family Planning Visits

The general recommendations for integrating STI/RTI prevention with routine family planning clinic visits provided here are based on the approach to client-provider interactions developed by WHO in its *Decision-making tool for family planning clients and providers*. The opportunities for addressing STIs/RTIs during the initial (method-choice) visit and routine follow-up visits are different and treated separately.

Initial Visit

Women attending a family planning clinic for the first time are usually interested in a method of contraception. They may already have a particular method in mind—and they may have other concerns as well. These concerns may or may not include STIs/RTIs. There are often many issues that need to be discussed before a woman can choose and then receive a contraceptive method that meets her needs. STI/RTI prevention is one of the issues that should be addressed.

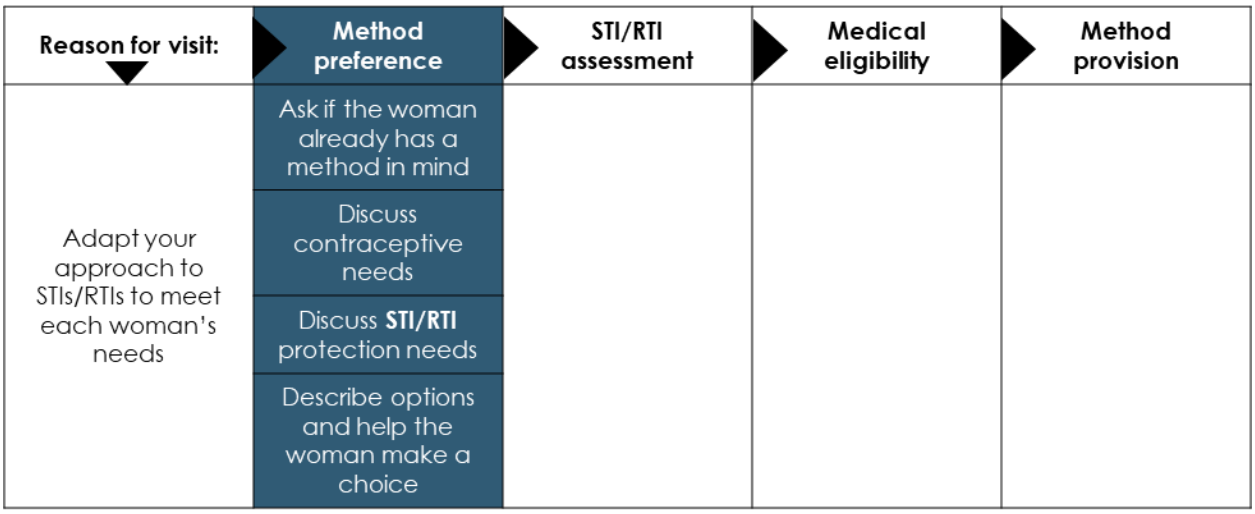
When should the subject of STI/RTI be introduced in the initial family planning visit? If it is brought up too early, the woman may feel that her family planning needs are being ignored. If brought up too late, the method of choice may need to be reconsidered. The following pages illustrate an approach to dealing with STI/RTI issues in the course of the first family planning visit. Starting with the client's reason for visit, a health care provider follows several steps with the client to reach a decision about a suitable method. These steps include determining the woman's preferred family planning method, assessing her risk of current or future STIs/RTIs, reviewing her medical eligibility for that method, and providing her chosen method (see Figure 6.1).

Figure 6.1. Steps in decision-making at initial family planning visit

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

We will now consider each of these steps with particular attention to assessment and prevention of STIs/RTIs (see Figure 6.2).

Figure 6.2. Step 1—Discuss method preference



Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Ask if the woman already has a method in mind. The woman's initial method of preference is an important factor in the woman's subsequent successful use of that method. Women who are given their preferred method use it longer and with greater satisfaction.

Discuss contraceptive needs. In discussing pregnancy prevention, providers can introduce the idea of dual protection by mentioning that some methods provide better protection than others against STIs/RTIs.

Discuss STI/RTI protection needs. Invite the client to share her concerns about such infections. Open-ended, personalized questions (e.g., please tell me what concerns you have about infections that are spread by sex) are better than closed questions (e.g., do you want information about STIs/RTIs?) that can be easily dismissed with the answer of no.

Describe options, and help the woman make a choice. Table 6.2, later in this chapter, includes information on the effectiveness of different contraceptives in preventing pregnancies and STIs/RTIs. Sexually active women and men often need dual protection to prevent both pregnancy and infection. Dual protection can be provided using a single method (condom) or using a combination of methods that includes the condom (dual methods). Box 6.2 gives some options for dual protection and some issues to discuss with clients.

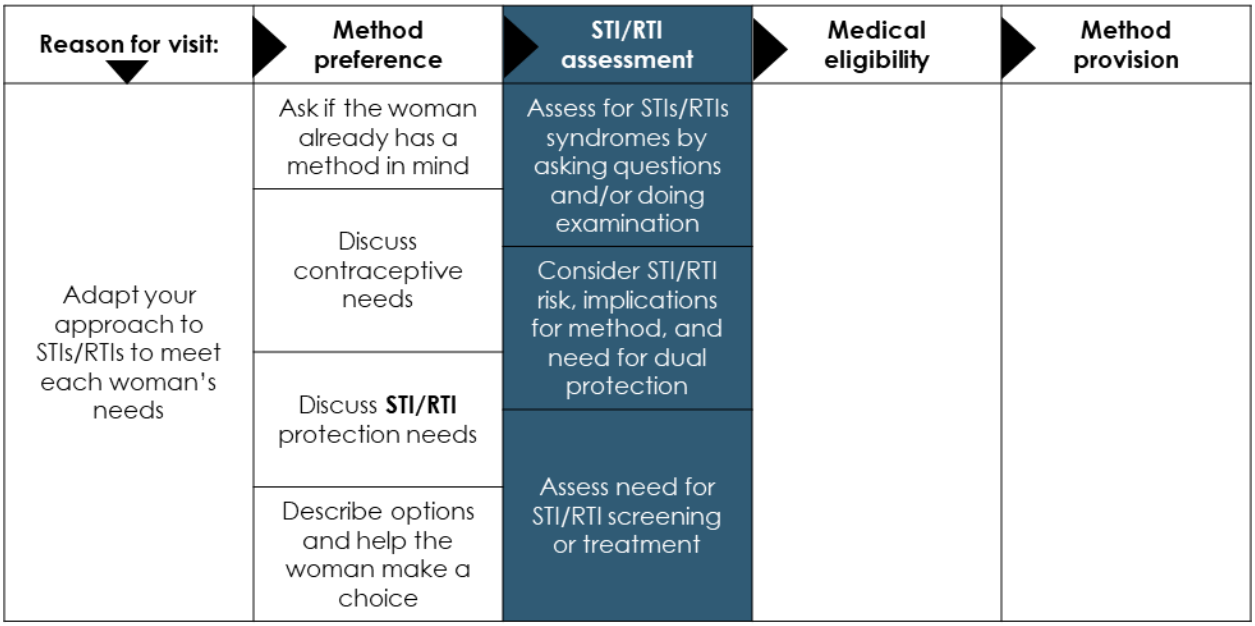
Box 6.2. Dual protection options and issues

Box 6.2. Dual protection options and issues
Some questions to ask are the following: • *Which choice suits you best?* Help clients choose the method that works best for them. • *Can you stick to this choice?* What would make this method difficult? What would help? • *Will your partner help?* Can the client talk with her partner about this? • *What is your back-up choice?* For example, if the client chooses condoms, could the couple abstain if they ran out of condoms? • *Do you think you or your partner may have an infection?* For example, is there pain or burning during urination, an open sore in the genital area, or pus coming from his penis? • *Do you think your partner has other sexual partners?*

Assess for STI/RTI syndromes by asking questions and/or by doing examinations (see Figure 6.3). After a woman has chosen a few contraceptive methods, depending on whether she requires single or dual protection, the provider should determine whether a more thorough examination or laboratory workup is needed to identify any current infections. They should ask about vaginal discharge, genital ulcer, and lower abdominal pain and whether the woman's partner has symptoms of an STI/RTI. The flow charts in Chapter 8 can be used to manage patients with such complaints.

A pelvic examination may be required for the provision of contraceptive methods other than an intrauterine contraceptive device (IUCD) (to rule out pregnancy and infection and to determine uterine size, shape, and position), a diaphragm/cervical cap (to fit the device), and sterilization (to assess the size, position, and mobility of the uterus). Speculum and bimanual examinations can, however, be useful for evaluating STI/RTI concerns and detecting some asymptomatic infections (see Chapter 2).

Figure 6.3. Step 2—Look for STIs/RTIs



Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Consider STI/RTI risk, implications for contraceptive method, and need for dual protection. STI/RTI risk and the woman's need for protection should be reviewed at this point. She may change her preferred method or add condom to improve her protection against STIs/RTIs. It is important to keep in mind that an STI/RTI risk is difficult to assess accurately, and a risk assessment result of negative does not mean that the woman does not need to consider STI protection.

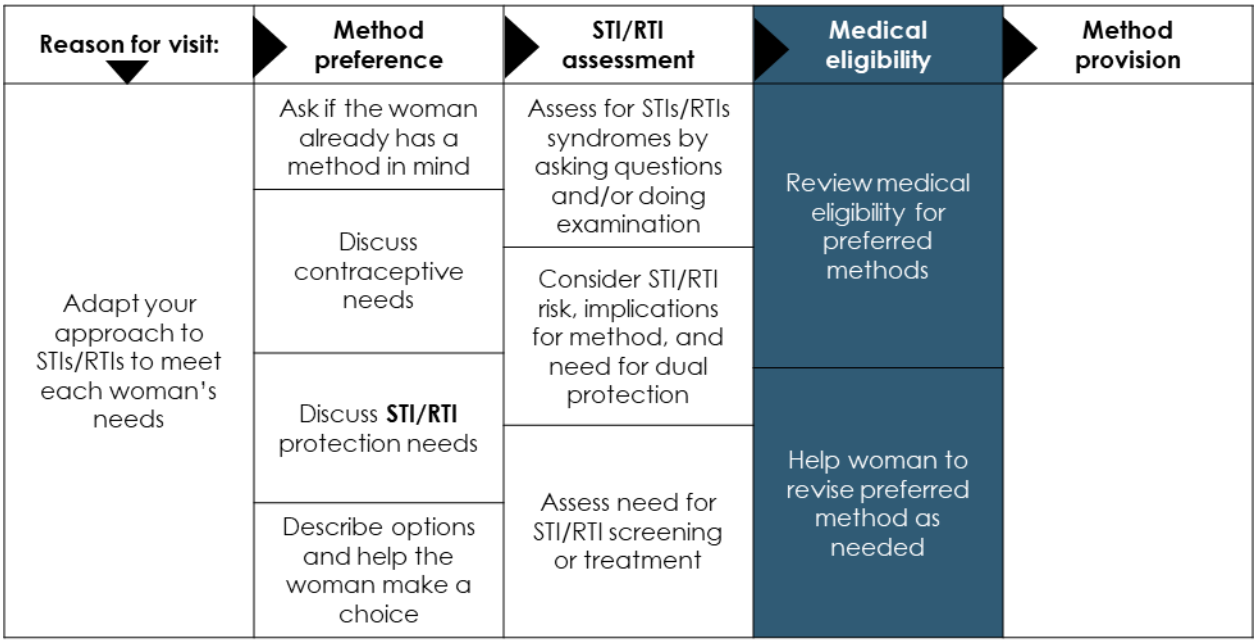
Assess need for STI/RTI screening or treatment. The extent of the STI/RTI diagnostic or screening workup will depend on the resources available. Symptomatic women can be managed without laboratory tests (see Chapter 8). Where resources permit, screening for common, asymptomatic STIs/RTIs—such as cervical infection, syphilis, and HIV (see Chapter 2)—can be included in the protocol for the initial visit along with screening of cervical cancer through visual inspection with acetic acid (VIA) (refer to the national cervical cancer prevention guideline). Following examination and STI/RTI screening, a woman may want to reconsider her previous method of choice to improve her protection against STIs/RTIs.

The existence of a current STI/RTI is not in itself a reason to deny most methods chosen. Providers should offer treatment or referral and information or counselling on how to prevent a future infection (see Chapters 3 and 4). Initiation of some methods, such as an IUCD and sterilization, should be delayed until the STI/RTI is cured. During the treatment period, the woman should be advised to use condoms and, possibly, another contraceptive method.

WHO Medical Eligibility Criteria for Family Planning Method use

WHO developed detailed criteria to review a client's medical eligibility for preferred method. The suitability of the preferred method or methods should be evaluated. Medical eligibility criteria assist health care providers to identify health conditions or situations where certain contraceptive methods should be discouraged or where special precautions are advisable. For example, STI, including HIV, risk may influence the medical eligibility for use of an IUCD or spermicide (see Figure 6.4).

Figure 6.4. Step 3—Assess medical eligibility



Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

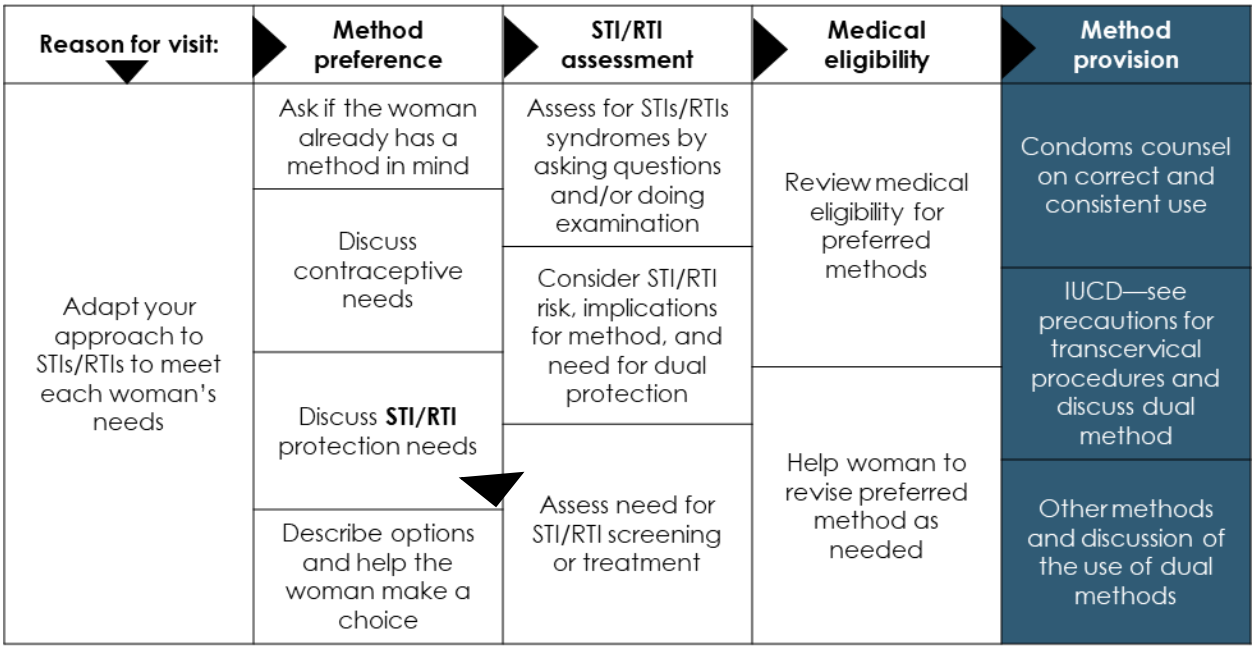
The WHO medical eligibility criteria provide guidance on the safety of 19 contraceptive methods for women and men with specific characteristics or known medical conditions. WHO medical eligibility criteria consider various individual characteristics (e.g., age, breastfeeding status) or health conditions (e.g., diabetes, hypertension) that may or may not affect eligibility for using each contraceptive method and classifies methods into one of the following four categories (see Table 6.1).

Table 6.1. World Health Organization medical eligibility criteria

Category	With clinical judgement	With limited clinical judgement
1	Use method in any circumstances	YES Use the method
2	Generally use: Advantages outweigh risks	YES Use the method
3	Generally DO NOT use Risks outweigh advantages	NO DO NOT use the method
4	Method NOT to be used	NO DO NOT use the method

The final step in the process is method provision (see Figure 6.5). If the client chooses condoms, she will require counselling, demonstration of use, and skill building to ensure that she and her partner can properly and consistently use condoms (see Chapters 3 and 4). An IUCD should not be inserted if the woman has a cervical infection; Chapter 4 describes steps that can be taken to ensure safe insertion. Methods other than condoms do not protect against STI, and adequate counselling should be given on the use of dual methods to protect against STIs.

Figure 6.5. Step 4—Provide method(s)



Notes: intrauterine contraceptive device (IUCD), reproductive tract infection (RTI), sexually transmitted infection (STI)

Return Visits

Clients return to reproductive health clinics for follow-up visits for many reasons:

- Evaluation of method-related problems
- Investigation of STI/RTI symptoms
- Routine follow-up related to contraceptive method
- Routine visits for well-woman care

Whatever the reason, a follow-up visit is an opportunity to assess how things are going, in general, and, specifically, in relation to her need for contraception and protection against STIs/RTIs. Regarding STIs/RTIs, the woman should be asked about current symptoms and whether her needs for STI/RTI protection have changed. Chapter 8 describes the management of symptomatic STIs/RTIs. Chapter 2 presents options for STI/RTI screening that may be appropriate at routine follow-up visits. Each follow-up visit is an opportunity to promote STI/RTI prevention through education and counselling.

Family Planning Methods and STIs/RTIs

Most family planning methods do not protect against STIs/RTIs. Table 6.2 presents estimates of effectiveness and protection against STIs/RTIs for common methods. Some contraceptive methods actually increase the risk of nonsexually transmitted RTIs or their complications, and clients may abandon a method (and risk pregnancy) if they think it is causing problems. Yeast infection, for example, is more common in women using oral contraceptives, and bacterial vaginosis occurs more frequently in women using diaphragms with spermicide. Health care providers should be aware of such method-related problems and be able to counsel clients about management or alternative methods.

Table 6.2. Family planning methods: protection from pregnancy and STIs

Method	Effectiveness in pregnancy protection	Protection against STI
Male condom	85%–98%	This method protects against most STIs, including HIV.
Female condom	79%–95%	Laboratory studies show protection against STI, including HIV. More human studies are needed.
Spermicide	71%–85%	This offers no protection against STIs, including HIV, and it may increase the risk of HIV infection.
Diaphragm (with spermicide)	84%–94%	It offers possible protection against bacterial STIs. It increases the risk of bacterial vaginosis. Little is known about the diaphragm's protection against HIV. It is protective against cervical neoplasia. Spermicide use may increase risk of HIV infection.

Method	Effectiveness in pregnancy protection	Protection against STI
Oral contraceptive	92% to > 99%	It offers no protection against lower genital tract infections and no protection against viral STIs, including HIV. Yeast infections are more common.
Implantable contraceptive	> 99%	It offers no protection against bacterial or viral STIs, including HIV.
Injectable contraceptive	> 99%	It offers no protection against lower genital tract infections and no protection against viral STIs, including HIV.
IUCD	> 99%	It offers no protection against bacterial or viral STIs, including HIV. They are associated with pelvic inflammatory disease in the first month after insertion.
Surgical sterilization (tubal ligation and vasectomy)	> 99%	It offers no protection against lower genital tract infections and no protection against viral STIs, including HIV.

Notes: intrauterine contraceptive device (IUCD), sexually transmitted infection (STI)

Dual Protection and Emergency Contraception

Only correct and consistent condom use provides reliable protection against STIs/RTIs. Therefore, counselling on dual protection should always include the promotion of condoms. When used consistently and correctly, condoms also prevent pregnancies. Couples who want additional protection against pregnancy can combine condoms with another method, or use emergency contraception as a backup protection in the event of condom misuse or failure. Box 6.3 describes how to provide emergency contraception using different types of emergency contraceptive pills, including commonly available oral contraceptives.

Box 6.3. Use of emergency contraception

Box 6.3. Use of emergency contraception

In many countries, special-purpose pills for emergency contraception are available. Regular birth control pills can also be used for emergency contraception. Each type or brand of birth control pill has a different amount of hormone, so the number of pills that make up a full dose will vary.

Taking emergency contraceptive pills

Ideally, take only levonorgestrel or a combined estrogen-progestogen pill as early as possible, but within 72 hours, after unprotected an intercourse. A levonorgestrel pill or a combined estrogen-progestogen pill can be used between 72 hours and 120 hours after unprotected intercourse. However, the client should be advised that the effectiveness of an emergency contraceptive pill is reduced the longer the interval between having unprotected intercourse and taking emergency contraceptive pills. Emergency contraceptive pills may cause nausea and/or vomiting. These side effects are much less common with progestogen-only (or levonorgestrel) pills. Advise the woman to eat something at the same time as she takes the pills and, if possible, to take a medicine that will prevent vomiting before taking the combined emergency contraceptive pills. If she vomits within 2 hours of taking the pills, she should take another dose immediately.

Copper-bearing IUCDs are the most effective method of emergency contraception; they can be used within 5 days after unprotected intercourse. To use the IUCD as an emergency contraceptive method, women must meet medical eligibility requirements for regular IUCD use. The IUCD can then be used for continuing contraception, or removed at the next menses.

Emergency contraception	Dose
Special-purpose contraception	Preferably, take 1.50 mg of levonorgestrel in a single dose. Alternatively, take the levonorgestrel in two doses (one dose of 0.75 mg of levonorgestrel, followed by a second dose of 0.75 mg of levonorgestrel 12 hours later).
Low-dose combined pills	Take four low-dose birth control pills (30 g of ethinylestradiol each). Repeat the dose 12 hours later.
High-dose combined pills	Take two high-dose birth control pills (50 g of ethinylestradiol each). Repeat the dose 12 hours later.

Note: intrauterine contraceptive device (IUCD)

Intrauterine Contraceptive Device

For women with a high individual likelihood of being exposed to gonorrhoea or chlamydial infection, IUCD use is usually not recommended, unless other more appropriate methods are unavailable or unacceptable. Other women at increased risk of STIs can generally use the IUCD. Precautions to reduce risk of iatrogenic infection due to IUCD insertion are described in Box 6.4.

Box 6.4. Reducing risk of iatrogenic RTIs due to IUCD insertion

Increased risk of PID with IUCD use generally occurs during the month following insertion. This risk may be reduced by taking precautions during the transcervical procedure (see Chapter 4).

Avoid unnecessary removal and reinsertions. For example, the copper T380A provides safe and effective protection against pregnancy for 10 years. The effective duration of use varies for each type of IUCD, and the provider and client should be aware of the duration of effectiveness of the device chosen.

Notes: intrauterine contraceptive device (IUCD), pelvic inflammatory disease (PID), reproductive tract infection (RTI)

Any woman with signs of cervical infection (mucopurulent cervical discharge or cervical friability) should be treated for gonorrhoea and chlamydia using Treatment Table 2 (see Chapter 8); her partner should also receive treatment. The insertion of an IUCD must be delayed until the infection is cured. The client should also be counselled about dual protection.

In the event that a women reports exchanging sex for cash or goods, even if she is asymptomatic for STI, she should be given an IUCD only after a dose of STI PPT (refer to chapter 4 for the dosage and frequency).

Women with lower abdominal, uterine, adnexal, or cervical-motion tenderness should be treated for PID using Treatment Table 3, in Chapter 8, and counselled about alternative contraceptive methods (emphasizing dual protection). Women who are at high individual risk of gonorrhoea or chlamydia should usually not use the IUCD, unless other more appropriate methods are unavailable or unacceptable.

If a woman develops PID, purulent cervicitis, chlamydial infection, or gonorrhoea while using the IUCD, there is usually no need to remove the IUCD to treat the infection if the woman wishes to continue her IUCD use.

Chapter 7. STI/RTI Assessment in Pregnancy, Childbirth, and the Postpartum Period

Overview

STI/RTI prevention and management are as important during pregnancy as at any other time because a woman's sexual activity may increase or decrease, and exposure to infection may change. A number of STIs/RTIs—including syphilis, gonorrhoea, chlamydia, trichomoniasis, genital herpes, HPV, 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, preterm rupture of membranes, or may occur following delivery and may be life threatening.

Some of the most important STI/RTI-related problems in pregnancy—including postabortion and postpartum infections and congenital syphilis—are, altogether, not technically difficult or expensive to manage or prevent. Yet maternal and perinatal morbidity and mortality due to these problems remain high. Simple improvements in service delivery using available technology—such as same-day, onsite syphilis screening in ANC clinics—can lead to dramatic improvements in pregnancy outcomes (see Box 7.1). Treatment of symptomatic bacterial vaginosis can reduce the risk of preterm labour, and prevention and effective management of postpartum and postabortion infections can reduce maternal morbidity and mortality.

Women of reproductive age should be educated about the importance of early ANC and screening for STIs/RTIs. Couples should be counselled during pregnancy on the symptoms of preterm labour, safer sex practices, and avoidance of risky sexual behaviour during pregnancy.

ANC clinic visits provide opportunities to learn about preventing STIs/RTIs and detecting STIs/RTIs. WHO and MOHCDGEC, through the ANC programme, recommend at least four ANC visits for women with uncomplicated pregnancies, during which time screening for STIs/RTIs should be offered at least once.

Box 7.1. Key points

- Women should be encouraged to attend ANC clinics early in their pregnancies to allow timely detection and prevention of any problems, including STIs/RTIs.
- Women should be screened for syphilis at the first ANC visit. Screening for syphilis should be done on site, and results and treatment should be made available to women on the same day and before they leave the clinic. Screening for other STIs/RTIs—including cervical infections, bacterial vaginosis, and HIV—should be offered if available or through referral.
- At each ANC visit, women should be asked about STI/RTI symptoms in themselves and in their partners. Screening and/or treatment of partners should be offered—for at least symptomatic STIs/RTIs, syphilis, and HIV.
- STI/RTI prevention should be promoted during pregnancy as a way to protect both mother and child and safeguard future fertility.
- Access to counselling and testing for HIV, PMTCT interventions, and maternal care should be available onsite or by referral.
- Prophylaxis for ophthalmia neonatorum should be given routinely to all newborn babies.

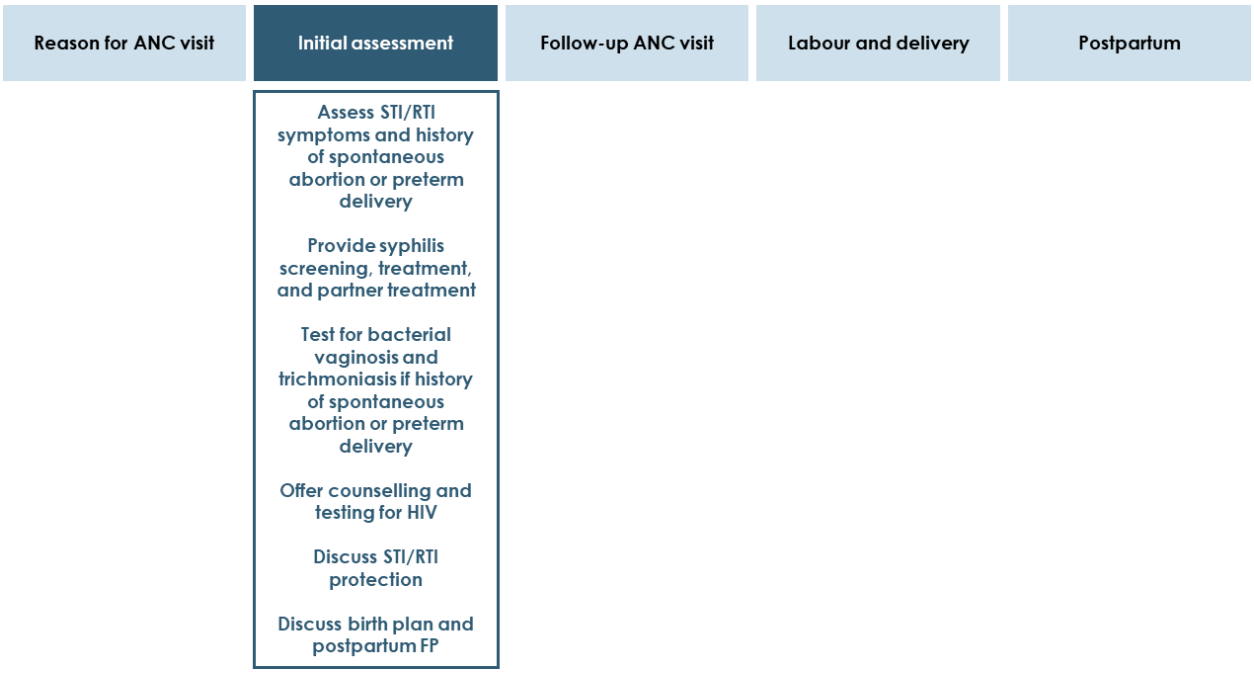
Notes: antenatal care (ANC), preventing mother-to-child transmission of HIV (PMTCT), reproductive tract infection (RTI), sexually transmitted infection (STI)

A woman may first come to the ANC clinic any time between the first trimester and the onset of labour. She might return to the clinic before delivery. Therefore, it is important to make the most of the first visit, and some consideration of STIs/RTIs should be included in the assessment (see Figure 7.1).

The following practices are recommended as a minimal STI/RTI assessment at the initial ANC visit:

- Ask the woman about symptoms of STIs/RTIs and whether her partner has urethral discharge or other symptoms. A woman or her partner with symptoms should be immediately managed using the flow charts in Chapter 8.
- Serological syphilis testing using SD BIOLINE 3.0 Syphilis or an equivalent nontreponemal syphilis antibody test should be carried out as early as possible in pregnancy (see Chapter 2). Testing should be done on site where possible, and the woman should receive her results and treatment before leaving the clinic. Treatment of her partner should also be encouraged and active assistance given if requested.
- A pregnant woman 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 (400 mg twice a day for 7 days) to reduce risk of adverse pregnancy outcome.
- Counselling and testing for HIV should be available onsite or through referral. Women who test positive should be initiated on antiretroviral therapy and referred to appropriate support services; they should be advised on preventing mother-to-child transmission of HIV (see Box 7.2).
- Prevention of STIs (including HIV) should be discussed with the woman and her partner in the context of ensuring a healthy pregnancy and protecting future fertility.
- Plans for delivery and the postpartum period should be discussed early in pregnancy. Infection with a viral STI/RTI, 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.

Figure 7.1. Step 1—Initial assessment visit during pregnancy



Notes: antenatal care (ANC), family planning (FP), reproductive tract infection (RTI), sexually transmitted infection (STI)

Mother-to-child transmission of HIV is the major cause of HIV infection in children throughout the world. Each year, over half a million children are infected this way. Without intervention, up to 40% of children born to HIV-infected women will acquire HIV. Infection can be transmitted from mother to child during pregnancy, during labour and delivery, and through breastfeeding. Preventing the mother-to-child transmission should begin as early as possible in pregnancy by offering testing and counselling to parents on HIV infection—and initiating antiretroviral therapy (option B+) to HIV-positive pregnant women.

Routine ANC is similar for women who are HIV positive or uninfected. Detection and treatment of STIs/RTIs are important since several STIs/RTIs increase the amount of HIV in genital secretions, which then increases the risk of transmitting infection to the child during delivery. Careful attention should be paid to symptoms or physical examination findings suggestive of opportunistic infections or STIs/RTIs. Invasive procedures, such as amniocentesis, should be avoided.

Apart from antiretroviral therapy, there is no need for HIV-infected women to be isolated during labour and delivery or treated differently than other women during labour and delivery. Universal precautions to reduce the risk of HIV transmission and other infections should be used by staff for all patients, not only for those who are known to be HIV infected (see Annex 2).

HIV-positive women require special attention in the postpartum period. They may benefit from further care and counselling and support; they may need assistance if they choose substitute infant feeding. They should be linked to care and support services related to HIV/AIDS.

Notes: antenatal care (ANC), reproductive tract infection (RTI), sexually transmitted infection (STI)

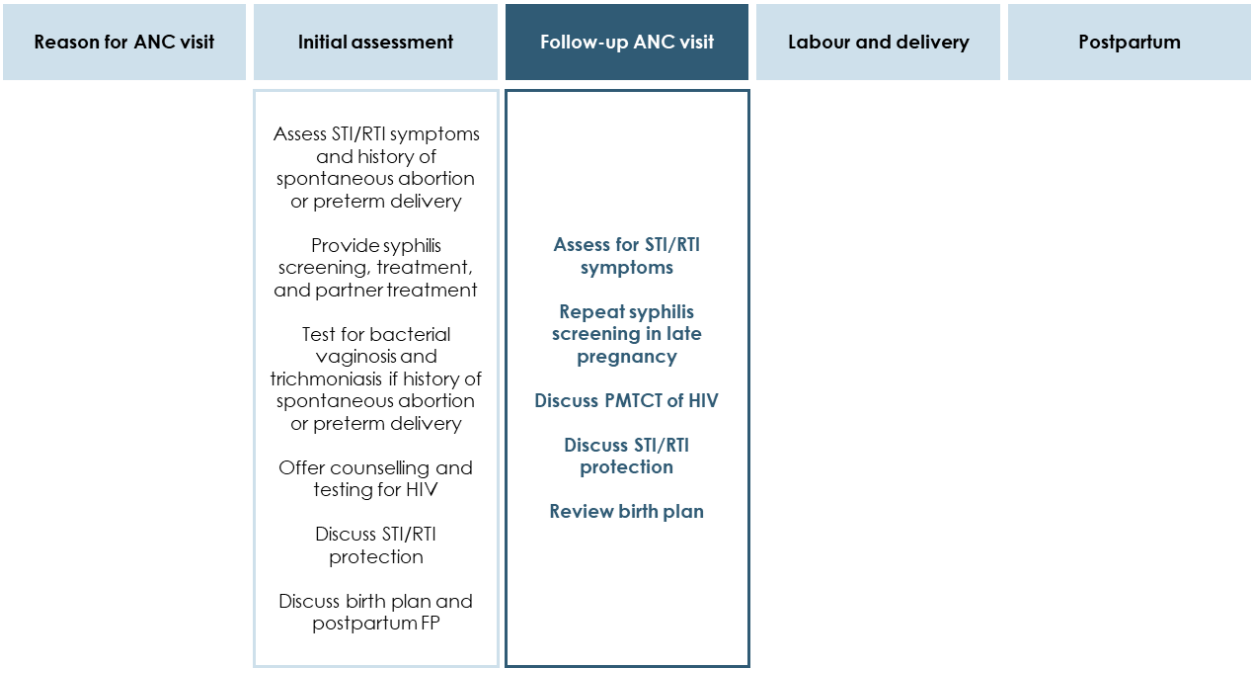
When women return for follow-up ANC visits, attention should be paid to STI/RTI prevention and detection since risk of infection may persist (see Figure 7.2). As at the first visit, women should be asked about symptoms in themselves or their partners. Any symptomatic STI/RTI should be managed using the flow charts in Chapter 8 and Chapter 9.

- All women should be tested for syphilis at least once during each pregnancy, and all women with reactive serology should receive treatment (see Annex 3 for information on interpreting syphilis test results in women treated previously).

Syphilis testing should be repeated in late pregnancy for those who tested negative in the first trimester in order to identify women infected during pregnancy.

- Follow national guidelines for preventing mother-to-child transmission of HIV to manage women who are HIV positive during the antenatal period. Health care providers should review the birth plan and discuss options for infant feeding, postpartum contraception, and HIV care and support for the mother and baby.
- Prevention of STIs/RTIs should be stressed. The woman and her partner should understand that, regardless of previous treatment, an STI/RTI acquired in late pregnancy is capable of causing pregnancy complications and congenital infections. 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; this should be linked with counselling for behavioural change to reduce future risks and consequences of STI/RTI-related morbidity and mortality.

Figure 7.2. Step 2—Follow-up antenatal care visit



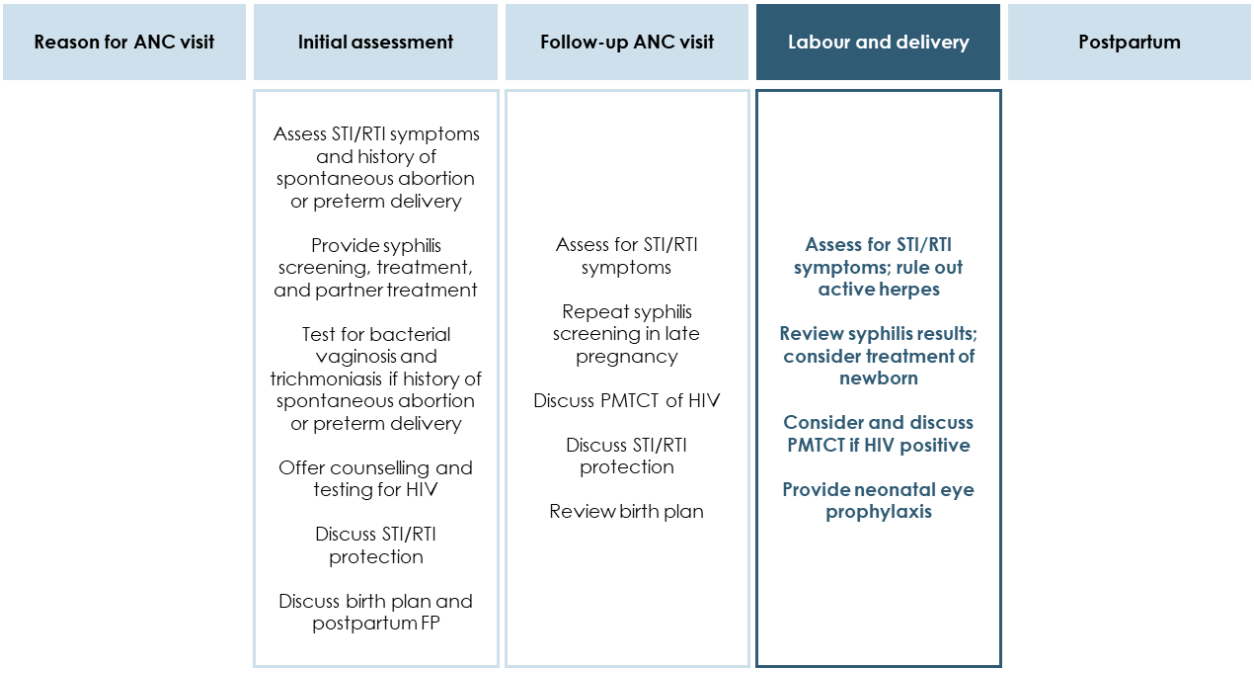
Notes: antenatal care (ANC), family planning (FP), reproductive tract infection (RTI), preventing mother-to-child transmission (PMTCT), sexually transmitted infection (STI)

STI/RTI concerns during labour and delivery are few but potentially important (see Figure 7.3). 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 STIs/RTIs in the newborn (Box 7.3).

- Look for signs of infection. Most STIs/RTIs are not emergencies and treatment can be delayed until after delivery. Vesicles or ulcers suggestive of a first episode of genital herpes (primary HSV-2 infection) near delivery may be an indication for caesarean section since vaginal delivery carries a risk of the newborn having disseminated herpes and a high risk of neonatal death. Where caesarean section is not possible or would be unsafe, a referral to a hospital should be considered if delivery is not imminent. Caesarean delivery is not beneficial if more than 6 hours have passed since rupture of the membranes.
- Having genital warts is not an indication for delivery by caesarean section, depending on its severity.
- Preterm rupture of membranes and rupture of membranes before the onset of labour require careful management to reduce risk of infections (see Chapter 9).
- Manage HIV-infected women based on current national guidelines for preventing mother-to-child transmission of HIV.

Standard precautions should be followed for all deliveries (see Box 7.4).

Figure 7.3. Step 3—Labour and delivery



Notes: antenatal care (ANC), family planning (FP), reproductive tract infection (RTI), preventing mother-to-child transmission (PMTCT), sexually transmitted infection (STI)

Box 7.3. Prevention and management of STIs/RTIs in the newborn
Prevention of ophthalmia neonatorum All newborn babies, regardless of maternal signs or symptoms of infection, should receive prophylaxis against ophthalmia neonatorum due to gonorrhoea or chlamydial infection. Apply tetracycline eye ointment (1% in each eye, in a single application, within 1 hour of birth).
Congenital syphilis Syphilis test results should be reviewed at this time, and the newborn should be evaluated for signs of congenital syphilis. Women who have not been previously tested for syphilis should be tested. Results should be obtained as soon as possible so that early treatment can be given to newborns of mothers who test positive. Newborn babies should be managed as described in Table 7.1, regardless of whether the mother received treatment for syphilis during pregnancy. The mother and her partner should also be treated if this has not already been done.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Box 7.4. Standard precautions during childbirth
The following precautions are advised for every childbirth, regardless of the woman's HIV or STI/RTI status: • Use gloves. Carefully wash hands between procedures, and perform a high-level disinfection or sterilization of all instruments/equipment used in the process of delivery. • Follow standard practices for the delivery: avoid unnecessary vaginal examinations, minimize trauma, and actively manage the second stage of labour. • Episiotomy should be done for only obstetric indications and not as a routine procedure. If assisted delivery is required, this should involve as little trauma as possible. • Cut the umbilical cord under cover of a lightly wrapped gauze swab to prevent blood spurting. Do not apply suction to the newborn's airway with a nasogastric tube, unless there are signs of meconium. Mouth-operated suction should be avoided. • Regardless of the mother's HIV status, wear gloves when handling any newborn baby until maternal blood and secretions have been washed off. All babies should be kept warm after delivery.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Table 7.1. Treatment of neonatal syphilis (first month of life)

<table>
<tr><th colspan="4">Mother's syphilis test status</th></tr>
<tr><th></th><th>Reactive</th><th>Unknown</th><th>Nonreactive</th></tr>
<tr><td rowspan="2">Infant with signs of congenital syphilis</td><td rowspan="2">Treatment 1 or 2</td><td>Test mother</td><td>Repeat test</td></tr>
<tr><td colspan="2">• Start treatment 1 or 2 while awaiting results (if delay is expected).
• If reactive, continue treatment.
• If negative, investigate for other causes and modify treatment accordingly.</td></tr>
<tr><td>Infant with signs of congenital syphilis[a]</td><td>Treatment 3
Single injection</td><td>Test mother</td><td>No treatment</td></tr>
<tr><td>Treatment 1</td><td colspan="3">Aqueous crystalline benzylpenicillin 100,000–150,000 units/kg of body weight per day, administered as 50,000 units/kg of bodyweight, intramuscularly or intravenously (preferably), every 12 hours during the first 7 days of life and every 8 hours thereafter for a total of 10 days</td></tr>
<tr><td>Treatment 2</td><td colspan="3">Procaine benzylpenicillin 50,000 units/kg of body weight, intramuscularly in a single daily dose for 10 days</td></tr>
<tr><td>Treatment 3</td><td colspan="3">Benzathine benzylpenicillin 50,000 units/kg of body weight, intramuscularly, in a single dose</td></tr>
</table>

[a] Signs of congenital syphilis: vesicular eruptions on palms or soles, hepatosplenomegaly, pseudoparalysis, oedema/ascites, fever (in first week of life), prolonged or conjugated hyperbilirubinaemia, petechiae, bleeding, syphilitic facies—infants are often asymptomatic at birth

It is as important to be aware of signs of infection following delivery as it is during pregnancy. Postpartum uterine infection is a common and potentially life-threatening condition, and early detection and effective treatment are important to prevent complications (see Figure 7.4). All women are vulnerable to infection following delivery, and retained products of conception—such as 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 is covered in Chapter 9.

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 should be provided with care and treatment according to national care treatment guidelines, including support for infant feeding options.

If contraception was not discussed before delivery, it should be brought up early in the postpartum period. Planning for a suitable method should consider the need for STI/RTI protection (see Chapter 6). Dual protection should also be discussed with women who choose a long-term contraceptive method, such as an IUCD, following delivery.

Figure 7.4. Step 4—Postpartum care

Reason for ANC visit	Initial assessment	Follow-up ANC visit	Labour and delivery	Postpartum
	Assess STI/RTI symptoms and history of spontaneous abortion or preterm delivery Provide syphilis screening, treatment, and partner treatment Test for bacterial vaginosis and trichmoniasis if history of spontaneous abortion or preterm delivery Offer counselling and testing for HIV Discuss STI/RTI protection Discuss birth plan and postpartum FP	Assess for STI/RTI symptoms Repeat syphilis screening in late pregnancy Discuss PMTCT of HIV Discuss STI/RTI protection Review birth plan	Assess for STI/RTI symptoms; rule out active herpes Review syphilis results; consider treatment of newborn Consider and discuss PMTCT if HIV positive Provide neonatal eye prophylaxis	**Assess for symptoms; rule out postpartum STI/RTI** **Discuss STIs/RTIs protection and contraception**

Notes: antenatal care (ANC), family planning (FP), reproductive tract infection (RTI), preventing mother-to-child transmission (PMTCT), sexually transmitted infection (STI)

Section 3: Management of STIs/RTIs

Section 3 deals with the management of STIs/RTIs—how to diagnose and treat STI/RTI-related problems—and includes flow charts and treatment tables. This section is organized using a problem-oriented approach to permit rapid access to information.

Chapter 8. Management of Symptomatic STIs/RTIs

Overview

This chapter is designed to introduce the service provider to the concept of syndromic management of STIs in relation to other STI/RTI management approaches, such as aetiological and clinical (see Box 8.1). Service providers are introduced to various types of syndromes with their respective common causative agents. The chapter also emphasizes the importance of proper history taking and physical examination, which are crucial to confirm the presence of a disease or syndrome.

Box 8.1. Key points

- Women with vaginal discharge should be treated for the common causes of vaginal discharge (bacterial vaginosis and trichomoniasis). Treatment for yeast infection should be added if relevant clinical signs (curd-like vaginal discharge) are present.
- Women with lower abdominal pain should be treated for gonorrhoea, chlamydia, and anaerobic infections. Hospitalization or referral should be considered if the patient has fever of ≥ 38°C or if there are other danger signs.
- Women and men with genital ulcers should be treated for syphilis, chancroid, and HSV-2.
- Men with urethral discharge should be treated for gonorrhoea and chlamydia. Women whose partners have urethral discharge should receive the same treatment.
- All STI/RTI clients should receive counselling on complying with treatment, risk reduction, and condom use. They should also be offered HIV counselling and testing.
- Treatment should be given to the female partners of men diagnosed with STI syndromes, such as urethral discharge or genital ulcer disease. Male partners of women who are treated for PID should be counselled and offered treatment. Male partners of women treated for candida infection should receive topical antifungal treatment.
- Routine follow-up visits for reassessments are necessary for all syndromes.
- A woman experiencing lower abdominal pain, fever, missed period, abnormal vaginal bleeding, recent delivery, miscarriage, or abortion should be referred to the inpatient department.
- Neonates treated for ophthalmia neonatorum should be reexamined 3 days after starting treatment, and their parents should be treated for discharge syndrome.

Notes: herpes simplex virus 2 (HSV-2), reproductive tract infection (RTI), sexually transmitted infection (STI)

This chapter covers the management of STIs/RTIs in people who seek care because they have symptoms or when a health care provider detects signs of possible infection while addressing other health care issues. A symptom is something that the patient notices, while a sign is something observed by the health care provider (see Annex 1 for a review of history taking and physical examination). Four clinical situations are common:

- A person comes to the clinic with a spontaneous complaint of symptoms for an STI/RTI.
- A patient admits having symptoms when asked by the health care provider (elicited symptoms).
- The health care provider detects signs of STIs/RTIs when examining a patient for other reasons.
- A person comes to the clinic, with or without symptoms and signs, as a contact to an STI/RTI index case.

Health care providers should be able to recognize STIs/RTIs symptoms and signs in these different clinical situations. They should know when it is possible to tell the difference between STIs and nonsexually transmitted conditions. Women experiencing symptoms of a genital tract infection may be concerned about an STI even though most symptomatic RTIs in women are not sexually transmitted. Providers and patients should also understand that STIs/RTIs are often asymptomatic and that the absence of symptoms does not necessarily mean an absence of infection. Screening for asymptomatic STIs/RTIs should be done where possible (see Chapter 3).

Syndromic Management of STIs/RTIs

Concept of Syndromic Management of STIs/RTIs

STIs/RTIs can be managed through the following approaches:

- **Aetiological laboratory approach** identifies causative agents through laboratory methods, followed by disease-specific treatment.
- **Aetiological clinical approach** targets disease treatment based on suspected causative agents diagnosed clinically.
- **Syndromic approach** identifies clinical syndromes (symptoms and signs) followed by syndrome-specific treatment that targets causative agents that can cause the syndrome.

Advantages and Disadvantages of Each Approach to Manage STIs/RTIs

For the reasons outlined in Table 8.1, an aetiology/laboratory approach is only undertaken in few health facilities that have well-equipped functional laboratories. It is the approach applied in STI referral facilities. The clinical aetiological approach is not appropriate at any health facility because of its demands on the clinical acumen of the service provider and the danger of incorrect diagnosis and, hence, insufficient treatment.

In this era of the HIV pandemic, where there is a need for prompt effective treatment of STIs/RTIs at the first level of contact, the syndromic approach has been proven to be effective in all levels of health settings and is, therefore, the recommended approach by the MOHCDGEC in Tanzania. Syndromic management of STIs is based on the diagnosis of defined symptoms and easily recognizable clinical signs. Each syndrome can be caused by a number of different causative agents. For each syndrome, a well-defined standard treatment is recommended by the MOHCDGEC, which has been proven to be effective against the majority of endemic causative agents that can cause the syndrome.

Table 8.1. Advantages and disadvantages of different STI/RTI management approaches

Approach	Advantages	Disadvantages
Aetiological/ laboratory approach	• Avoids overtreatment and saves drugs • Conforms to traditional clinical training • Satisfies patients who feel they are not properly attended to without a laboratory check-up • Can be extended as screening to identify patients with asymptomatic STIs/RTIs	• Laboratory results often not reliable due to lack of quality control • Mixed infections often overlooked • Treatment delays and reluctance of patients to wait for laboratory results • High costs • Laboratory services not available at the majority of health facilities

Approach	Advantages	Disadvantages
Aetiological/ clinical approach	• Saves time for patients • No need of laboratory facilities	• Mixed infections often overlooked • Similar clinical features can be caused by various causative agents • Requires long-term training • Does not identify asymptomatic STIs • Atypical presentation in HIV infection or mixed infections
Syndromic approach	• Saves time for patients • No need of laboratory facilities • Provides adequate treatment, even for mixed infections • Easy to teach and simple to apply • Cost-effective • Promotes integration of services	• Entails frequent overtreatment of patients • Requires special attention to microbial drug sensitivity monitoring on regular basis • Does not identify asymptomatic STIs

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Overview of STI Syndromes

Although STIs are caused by many organisms/agents, these organisms give rise to a limited number of syndromes. Table 8.2 outlines the seven common STI syndromes and their aetiological agents.

Table 8.2. STI syndromes and their aetiological agents

STI syndrome	Sex	Common aetiological agent
1. Urethral discharge syndrome	Male	• Chlamydia trachomatis • Neisseria gonorrhoea
2. Painful scrotal swelling (acute epididymoorchitis)	Male	• Chlamydia trachomatis • Neisseria gonorrhoea
3. Vaginal discharge syndrome[1]	Female	• Candida albicans • Chlamydia trachomatis • Gardnerella vaginalis • Neisseria gonorrhoea • Trichomonas vaginalis
4. Pelvic inflammatory disease (lower abdominal pain)	Female	• Anaerobic bacteria • Chlamydia trachomatis • Neisseria gonorrhoea
5. Genital ulcer disease	Male Female	• Chlamydia trachomatis • Haemophilus ducreyi • HSV-2 • Treponema pallidum • Klebsiella granulomatis (Calymmatobacterium granulomatis)
6. Inguinal bubos	Male Female	• Chlamydia trachomatis • Haemophilus ducreyi

STI syndrome	Sex	Common aetiological agent
7. Anorectal syndrome	Male Female	• Neisseria gonorrhoea • Chlamydia trachomatis • HSV • Treponema pallidum • HPV
8. Neonatal conjunctivitis (ophthalmia neonatorum)	Newborns Males and females	• Neisseria gonorrhoea • Chlamydia trachomatis
9. Oropharyngeal infection	Males Females	• Treponema pallidum • Neisseria gonorrhoea • Chlamydia trachomatis • Klebsiella spp • HPV

[1] Cervical infections caused by *Neisseria gonorrhoea* and *Chlamydia trachomatis* sometime present with vaginal discharge.

Notes: herpes simplex virus (HSV), herpes simplex virus 2 (HSV-2), human papillomavirus (HPV), reproductive tract infection (RTI), sexually transmitted infection (STI)

Management of Common Syndromes

Introduction to Flow Charts

Syndromic approach to manage STIs/RTIs requires the service provider to follow steps in a flow chart to ensure that the client is treated with decision-making that is rational. Therefore, these are known as treatment flow charts. They may also be known as treatment algorithms, treatment protocols, or treatment decision trees. They guide the provider through a series of decisions and actions that need to be made. Each decision or action is enclosed in a box, with one or two routes leading out of it to another box, with another decision or action. Upon learning a patient's symptoms and signs, the service provider turns to the flow chart for the relevant syndrome and works through the decisions; the flow chart guides the clinician in managing the client accordingly. Each flow chart is made up of a series of three steps:

- Clinical problem (the patient's presenting symptoms and signs)
- Decision that needs to be taken
- Action that needs to be carried out

Follow these steps in using the flow charts:

- Start by asking the patient for their symptoms.
- Find the appropriate flow chart—stated in the clinical problem box with "Patient Complaints of."
- The clinical problem box usually leads to an action box that asks you to examine the patient and/or take their history.
- Next, move to the decision box. After taking the history and examining the patient, you should have the necessary information to accurately choose Yes or No in the flow chart.
- Depending on your choice, there may be further decision boxes and action boxes to consider.

Urethral Discharge Syndrome

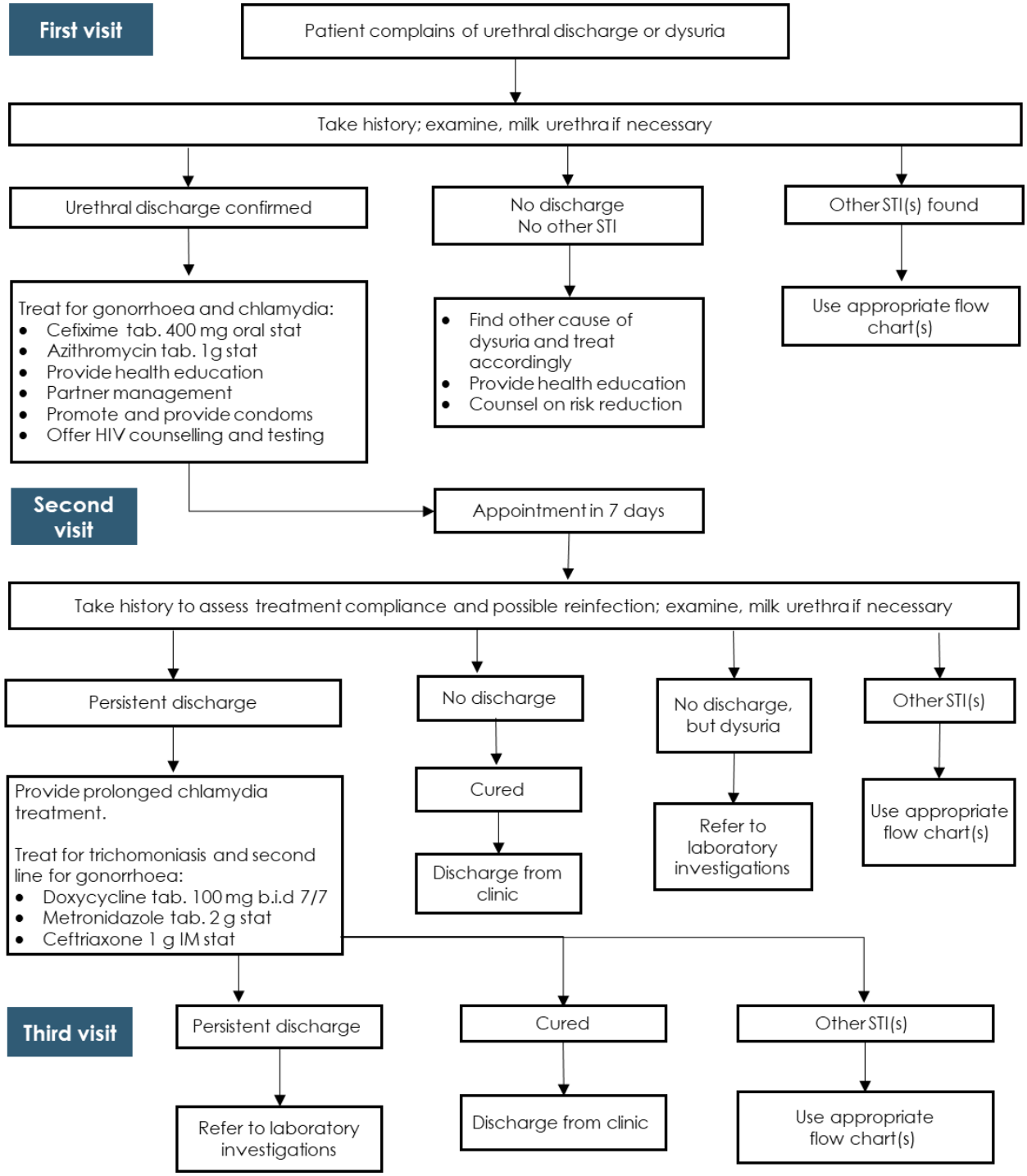
Urethral discharge syndrome (UDS) refers to the presence of abnormal secretions in the distal portion of the urethra, usually accompanied by symptoms and signs. Common symptoms and signs of UDS include urethral discharge, burning or painful micturition, itchy urethra, and increased frequency of and urgency for micturition. See Flow Chart 1 for the management of UDS.

Male patients complaining of urethral discharge and/or dysuria should be examined for evidence of discharge. If no evidence is seen during the inspection, the urethra should be gently milked, from the ventral part of the penis toward the meatus. If microscopy is available, an examination of the urethral smear may show an increased number of polymorphonuclear leukocytes, and a Gram stain may demonstrate the presence of gonococci. In the male, more than five polymorphonuclear leukocytes, per high-power field (x 1,000), are indicative of urethritis.

The major pathogens that cause urethral discharge are *Neisseria gonorrhoea* and *Chlamydia trachomatis*. In syndromic management, treatment of a patient with urethral discharge should adequately address these two organisms. Where laboratory facilities are available, a distinction may be made between the two organisms and specific treatment then instituted. However, testing for chlamydia is still beyond the scope of most laboratories in Tanzania.

Persistent or recurrent symptoms of urethritis may be due to drug resistance, poor compliance, or reinfection. In some cases, there may be infection with *Trichomonas vaginalis*. In some geographical settings, there is evidence to suggest high prevalence of *T. vaginalis* in men with urethral discharge. Where symptoms persist or recur even after adequate treatment for gonorrhoea and chlamydia in the patient and their partner(s), the patient should be treated for *T. vaginalis* if the local epidemiological pattern so indicates. If symptoms persist at a follow-up visit, the patient must be referred for laboratory tests. Delayed or inadequate treatment may result in orchitis, epididymitis, urethral stricture, and/or infertility.

Flow Chart 1. Management of urethral discharge syndrome (UDS)



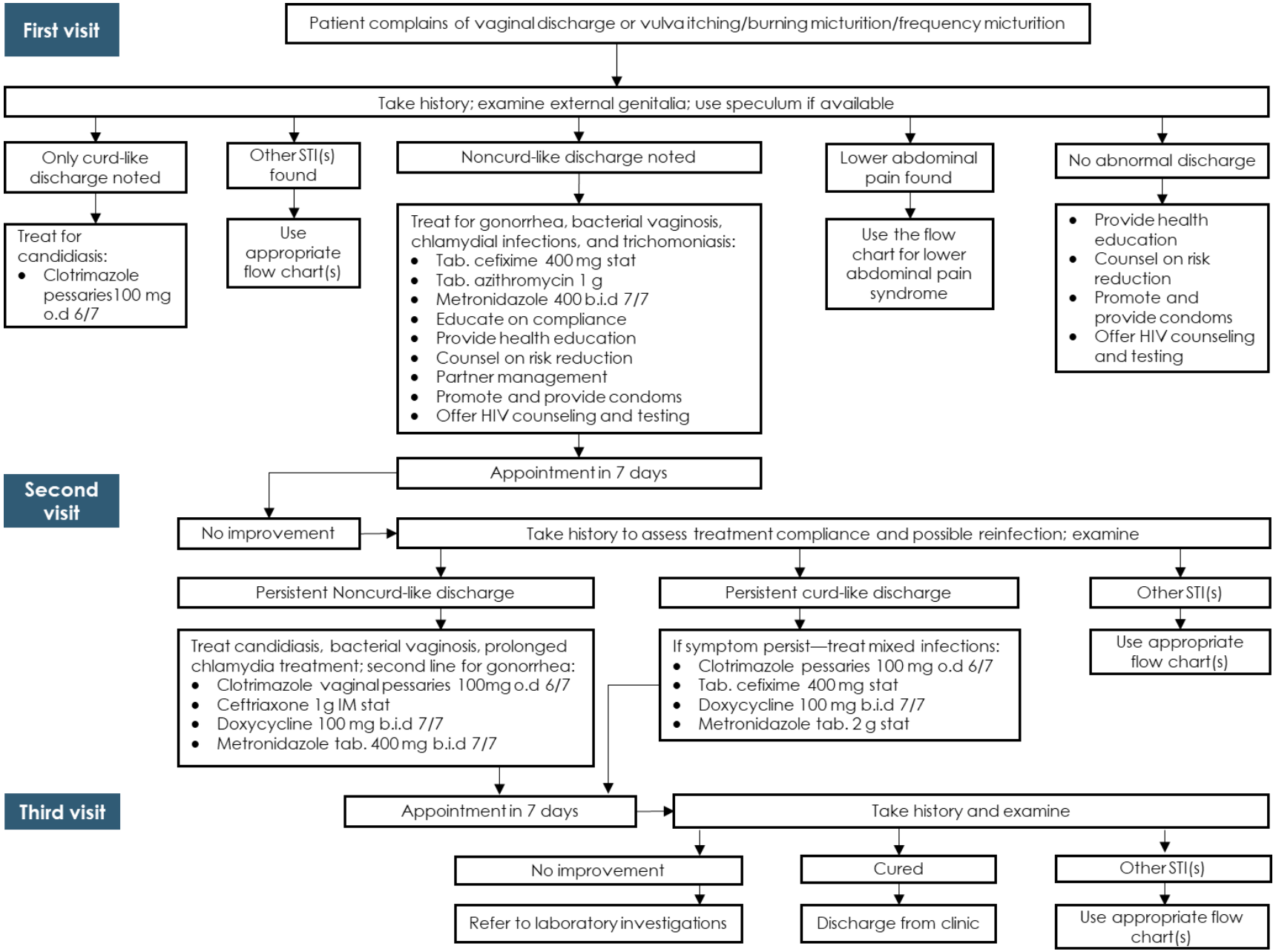
Notes: intramuscular (IM), tablet (tab.), twice a day (b.i.d), sexually transmitted infection (STI)

Vaginal Discharge Syndrome

Vaginal discharge syndrome (VDS) refers to change of colour, odour, and/or amount of vaginal secretions, and is usually accompanied by symptoms and signs. Common signs and symptoms are abnormal vaginal discharge, burning or painful micturition, itchy vulva, increased frequency of and urgency for micturition, and/or painful coitus. See Flow Chart 2 for the management of VDS.

A spontaneous complaint of abnormal VDS is most commonly due to a vaginal infection. It may also be the result of mucopurulent STI-related cervicitis. *T. vaginalis, C. albicans,* and bacterial vaginosis are the most common causes of vaginal infection while *Neisseria gonorrhoea* and *Chlamydia trachomatis* cause cervical infection. The clinical detection of cervical infection is difficult because a large proportion of women with gonococcal or chlamydial infections are asymptomatic. The symptom of abnormal vaginal discharge is therefore highly indicative of vaginal infection, but poorly predictive for cervical infection. Due to the high prevalence of gonorrhoea and chlamydia, all women presenting with VDS in Tanzania should receive treatment for both vaginal and cervical infections. Delayed or inadequate treatment of VDS may result in endometritis, salpingitis, oophoritis, or ectopic pregnancy. Note that gonococcal or chlamydial cervical infection may be asymptomatic.

Flow Chart 2. Management of vaginal discharge syndrome (VDS)



- Do not give metronidazole in first trimester of pregnancy.
- Do not give doxycycline or ciprofloxacin in pregnancy or to a lactating mother—substitute with erythromycin, 500 mg t.i.d 7/7, and ceftriaxone, 250 mg IM stat.

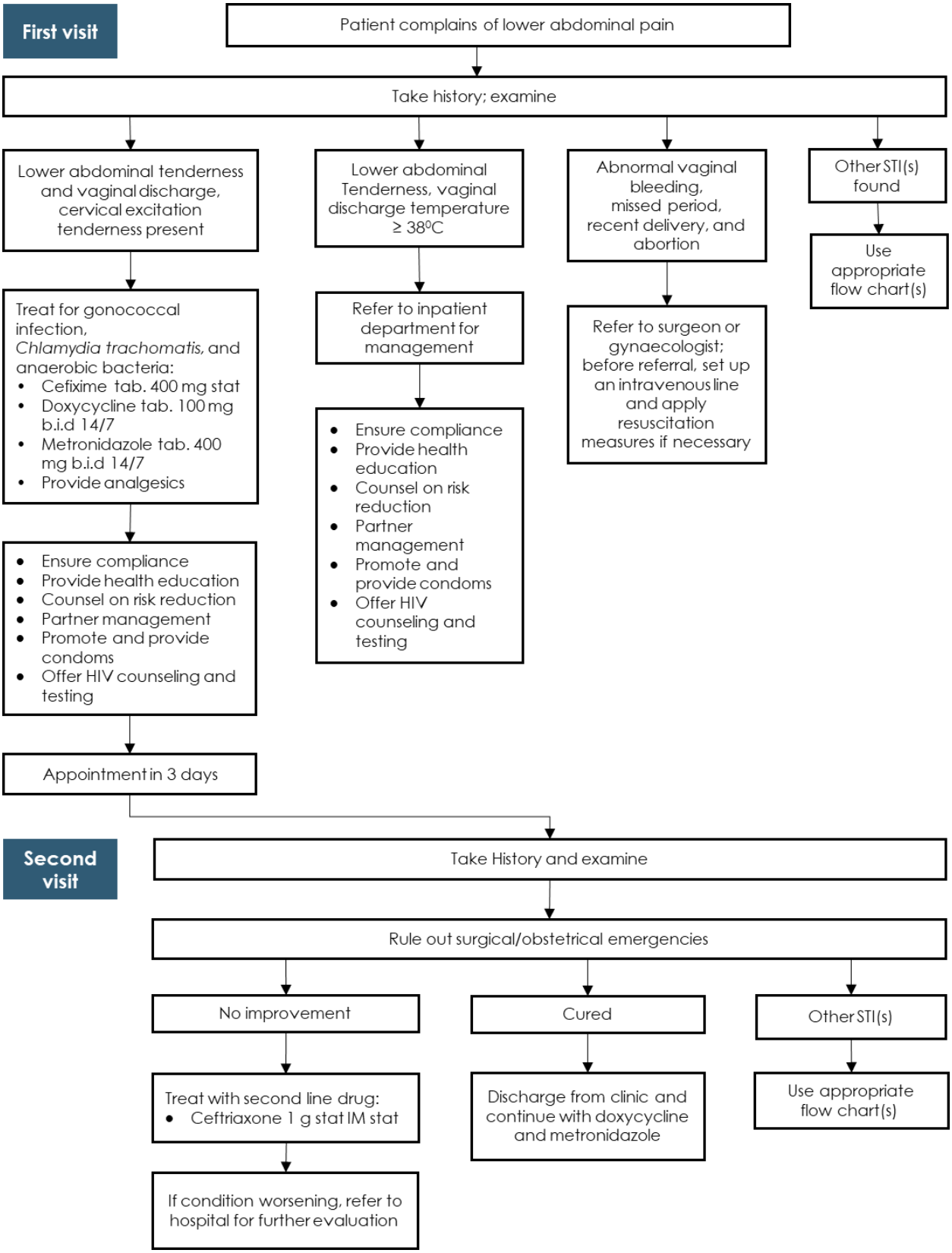
Notes: intramuscular (IM), once a day (o.d), tablet (tab.), three times a day (t.i.d), twice a day (b.i.d), sexually transmitted infection (STI)

Lower Abdominal Pain Syndrome or Pelvic Inflammatory Disease (PID)

PID is defined as the inflammation of the uterus, fallopian tubes, ovaries and pelvic peritoneum. It is also known as lower abdominal pain syndrome. It commonly occurs as a result of an infection that ascends from the cervix. It can also occur as a result of transcervical procedure. See Flow Chart 3 for the management of PID.

Common symptoms and signs of PID include lower abdominal pain and tenderness, painful micturition, painful coitus, abnormal vaginal discharge, menometrorrhagia, fever, and, sometimes, nausea and vomiting. Common aetiologies of PID are *Neisseria gonorrhoea*, *Chlamydia trachomatis,* and anaerobic bacteria. Delayed or inadequately treated PID may lead to chronic lower abdominal pain, pelvic abscess, ectopic pregnancy, dysmenorrhea, and infertility.

Flow Chart 3. Management of lower abdominal pain syndrome (PID)



Notes: intramuscular (IM), pelvic inflammatory disease (PID), tablet (tab.), twice a day (b.i.d), sexually transmitted infection (STI)

Inpatient Treatment of PID

All patients with PID who have fever of ≥ 38°C should be admitted for close care. The recommended inpatient treatment options for PID are the following:

Regimen 1:

- Cefixime 400 mg or spectinomycin 1g by IM injection, four times daily

PLUS

- Doxycycline 100 mg orally or by IV injection, twice daily, or tetracycline 500 mg orally, four times daily

PLUS

- Metronidazole, 400–500 mg orally or by IV injection, twice daily

Regimen 2:

- Ceftriaxone, 1 g by IM injection, once daily

PLUS

- Doxycycline, 100 mg orally or by IV injection, twice daily; or tetracycline 500 mg orally four times daily

PLUS

- Metronidazole, 400–500 mg orally or by IV injection, twice daily

Regimen 3:

- Clindamycin, 900 mg by IV injection, every 8 hours

PLUS

- Gentamycin, 1.5 mg/kg by IV injection, every 8 hours

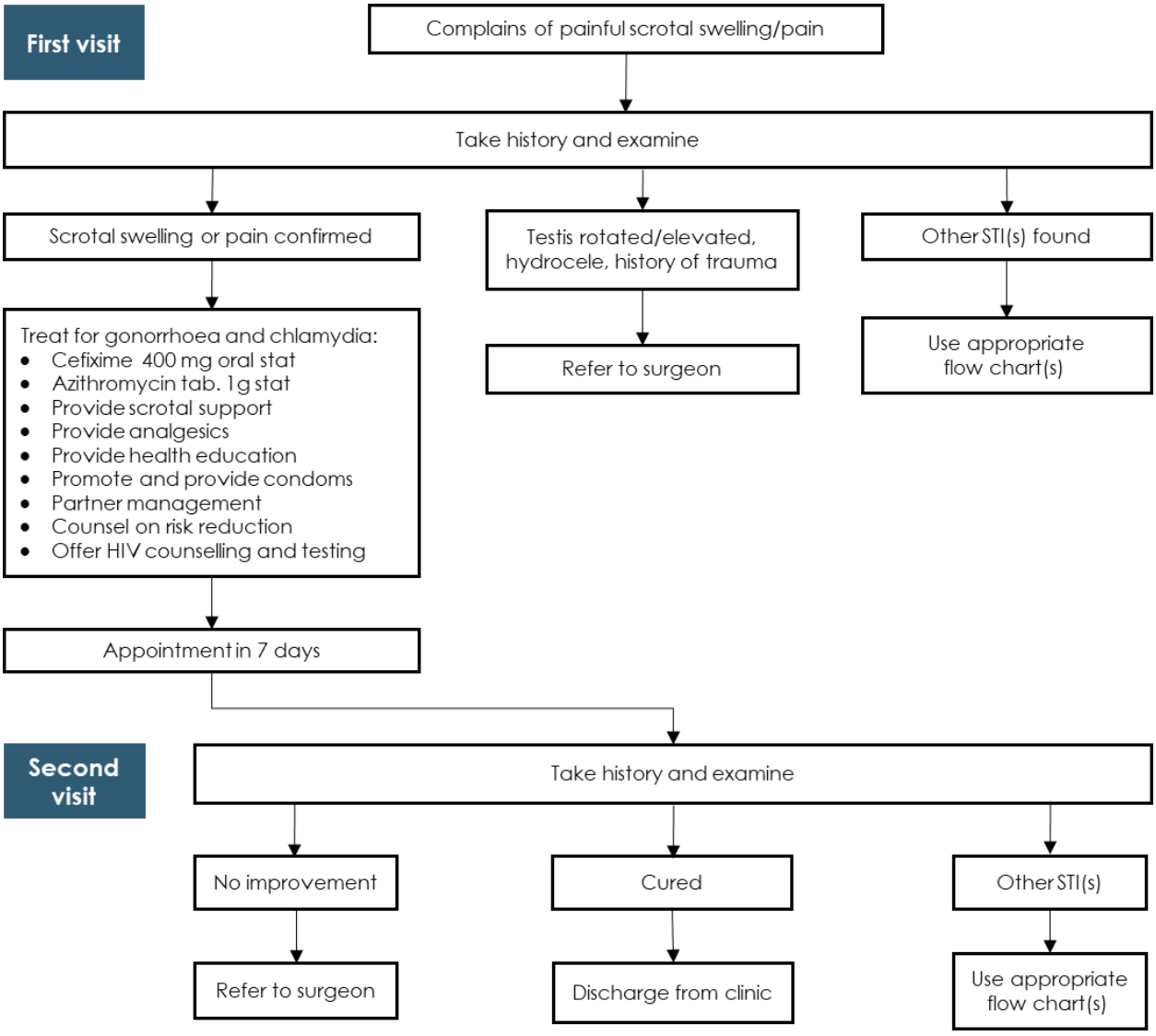
NOTE:

- For all three regimens, therapy should be continued until at least 2 days after the patient has improved and should then be followed by either doxycycline (100 mg orally, twice daily for 14 days) or tetracycline (500 mg orally, four times daily, for 14 days).
- Patients taking metronidazole should be cautioned to avoid alcohol.
- Tetracyclines are contraindicated in pregnancy.

Painful Scrotal Swelling

Painful scrotal swelling is the inflammation of the epididymis and testis, often accompanied with scrotal pain, swelling, and tenderness. It is also known as epididymorchitis. Common symptoms and signs are scrotal pain, scrotal swelling and tenderness, scrotal oedema, and fever. The common aetiologies are *Neisseria gonorrhoea* and *Chlamydia trachomatis*. Common complications of painful scrotal swelling include infertility and scrotal abscess. See Flow Chart 4 for the management of painful scrotal swelling.

Flow Chart 4. Management of painful scrotal swelling



Notes: tablet (tab.), sexually transmitted infection (STI)

Anorectal Syndrome

Anorectal syndrome (ARS) is defined as soreness, burning, itching, or other irritation of the rectum, together with redness in the area of anus. Sometimes, it is accompanied by diarrhoea, and it may occur as a toxic side effect of oral administration of certain broad-spectrum antibiotics. ARS may include a number of presentations. The most common include proctitis and rectal discharge. See Flow Chart 5 on how to manage ARS.

The most common sexually transmitted pathogens that cause ARS are *Neisseria gonorrhoea, Chlamydia trachomatis, Treponema pallidum*, and HSV. Proctitis is an inflammation of the rectal wall and is the most common reaction to an anorectal STI (due to gonorrhoea, syphilis, chlamydia, or herpes). Anyone whose immune system is impaired is at increased risk of developing proctitis, particularly from infections caused by the HSV or cytomegalovirus, or from reactivation of an earlier infection. Proctitis may be caused by *Salmonella* spp., *Shigella* spp., or *Entamoeba histolytica* as a part of gastroenteritis, which may manifest as diarrhoea with fever, anorexia, and abdominal cramps. Antibiotics that destroy normal intestinal bacteria and allow other bacteria to grow in their place may also cause proctitis. Herpes proctitis may be mistaken for the rectal manifestation of ulcerative colitis or Crohn's disease. Proctitis typically causes painless bleeding or the passage of mucous (sometimes mistaken for diarrhoea) from the rectum. There may also be ineffectual straining (tenesmus) to defecate, sometimes mistakenly described as constipation by patients. The anus and rectum may be intensely painful, with external and internal ulceration, when the cause is gonorrhoea, herpes, or cytomegalovirus infection. A proctoscopic examination (which should be done, if feasible) will reveal rectal pus, bleeding, or ulceration.

In men who have sex with men, all cases of proctitis should be treated for gonorrhoea and chlamydial infections. Symptoms of diarrhoea, bloody stools, abdominal cramping, nausea, and/or bloating may indicate giardia infection or amoebic dysentery. Most bacterial diarrheal diseases resolve spontaneously with oral rehydration and antidiarrheal medication. Anorectal infections are a potent cofactor for HIV transmission. The service provider should counsel the patient on consistent and correct use of condoms during anal or oral sex to prevent STIs, including HIV. Rectal discharge is a condition associated with intermittent or continuous expression of any discharge that is not stool or blood from the anus.

Generally, rectal discharge refers to either a mucous or purulent discharge. The discharge can occur for many reasons, including anal fissure, anal fistula (an abnormal connection between two organs) or abscess, other infections (including an STI), or chronic inflammatory diseases. When the definition of rectal discharge is related to STI, the following could be observed:

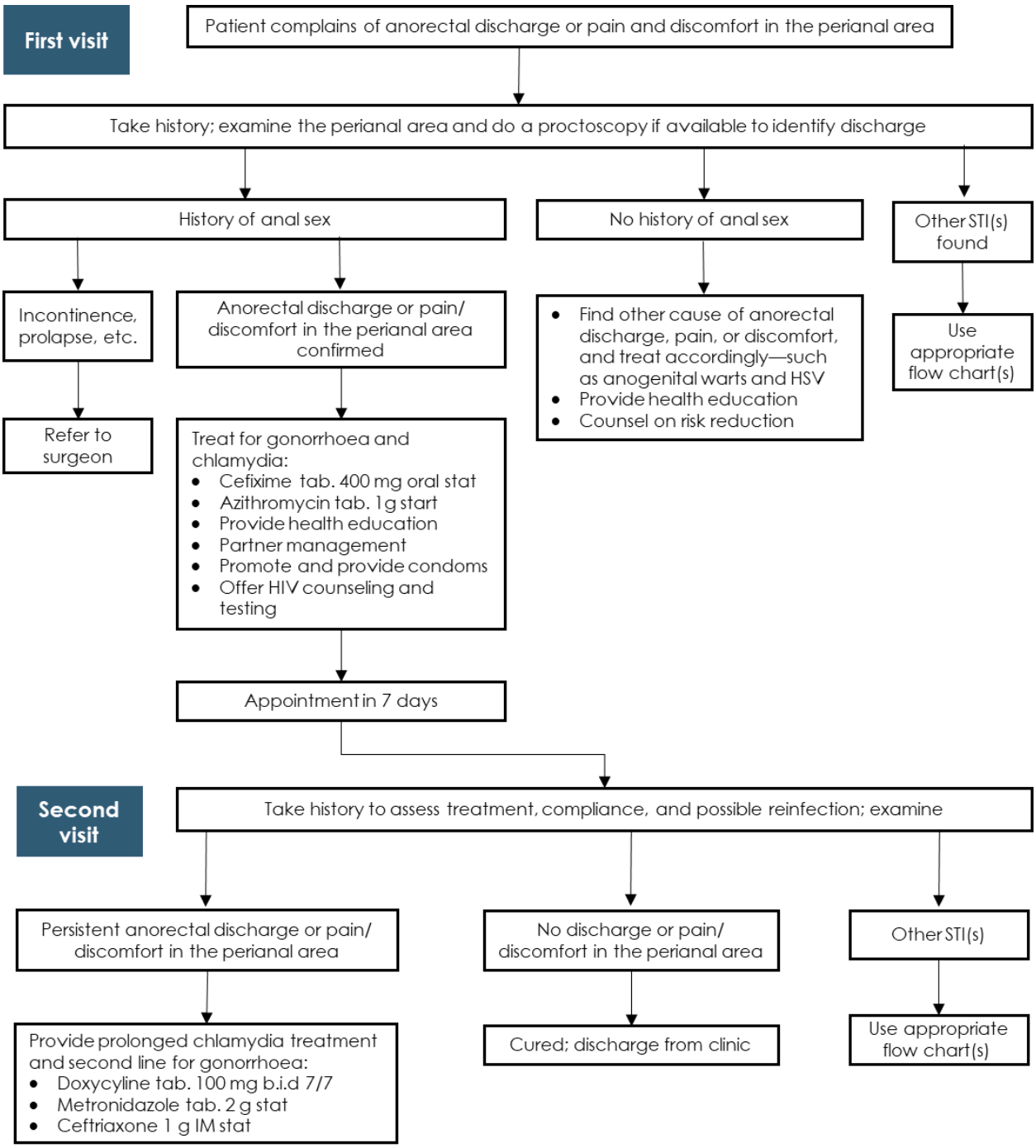
- Purulent rectal discharge
- Mucous rectal discharge
- Watery rectal discharge

Other causes of ARS that are not due to an STI include anal fissure, faecal impaction, food intolerance, gastroenteritis (bacterial and viral), inflammatory bowel disease (includes Crohn's disease and ulcerative colitis), neurological damage, and perirectal or perianal abscess.

Other symptoms might occur with rectal discharge, and they include gastrointestinal symptoms that vary depending on the underlying disease, disorder, or condition. These may include abdominal pain or cramping; abdominal swelling, distention, or bloating; bloody stool (blood may be red, black, or tarry in texture); burning feeling; change in bowel habits; constipation; diarrhoea; faecal incontinence

(inability to control stools); flatulence; pain, which may be severe, in the abdomen, pelvis, or lower back; urgent need to pass stool; and watery diarrhoea, including multiple episodes.

Flow Chart 5. Management of anorectal syndrome (ARS)



Notes: herpes simplex virus (HSV), intramuscular (IM), tablet (tab.), twice a day (b.i.d), sexually transmitted infection (STI)

Oropharyngeal STIs

Oral sex can lead to oropharyngeal STIs (infections of mouth and throat), including HPV, herpes, and gonorrhoea, among others. Clinically, it is difficult to reliably diagnose gonococcal or chlamydial pharyngitis. Additionally, service providers should be aware that pharyngeal gonorrhoea can be more difficult to clear than urethral infections. Other oropharyngeal STIs (e.g., herpes and warts) can often be detected in a physical examination and can be managed according to treatment guidelines. It is recommended that whenever a patient is suffering from significant pharyngitis, and there is a history of unprotected oral sex, pharyngeal gonococcal or chlamydial infection is likely; the patient should be treated syndromically. To manage an oropharyngeal STI, see Flow Chart 6.

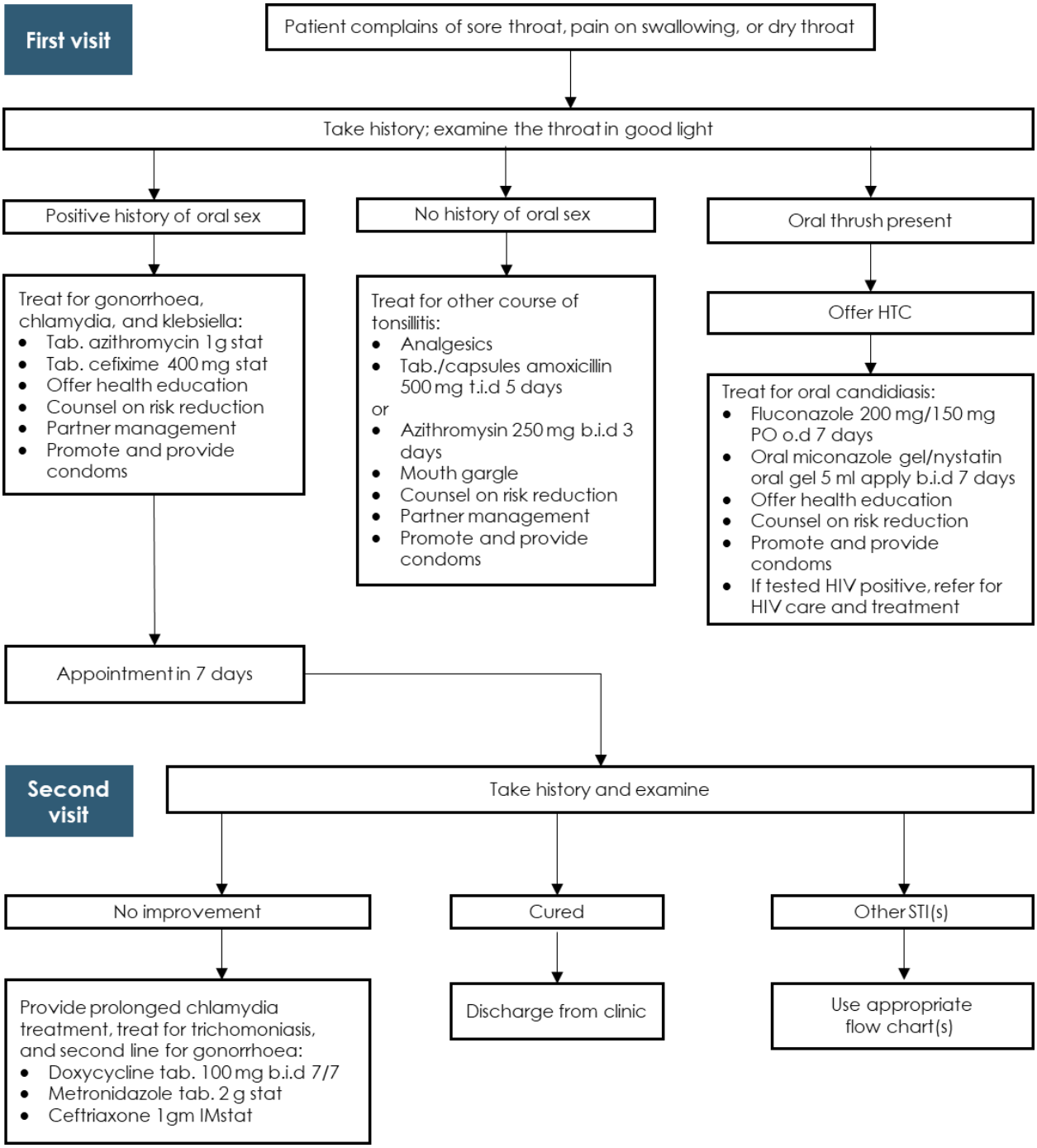
Treatment for sexually transmitted pharyngitis

- Cefixime, 400 mg orally stat (to treat gonococcal infection)

PLUS

- Azithromycin, 1 g orally stat (to treat chlamydial infection)

Flow Chart 6. Management of oropharyngeal syndrome



Notes: herpes simplex virus (HSV), HIV testing and counselling (HTC), intramuscular (IM), once a day (o.d), orally (PO), tablet (tab.), three times a day (t.i.d), twice a day (b.i.d), sexually transmitted infection (STI)

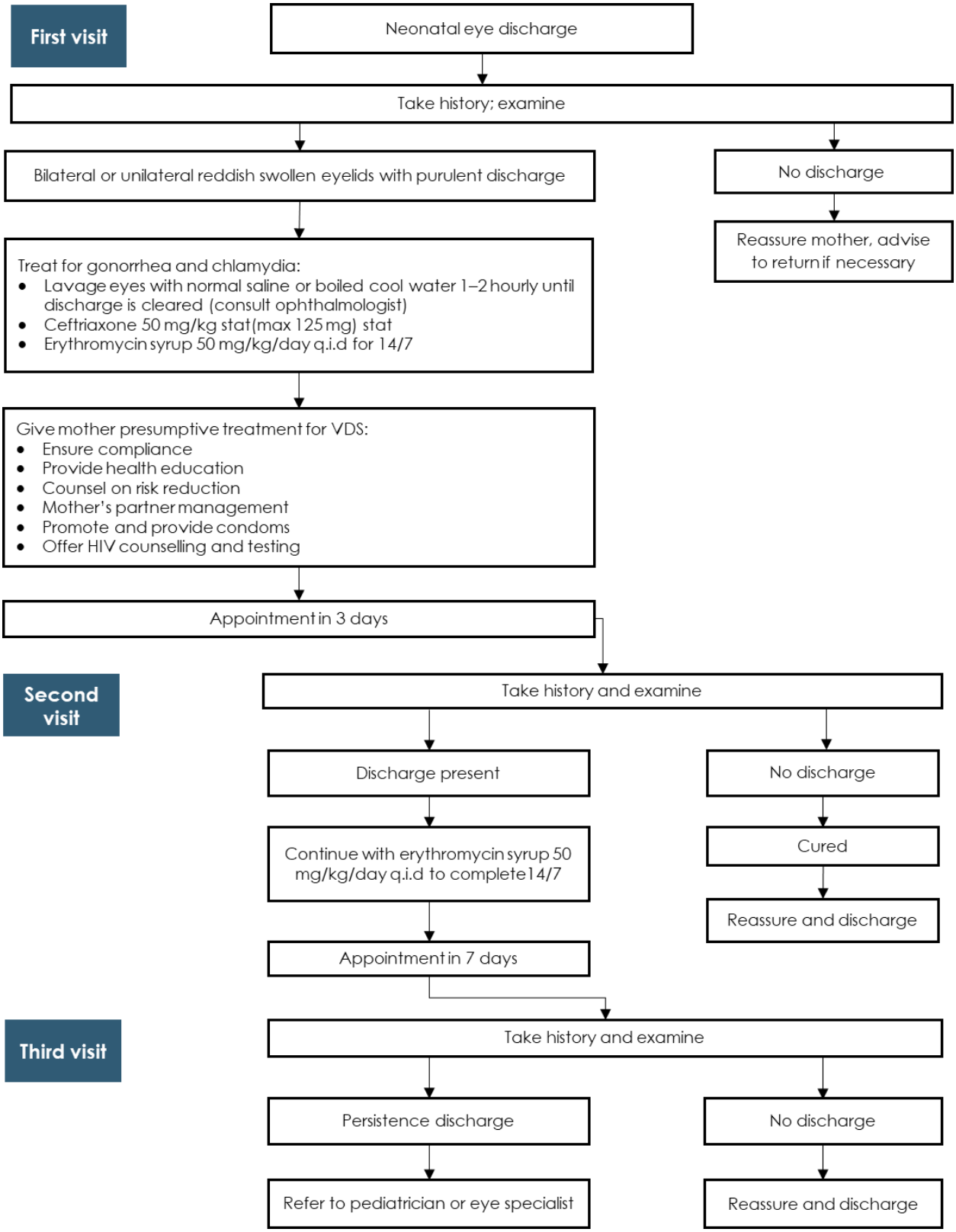
Neonatal Conjunctivitis (Ophthalmia Neonatorum)

Ophthalmia neonatorum (ON) means inflammation of the conjunctiva in a newborn baby who is less than 1 month old. This condition can threaten the child's sight. If the baby is older, the cause is unlikely to be an STI. The most common sexually transmitted pathogens that cause ON are *Neisseria gonorrhoea and Chlamydia trachomatis*. Other causes of neonatal conjunctivitis, and which are not due to an STI, include: *Staphylococcus aureus; Streptococcus pneumonia; Haemophilus* and *Pseudomonas* spp; and viral, chemical, and physical irritations. See Flow Chart 7 on how to manage ON.

Common symptoms and signs of ON are reddish conjunctiva, oedema/swelling of the eyelids, and purulent eye discharge. Prevention and control measures include screening of pregnant women, early treatment of VDS in pregnant women, and routine eye chemoprophylaxis in the newborn by administering to all newborns an eye ointment with 1% tetracycline.

Always examine the neonate and exclude other congenital diseases.

Flow Chart 7. Management of neonatal conjunctivitis



- Both parents should be examined and treated as per flow chart for genital discharge syndrome.

Notes: four times a day (q.i.d), tablet (tab.), sexually transmitted infection (STI), vaginal discharge syndrome (VDS)

Genital Ulcer Disease

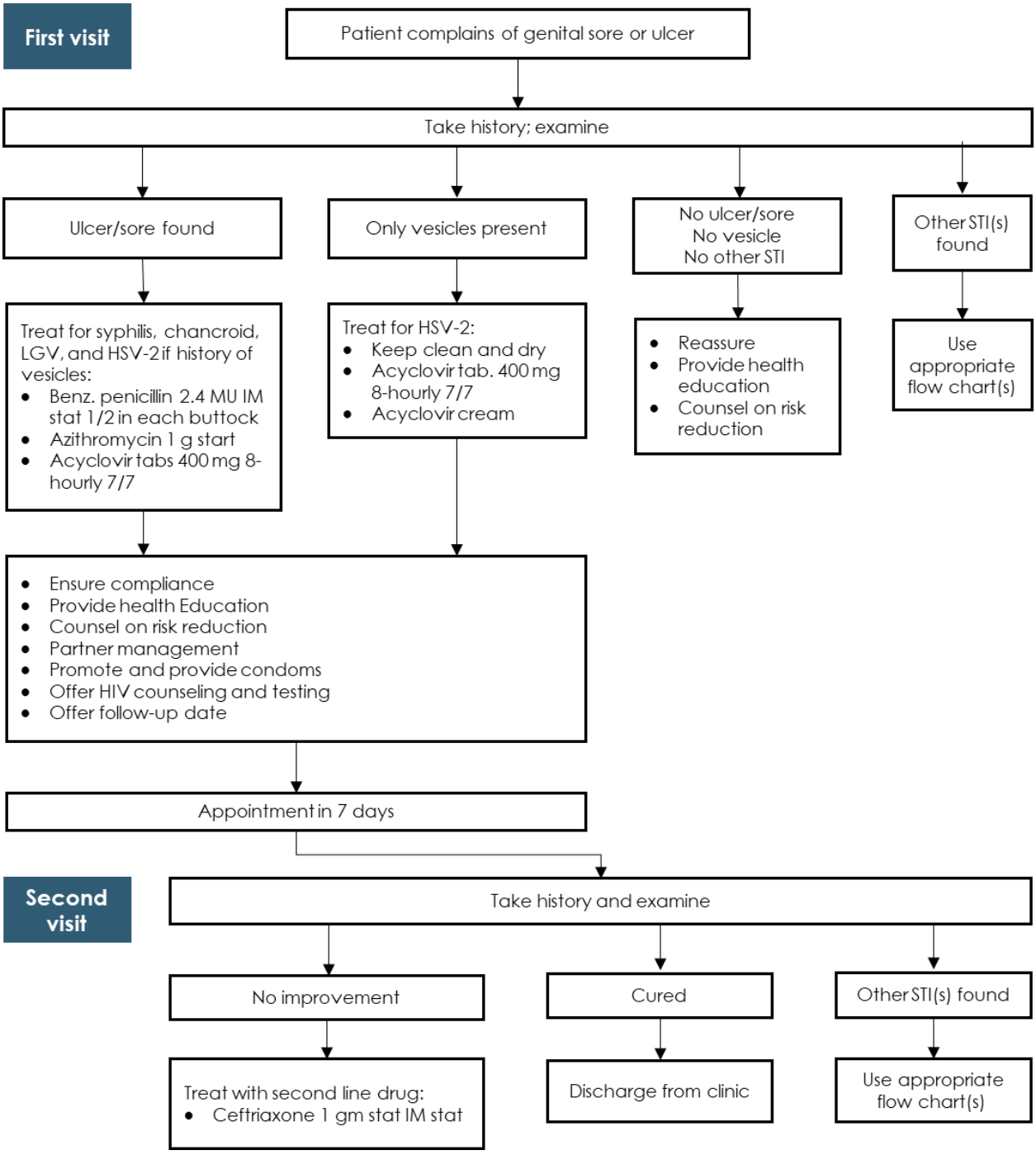
Genital ulcer disease (GUD) is the loss of continuity of skin or mucous membrane, producing one or more lesions in the genital area. The relative prevalence of causative organisms for GUD varies considerably in different parts of the world and may change dramatically over time. Clinical differential diagnosis of GUD is inaccurate, particularly in settings where several aetiologies are common. Clinical manifestations and patterns of GUD may be further altered in the presence of HIV. See Flow Chart 8 on how to manage GUD.

Laboratory-assisted differential diagnosis is rarely helpful at the initial visit, as mixed infections are common. In addition, in areas of high syphilis prevalence, a reactive serological test may reflect a previous infection and give a misleading picture of the patient's present condition.

In Tanzania, the common aetiologies of GUD are *Treponema pallidum*, *Haemophilus ducreyi, Chlamydia trachomatis,* HSV-2, and *Calymmatobacterium granulomatis.* In many parts of Tanzania, genital herpes is another frequent cause of GUD. Where HIV infection is prevalent, an increasing portion of cases of GUD is likely to harbour HSV. Herpetic ulcers may be atypical and persist for long periods in HIV-infected patients.

GUD may take different shapes, appearance and consistency. In addition to the observed ulcer(s), there may be lymphadenopathy—which may be painful—painful coitus, and painful micturition.

Flow Chart 8. Management of genital ulcer disease (GUD)



- For patients allergic to penicillin, substitute with erythromycin tab. 500 mg q.i.d for 15 days.
- Do not give acyclovir during pregnancy and breastfeeding.

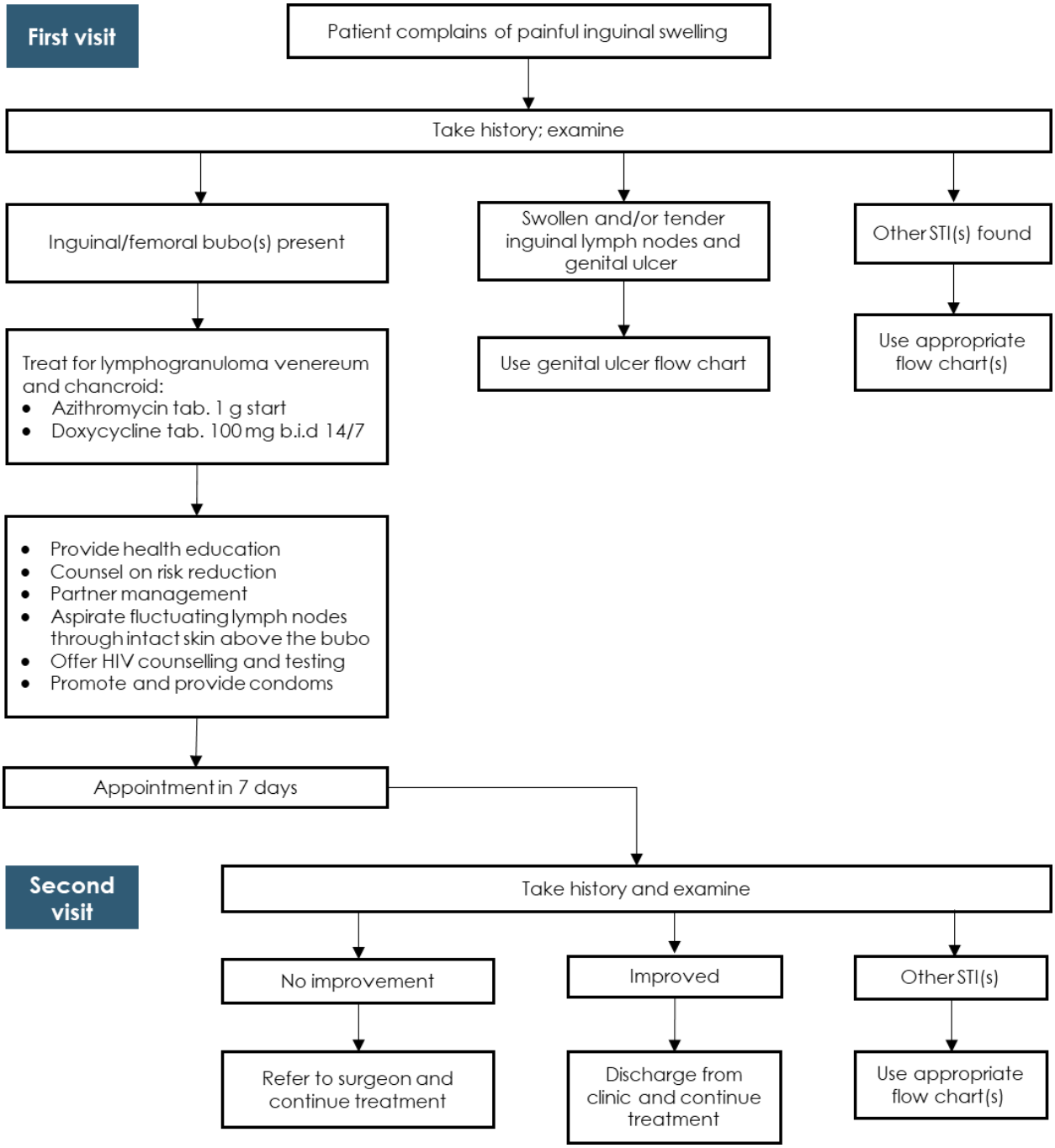
Notes: herpes simplex virus (HSV), herpes simplex virus 2 (HSV-2), intramuscular (IM), lymphogranuloma venereum (LGV), four times a day (q.i.d), tablet (tab.), sexually transmitted infection (STI)

Inguinal Bubo

Inguino and femoral bubos are localised enlargements of the lymph nodes in the groin area, which are painful and may be fluctuant. They are frequently associated with lymphogranuloma venereum and chancroid caused by Chlamydia trachomatis and Haemophilus ducreyi, respectively. In many cases of chancroid, an associated genital ulcer is visible but occasionally may not be. Nonsexually transmitted local and systemic infections (e.g., infections of the lower limb) can also cause swelling of inguinal lymph nodes. These should, therefore, be ruled out.

Common symptoms and signs of inguinal bubos include swelling in the groin, which are often fluctuant and associated with pain, fever and tenderness. See Flow Chart 9 on how to manage an inguinal bubo.

Flow Chart 9. Management of inguinal bubo



- Do not incise the bubo.

Notes: tablet (tab.), twice a day (b.i.d), sexually transmitted infection (STI)

Management of Mixed Infections

Mixed STIs	Drug treatment (new episode)
UDS + painful scrotal swelling	Ceftriaxone (250 mg IM stat) + azithromycin (1 g orally per week for 2 weeks) + metronidazole (2 g orally stat) + supportive therapy (to reduce pain, advise bed rest, scrotal elevation with a scrotal support (t-bandage), and analgesics)
UDS + balanitis	Cefixime (400 mg orally stat)/ceftriaxone (250 mg IM stat) + azithromycin (1 g orally stat) / doxycycline (100 mg orally b.i.d for 7 days) + metronidazole (2 g orally stat) + clotrimazole cream (local application b.i.d for 7 days)
UDS + GUS	Cefixime (400 mg orally stat)/ceftriaxone (250 mg IM stat) + acyclovir (400 mg orally TDS for 7 days) + benzathine penicillin* (2.4 MU IM stat) + azithromycin (1 g orally stat)/doxycycline*(100 mg orally b.i.d for 7 days) + metronidazole (2 g orally stat)
VDS + LAP	Ceftriaxone (250 mg IM stat) + azithromycin (1 g orally per week for 2 weeks)+ metronidazole (400 mg orally b.i.d for 7–14 days) Clotrimazole pessary to be added, if vulval oedema, itching, excoriations, or curd-like discharge present
VDS + GUS (not pregnant)	Cefixime (400 mg stat)/ceftriaxone (250 mg IM stat) + metronidazole (2 g orally stat) + benzathine penicillin* (2.4 MUIM stat)+ azithromycin (1 g orally stat) / doxycycline* (100 mg orally b.i.d for 7 days) + acyclovir (400 mg orally t.i.d for 7 days) Clotrimazole pessary to be added, if vulval oedema, itching, excoriations, or curd-like discharge present
VDS + GUS (pregnant, breastfeeding)	Cefixime (400 mg stat)/ceftriaxone(250 mg IM stat) + metronidazole(2 g orally stat) + benzathine penicillin* (2.4 MU IM stat) + azithromycin (1 g orally stat) / erythromycin* (500 mg orally q.i.d for 7 days) + acyclovir (400 mg orally t.i.d for 7 days) Clotrimazole pessary to be added, if vulval oedema, itching, excoriations, or curd-like discharge present
LAP + GUS	Ceftriaxone (250 mg IM stat) + metronidazole(400 mg orally b.i.d for 7–14 days) + benzathine penicillin* (2.4 MU IM stat)+ azithromycin (1 g orally per week for 2 weeks) / doxycycline* (100 mg orally b.i.d for 7–14 days) + Acyclovir (400 mg orally t.i.d for 7 days)
Painful scrotal swelling + GUD	Ceftriaxone (250 mg IM stat) + benzathine penicillin* (2.4 MU IM stat) + azithromycin(1 g orally per week for 2 weeks)/doxycycline* (100 mg orally b.i.d for 7–14 days) + acyclovir (400 mg orally t.i.d for 7 days)
* In penicillin-allergic patients, give doxycycline (men/not pregnant women) or erythromycin (pregnant women) for 14 days instead of 7 days.	

Notes: four times a day (q.i.d), genital ulcer disease (GUD), genital ulcer syndrome (GUS), lower abdominal pain (LAP), sexually transmitted infection (STI), three times a day (t.i.d), twice a day (b.i.d), urethral discharge syndrome (UDS), vaginal discharge syndrome (VDS)

Management of Other Common STI Conditions

The following common STI conditions have been grouped together because of their different presentations and can easily be diagnosed through laboratory investigations and clinical observation. However, others are not related to sexual transmission, but they affect genital parts—e.g., balanoposthitis—while other conditions that are transmitted through close sexual intimacy may not affect genital parts only, e.g., pediculosis and scabies.

Early Syphilis

This refers to primary, secondary, or latent syphilis of not more than 2 years in duration. In this case, it is recommended to treat by giving benzathine penicillin (2.4 MU, IM, single dose given as two injections at each buttock) or a tablet of azithromycin (1 gm start). An alternative regimen for penicillin-allergic not pregnant patients is doxycycline (100 mg orally twice daily for 15 days).

Late Syphilis

This refers to syphilis infection of more than 2 years. Recommended regimen is benzathine benzylpenicillin 2.4 MU once a week for 3 consecutive weeks. An alternative is to give azithromycin 2 g stat.

Syphilis in Pregnancy

Pregnant women should be regarded as a separate group, requiring close surveillance, in particular, to detect possible reinfection after treatment has been given. It is also important to treat the sexual partner(s). Pregnant women who are not allergic to penicillin should be treated with penicillin, at all stages of pregnancy, according to the dosage schedules for the treatment of patients who are not pregnant and who are at a similar stage of the disease—i.e., benzathine benzylpenicillin (2.4 MU, IM, as single dose). However, if there are clinical reasons to suspect that the client has late syphilis, three doses of benzathine benzylpenicillin should be provided.

Congenital Syphilis

All infants born to seropositive mothers should be treated with a single IM dose of 50,000 IU/kg of benzathine penicillin—regardless of the mothers' treatment (with or without penicillin) during pregnancy. Hospitalisation is recommended for all symptomatic babies born to mothers who were seropositive. Symptomatic infants and asymptomatic infants with abnormal cerebrospinal fluid (up to 2 years of age) should be treated as early congenital syphilis. The following treatment regimens are recommended for infants with early congenital syphilis (up to 2 years of age) and for infants with abnormal cerebrospinal fluid:

- Aqueous benzylpenicillin 100,000–150,000 IU/kg/day, administered as 50,000 IU/kg/dose IV every 12 hours during the first 7 days and every 8 hours thereafter for a total of 10 days

OR

- Procaine benzylpenicillin 50,000 IU/kg by IM injection, as a single daily dose for 10 days

Note: Some experts treat all infants with congenital syphilis as if the cerebrospinal fluid findings were abnormal. Antibiotics other than penicillin (i.e., erythromycin) are not indicated for congenital syphilis, except in cases of severe allergy to penicillin. Tetracyclines should not be used in young children. The alternative regimen for penicillin-allergic patients, after the first month of life, is erythromycin (7.5–12.5 mg/kg orally, four times daily for 30 days). For congenital syphilis in children who are at least 2 years old, the treatment regimen is aqueous benzylpenicillin (200,000–300,000 IU/kg/day, IV or IM injection, administered as 50,000 IU/kg every 4–6 hours for 10–14 days).

All infants of seropositive mothers should be examined at birth and at monthly intervals for 3 months until it is confirmed that serological tests are and remain negative. Any antibody carried over from mother to baby usually disappears within 3 months of birth. Where available, serology specific to immunoglobulin M (IgM) may aid diagnosis (SD BIOLINE Syphilis 3.0 test).
Early congenital syphilis responds generally well, both clinically and serologically, to adequate doses of penicillin. Recovery may be slow in seriously ill children with extensive skin, mucous membrane, bone, or visceral involvement. Those in poor nutritional conditions may succumb to concurrent infections, e.g., pneumonia.

Syphilis and HIV Infection

All patients with syphilis should be encouraged to undergo testing for HIV because of the high frequency of dual infections and their implications for clinical assessment and management. Neurosyphilis should be considered in the differential diagnosis of neurological disease in HIV-infected individuals. In cases of congenital syphilis, the mother should be encouraged to undergo testing for HIV; if her test is positive, the infant should be followed up with HIV tests.
Recommended therapy for early syphilis in HIV-infected patients is no different from the therapy for non-HIV-infected patients. However, some authorities advise examination of the cerebrospinal fluid and/or the provision of more intensive treatment with a regimen appropriate for all patients who are dually infected with *Treponema pallidum* and HIV, regardless of the clinical stage of syphilis. In all cases, careful follow-up is necessary to ensure that the treatment is adequate.

Genital Warts (Venereal Warts)

HPV is a common sexually transmitted pathogen. Genital warts are painless but may lead to serious complications. The removal of the lesion does not cure the infection. No treatment is completely satisfactory. In most clinical situations, podophyllin (10% or 25%), podofilox, or trichloroacetic acid (TCA) is used to treat external genital and perianal warts. Cryotherapy, with liquid nitrogen, solid carbon dioxide, or cryoprobe is preferred by many physicians when available. Cryotherapy is nontoxic, does not require anaesthesia, and, if used properly, does not result in scarring.

Note: When using topical applicants, apply Vaseline around the lesion to avoid burning the surrounding mucous.

Sexual partners should be examined for evidence of warts. Patients with anogenital warts should be made aware that they are highly contagious to sexual partners. The use of condoms is recommended to help reduce transmission.

Specific types of HPV have been associated with the occurrence of carcinoma of the cervix. It is a recommended practice to examine the cervix in all female patients with STIs/RTIs and to perform VIA annually in a person infected with HIV and to perform VIA every 3 years for non-HIV patients. However, a high percentage of smears in adolescents may incorrectly appear to be abnormal.

Available treatments for visible anogenital warts are either patient-applied (i.e., podophyllotoxin or imiquimod), which remove the need for frequent clinic visits, or administered by the provider. Podophyllotoxin solution (10%–25%) may be applied with a cotton swab, and the gel can be applied with a finger. Recommended regimens for venereal warts are the following:

A. Chemical treatment

Self-applied (i.e., patient applies it)

- Administer podophyllotoxin solution (10%–25%) or gel twice daily for 3 days, followed by 4 days of no treatment; repeat the cycle up to 4 times. Total volume of podophyllotoxin should not exceed 0.5 mL per day.

OR

- Apply imiquimod cream (5%) with a finger at bedtime. Leave on overnight. Do this three times a week for as long as 16 weeks. The treatment area should be washed with soap and water 6–10 hours after the application, and hands must be washed with soap and water immediately after the application. The safety of both podophyllotoxin and imiquimod during pregnancy has not been established.

Administered by provider

- Carefully apply podophyllin (10%–25%), as part of a compound tincture of benzoin, to the warts, avoiding normal tissue. External genital and perianal warts should be washed thoroughly 4–6 hours after the application of podophyllin. Podophyllin applied to warts on vaginal or anal epithelial surfaces should be allowed to dry before removing the speculum or anoscope. Treatment should be repeated at weekly intervals.
- Where available, podophyllotoxin 0%, or 10% of the active constituents of podophyllin resin, is recommended. Its efficacy is equal to that of podophyllin, but it is less toxic and appears to cause less erosion. Some experts advise against the use of podophyllin for anal warts. Large amounts of podophyllin should not be used because it is toxic and easily absorbed; its use during pregnancy and lactation is contraindicated.

OR

- Carefully apply trichloroacetic acid (TCA) (80%–90%) to the warts, avoiding normal tissue. Then, follow up by powdering the treated area with talc or sodium bicarbonate (baking soda) to remove unreacted acid. Repeat application at weekly intervals.

B. Physical treatment (available at higher-level centres)

- Cryotherapy with liquid nitrogen, solid carbon dioxide, or a cryoprobe—repeat applications every 1–2 weeks

OR

- Electrosurgery

OR

- Surgical removal

C. Treatment for vaginal warts
Recommended regimens for treatment of vaginal warts are the following:

- Cryotherapy (with liquid nitrogen)

OR

- Podophyllin (10%–25%), allow to dry before removing speculum

OR

- TCA (80%–90%)

D. Treatment for cervical warts
Treatment of cervical warts should not be started until the results from a cervical smear test are known. Most experts advise against the use of podophyllin or TCA for cervical warts.

E. Management of meatal and urethral wart

- Cryotherapy

OR

- Podophyllin (10%–25%)

Accessible meatal warts may be treated with podophyllin (10%–25%) in a compound tincture of benzoin or with podophyllotoxin (0.5%), where available. Great care should be taken to ensure that the treated area is dried before contact is allowed with normal skin or opposing epithelial surfaces. Low success rates with podophyllin are reported.

Urethroscopy is necessary to diagnose intraurethral warts, but they should be suspected in men with recurrent meatal warts. Some experts prefer electrosurgical removal. Intraurethral instillation of a 5% cream of fluorouracil or thiotepa may be effective, but neither has been adequately evaluated. *Podophyllin should not be used.*

Pediculosis Pubis (Phthiriasis)

The louse *Phthirus pubis* is the cause of pubic lice. The infestation is transmitted by sexual contact. Patients usually seek medical care because of pruritus. Recommended regimens for treatment are the following:

- Gently but thoroughly rub lindane (1% lotion or cream) into the infected area and adjacent hairy areas, and wash off after 8 hours; as an alternative, apply lindane (1%) shampoo for 4 minutes and then thoroughly wash off.

OR

- Apply pyrethrins plus piperonyl butoxide to the infected and adjacent hairy areas, and wash off after 10 minutes; retreatment is indicated after 7 days if lice are found or eggs are observed at the hair-skin junction. Clothing or bed linens that may have been contaminated by the patient in the

2 days before the start of the treatment should be washed and dried well, or dry-cleaned. Shave pubic hairs using a pair of scissors.

OR

- Give permethrin (1%) as described above.

The safety of both podophyllotoxin and imiquimod during pregnancy has not been established.

Special considerations: Pediculosis of the eyelashes should be treated by the daily application of an occlusive ophthalmic ointment to the eyelid margins for 10 days, in order to smother lice and nits. The ointment should not be applied to the eyes.

Balanoposthitis

Balanoposthitis refers to the inflammation involving the glans penis and the foreskin. It may be found with underlying immunosuppressive disease or uncontrolled diabetes mellitus. It is not an STI. It is more common in uncircumcised males; however, a client with the condition should be advised to keep good local hygiene—wash with soap and clean water, and paint area with gentian violet (0.5%) or use an antifungal lotion locally.

Scabies

Scabies is often sexually transmitted in adults. However, there are situations in which scabies is transmitted through close-body contact not related to sexual activities. This is true in circumstances in which people are living in very close quarters—such as in schools, poor housing complexes, and institutions, e.g., nursing homes, prisons, and psychiatric hospitals. To prevent stigmatization, labelling scabies as an STI should be avoided when the likely cause is close-body contact. In addition, the management recommendations are different for patients presenting with sexually acquired scabies (i.e., young adult living in good housing conditions). Management of such patients should include treatment of all sexual partners. For outbreaks of scabies related to nonsexual close-body contact, treatment of all people involved is critical.

Recommended regimens for adults, adolescents, and older children:

- Lindane (1%) lotion or cream applied thinly to all areas of the body from the neck down and washed off thoroughly after 8 hours.

OR

- Permethrin cream (5%)

OR

- Benzyl benzoate (25%) lotion nightly applied, for two nights, to the entire body from the neck down; patients may bathe before reapplying the drug and should bathe 24 hours after the final application

OR

Crotamiton (10%) lotion nightly applied, for two nights, to the entire body from the neck down and washed off thoroughly 24 hours after the second application; an extension to five nights is found necessary in some geographical areas (crotamiton has the advantage of an antipruritic action)

OR

- Sulfur (6%) in petrolatum nightly applied, for three nights, to the entire body from the neck down; patients may bathe before reapplying the product and should bathe 24 hours after the final application

Recommended regimens for infants, children aged less than10 years, and pregnant or lactating women:

- Crotamiton (10%), as above

OR

- Sulphur (6%), as above

OR

- Permethrin (5%), cream, applied in the same way as the sulphur regimen described above

OR

- Benzyl benzoate (12.5%) lotion

Note: Sexual contacts and close household contacts should be treated as above.

Special Considerations

Pruritus may persist for several weeks after adequate therapy. A single treatment after 1 week may be appropriate if there is no clinical improvement. Additional weekly treatments are warranted only if live mites can be demonstrated. If reinfection can be excluded and compliance assured, topical anti-inflammatory therapy may be considered because an allergic reaction may be the reason for clinical manifestation.

Clothing or bed linens that may have been contaminated by the patient in the 2 days before the start of treatment should be washed and well dried, or dry-cleaned.

Hepatitis B

Hepatitis B is a viral infection that causes inflammation of the liver. Hepatitis B virus (HBV) infects the liver and causes liver cirrhosis and liver cancer. HBV is transmitted through contact with semen, blood, or other body fluids of an infected person. The most common means of transmission include having unprotected sex, sharing needles when injecting drugs, and passing the infection from mother to baby around the time of birth. Less common means of transmission include using unscreened blood or blood products, being accidentally exposed to needle-stick injury or blood in health care settings, and sharing razors or toothbrushes. Incubation period is 6 weeks to 6 months, averaging 2–3 months.

Most people with HBV do not have any symptoms until it is too late. According to WHO, one in four adults with chronic HBV dies of liver cancer or liver cirrhosis. Furthermore, worldwide, there are 10 times more people with chronic HBV than HIV/AIDS, and HBV is 50–100 times more infectious than HIV.

In Tanzania, data from medication assistance therapy clinics in Dar es Salaam, from 2011 to 2014, show that of the 1,060 participants enrolled as of June 2014, HIV prevalence was 26%, prevalence of hepatitis C virus (HCV) was 47.5%, HBV prevalence was 29.1%, and TB prevalence was 17.2%. Furthermore, studies done among female sex workers in Tanzania, from 2010 to 2013, showed high rates of HIV and other STIs. HIV prevalence ranges from 17% to 37%, compared with 6.4% among women aged 15–49 years[12] in seven regions. HBV prevalence was 6.3%, HCV prevalence was 2.3%, HSV-2 prevalence was 54.1%, syphilis prevalence was 7.0 %, and gonorrhoea prevalence was 10.5%.

Stages of HBV Infection

There are two stages of HBV infection, which include acute and chronic infection. Acute (new infection) occurs in < 10% children and in 30%–50% adults who develop symptoms when first infected. Symptoms of the acute stage include loss of appetite, nausea, vomiting, abdominal discomfort, joint pain, fever, fatigue, dark urine, pale stools, and jaundice; this is a short-term disease that occurs when a person is first infected with HBV. Symptoms may occur in approximately 70% of patients 12 weeks after infection. The immune system usually suppresses the virus, and complete recovery may occur within a few months. Chronic (long-term infection) occurs in over 90% of babies who get infected during their first year of life.[13] Chronic infection can lead to chronic liver disease, cirrhosis, liver cancer, or liver failure, usually after 20 years or after 30 or more years. Approximately 240 million people are chronically infected worldwide.[14]

Screening for HBV

Screening for HBV identifies people who have chronic HBV, so they can receive medical treatment. Furthermore, it is done to identify those who are unprotected, so they can be vaccinated. Screening should target all patients who have abnormal liver function tests or who are positive for HCV, all foreign-born persons from areas where the rate of HBV infection is moderate to high, household and sexual contacts of infected persons, pregnant women, HIV-positive people, haemodialysis patients, and injection drug users.

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[12] National AIDS Control Programme (NACP). 2011. *HIV Behavioral and Biological Surveillance Survey among Female Sex Workers in Dar es Salaam, 2010.* National AIDS Control Programme, Ministry of Health and Social Welfare, US Centers for Disease Control and Prevention (CDC), and University of California, San Francisco.

[13] Centers for Disease Control and Prevention (CDC). Hepatitis B FAQs for the public. CDC website. https://www.cdc.gov/hepatitis/hbv/bfaq.htm. Accessed on August 21, 2017.

[14] World Health Organization (WHO). Fact sheets: hepatitis B. WHO website. http://www.who.int/mediacentre/factsheets/fs204_Jul2014/en/. Accessed on August 21, 2017.

Diagnosis of HBV

HBV is diagnosed through blood tests. There are three common blood tests:

- Hepatitis B surface antigen (HBsAg)
- A positive or reactive test results means that a person is infected with HBV (if the person has experienced more than 6 months of HBV infection)
- Hepatitis B surface antibody (HBsAb)
- Positive results indicates that a person has successfully responded to the HBV vaccine or has recovered from an acute HBV infection
- Hepatitis B core antibody (HBcAb)
- This is an antibody that is part of HBV. It does not provide protection. Positive results indicates a past or present infection, but it can also be a false positive.

Treatment of HBV Infection

There is no cure for HBV infection, but chronic HBV can be managed. Many patients, once treated, can live normal and healthy lives. Early detection and proper management can help save lives. Current treatments for hepatitis B fall into two general categories:

- Immune modulator drugs
  - These are interferon-type drugs that boost the immune system to help get rid of the HBV. They are given as a shot (similar to how insulin is given to people with diabetes) over 6 months to 1 year.
- Antiviral drugs
  - These are drugs that stop or slow the HBV from reproducing, which reduces the inflammation and liver damage. These drugs are taken as a pill once a day for at least 1 year, usually longer.

Oral medications include the following: adefovir, dipivoxil, entecavir, lamivudine, telbivudine, and tenofovir disoproxil fumarate. Injectable medications include interferon alfa-2b and pegylated interferon alfa-2a (peginterferon).

Prevention

Hepatitis B has been vaccine-preventable since 1982, yet one person still dies every 30–45 seconds of HBV-caused liver cancer and liver failure. Vaccination is the best way to protect against HBV. Some other ways to guard against infection include learning more about hepatitis; using condoms during intimate contact; not sharing razors or toothbrushes with an infected person; preventing transmission to infants by making sure the infant receives vaccination; and not donating blood, organs, or semen if positive for HBV.

Chapter 9. STI/RTI Complications Related to Pregnancy, Miscarriage, Induced Abortion, and the Postpartum Period

Overview

Chapter 7 discussed STIs/RTIs in the context of routine care of women during pregnancy, childbirth, and the postpartum period. This chapter looks at some important STI/RTI-related problems that can occur during or following pregnancy, and it addresses the management of infectious complications that can occur in such situations. Management of miscarriage, complicated induced abortion (endometritis, septic abortion), and postpartum infection (endometritis, puerperal sepsis) is emphasized because these are among the most serious conditions that affect women's health during their reproductive years—and are largely preventable (see Box 9.1).

While this chapter focuses on STI/RTI management, infection may not be the woman's chief concern or reason for her visit to the clinic. Women with abortion complications or postpartum infection often present with bleeding and pain and may be in shock. Follow standard treatment guidelines to provide guidance on comprehensive management including assessing, stabilizing patients, and starting IV fluids and antibiotics. Once stabilized, the patient should be referred to a centre that can provide appropriate emergency services. Advice on preventing infection when performing medical and obstetric procedures is given in Chapter 4.

Box 9.1. Key points

- Infection in pregnancy, following miscarriage, after an induced abortion, or in the postpartum period can be life threatening and must be managed aggressively without delay.
- Patients with infectious complications from an induced abortion (safe or unsafe) should be treated with IV fluids and antibiotics and immediately referred if emergency management cannot be provided onsite.
- Infection in pregnancy can provoke preterm labour and serious complications for the mother and foetus. Prevention and early management are key to reducing morbidity and mortality.
- Patients with postpartum infections should be treated with IV fluids and antibiotics and immediately referred if emergency management cannot be provided onsite.
- Vaginal discharge in pregnancy may mask signs of abortion complications, rupture of membranes, or postpartum infection; treatment should be given to address yeast infection, trichomoniasis, and bacterial vaginosis.
- Activities to prevent postpartum infection include prevention and detection of STIs/RTIs during pregnancy (see Chapter 2 and Chapter 4) and good delivery practice.

Notes: intravenous (IV), reproductive tract infection (RTI), sexually transmitted infection (STI)

Infection in Early Pregnancy

Upper genital tract infection is different in pregnant women than in women who are not pregnant. A woman with a preexisting PID has difficulty becoming pregnant as acute infection in the uterus interferes with implantation of the ovum and fertilization; an established PID may cause scarring, infertility, and an ectopic pregnancy.

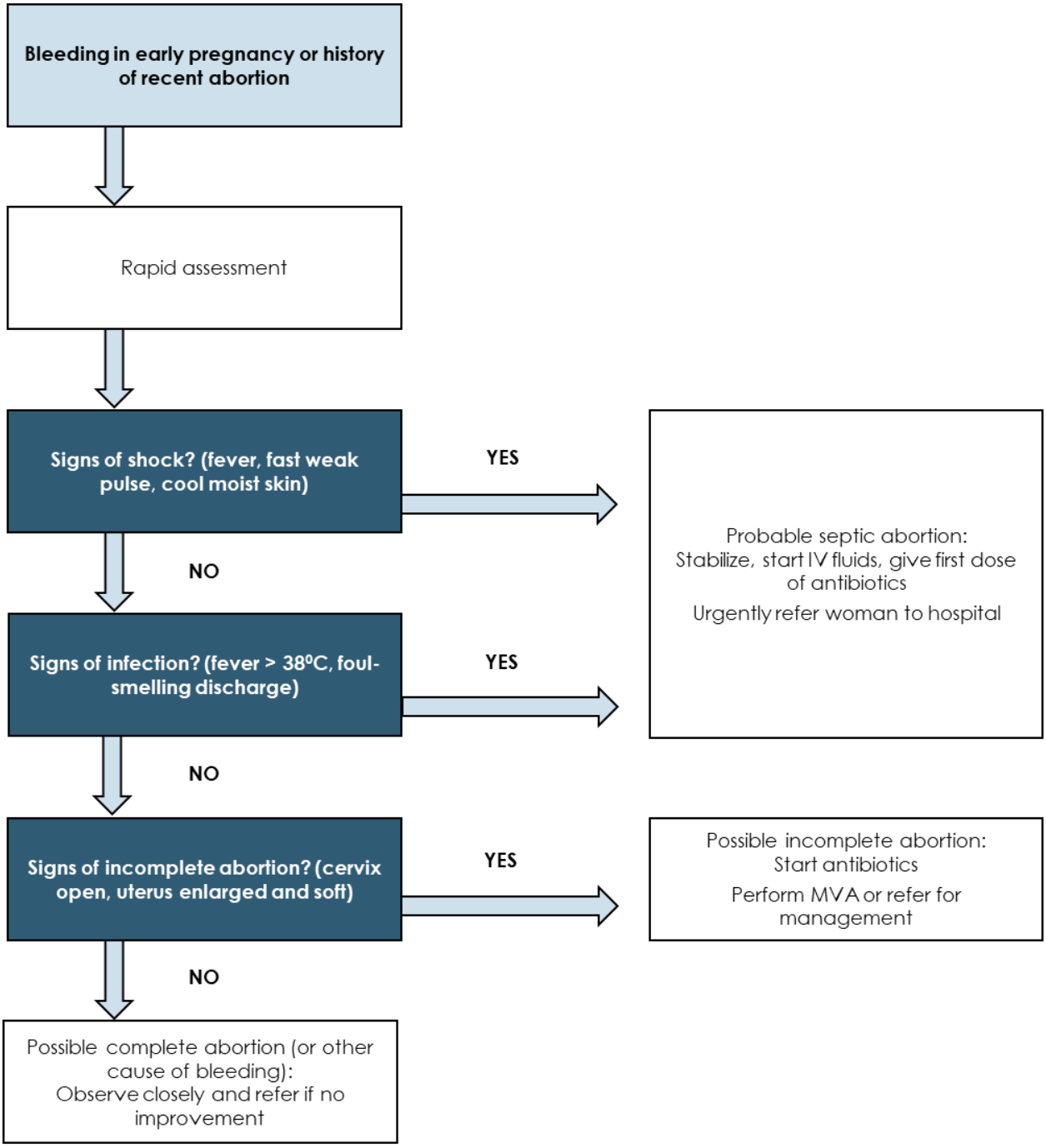
Most infectious complications of early pregnancy are related to spontaneous or induced abortions. Spontaneous abortion (or miscarriage) is common in the first trimester and usually resolves without complication. Induced abortion is also common, and the risk of infection is high when it is performed in unsafe conditions. Spontaneous or induced abortion is incomplete when products of conception remain inside the uterus, and infection may develop if any remaining products of conception are not removed. Such details are not always apparent when a woman seeks medical care for abortion complications. In fact, women with problems following an induced abortion may not mention having had a procedure, especially in places where abortion is illegal. They may simply complain of spontaneous bleeding or other problems instead. Therefore, health care providers should have a high index of suspicion and manage possible infection following an abortion based on objective signs, regardless of history.

Management of Postabortion Complications

The treatment of a complicated abortion includes stabilizing the patient, removing the remaining products of conception from the uterus, and administering antibiotics through IV or IM method (see Flow Chart 10 and Treatment Table 9.1). Abortion complications can be life threatening, and timely assessment and management are critical. A rapid assessment, short history, vital signs, general examination, and abdominal and genital examinations should be performed and emergency treatment started. Women with signs of shock should be stabilized with IV fluids. All women with signs of shock or infection in early pregnancy should be given the first dose of antibiotics through IV or IM method, and referred immediately to a facility that can provide appropriate management, including safe evacuation of the uterine contents.

Syphilis testing should be performed on every woman who experiences a spontaneous abortion.

Flow Chart 10. Possible complications of abortion



See Treatment Table 9.1

Note: Oxytocin (10 IU), ergometrine (0.2 mg), or misoprostol (600 mg) IM or by slow IV infusion is recommended to control heavy bleeding.

Notes: intramuscular (IM), intravenous (IV), manual vacuum aspiration (MVA)

Incomplete Abortion and Risk of Infection

Vaginal bleeding in early pregnancy may indicate a threatened abortion or an abortion that is in progress or incomplete; or the bleeding may be a sign of ectopic pregnancy or another problem. Signs of an incomplete abortion include pain, bleeding, and open cervical os. Abdominal pain frequently precedes or accompanies abortion, post abortion infection and ectopic pregnancy. Severe pain without vaginal bleeding may be a sign of ectopic pregnancy.

The treatment of incomplete abortion involves removing the remaining products of conception. This can be safely performed using manual vacuum aspiration (MVA) or other methods. If there are signs of infection, women should be treated with antibiotics (see Chapter 2). All other women should be counselled to come back immediately if any signs of infection appear.

Women with light vaginal bleeding and no signs of shock or infection should be further evaluated if they do not improve in the next few days.

Infections in Late Pregnancy

After the first trimester, infection of the vagina, cervix, or foetal membranes or amniotic fluid (chorioamnionitis) is a common cause of spontaneous abortion, rupture of membranes, preterm labour, and stillbirth. The same vaginal, cervical, and exogenous organisms (gonococci, chlamydia, bacteria associated with bacterial vaginosis, trichomonas, group B streptococci) may be involved in postabortion infection, chorioamnionitis, postpartum, and neonatal infections. Some of these infections often follow vaginal examination or other procedures, which should be avoided in late pregnancy unless necessary. Prevention of these complications also includes detection and treatment of STIs/RTIs during ANC visits where possible (see Chapter 2).

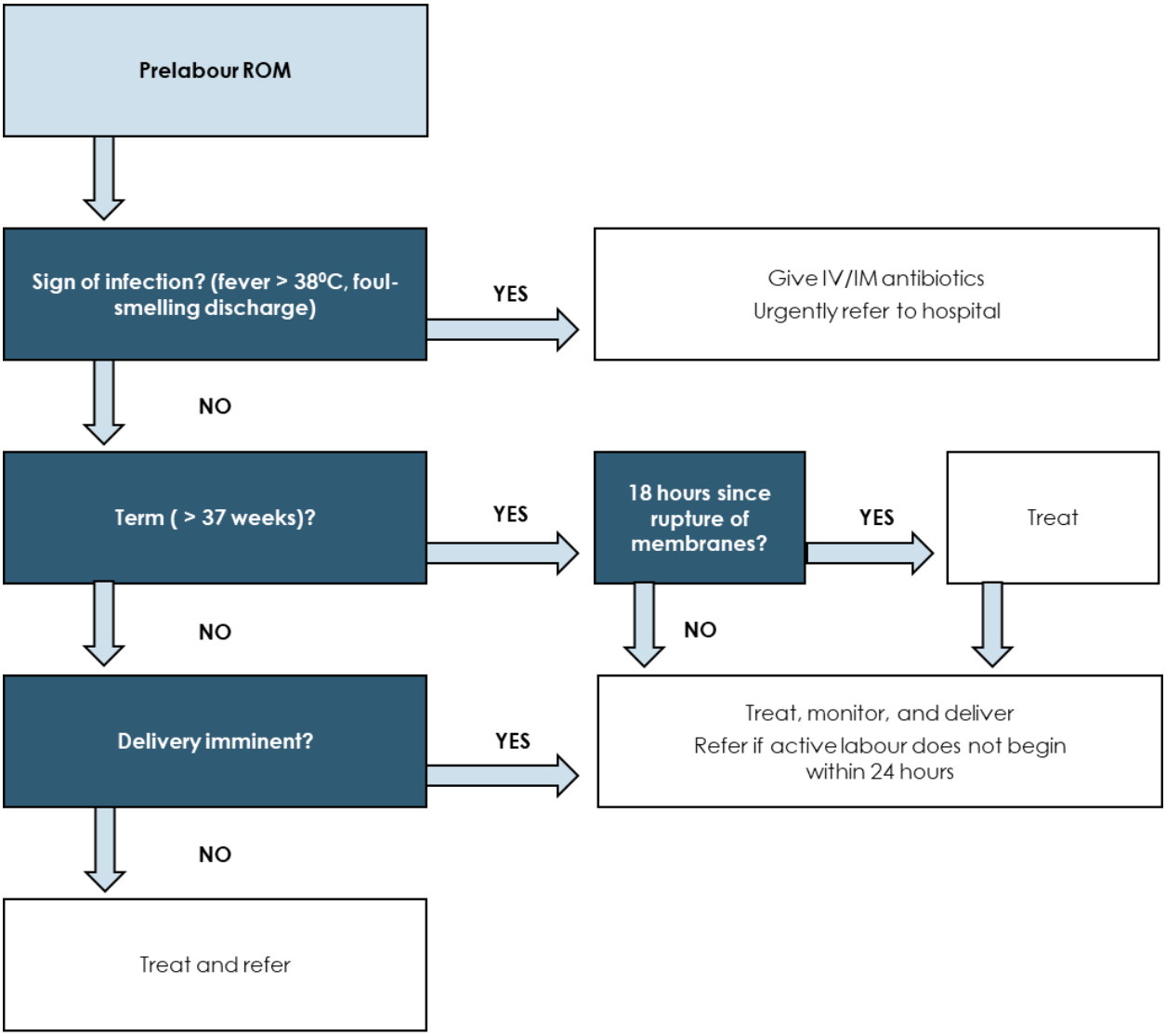
Infections and Rupture of Membranes

Infections may cause a rupture of membranes (ROM) or follow it. All women—whether at term or preterm—with ROM and any signs of infection (fever, increased white blood cells, increased C-reactive protein, or foul-smelling discharge) should be given antibiotics through an IV or IM method (see Flow Chart 11) and urgently referred for care.

When membranes rupture at term, labour usually begins within 24 hours. Women without signs of infection can be observed. If labour does not begin within 24 hours, the woman should be referred to a facility where labour can be safely induced. To further reduce the risk of infection, avoid unnecessary vaginal examinations once the membranes have ruptured; and if labour has not begun within 18 hours, give antibiotics (see Treatment Table 9.2) to reduce the risk of infection before and after delivery.

When membranes rupture before term, complications—preterm delivery, low birthweight, and perinatal morbidity and mortality—are more common. When an ROM occurs before onset of labour, management should take into account the health of the mother, gestational age and viability of the foetus, and available options for intervention. Flow Chart 11 summarizes the management of women with prelabour ROMs.

Flow Chart 11. Prelabour rupture of membrane (ROM)



See Treatment Table 9.1

Notes: intramuscular (IM), intravenous (IV), rupture of membrane (ROM)

In choosing the antibiotic to treat infection in a woman with a viable pregnancy, the risks and benefits of the antibiotic should be carefully weighed. Antibiotics that may harm the foetus should be avoided where possible (see Annex 4). If infection is severe, however, prioritize the life of the mother by administering the most effective antibiotic treatment.

Prevention of infection in late pregnancy and preterm delivery should include interventions throughout the pregnancy to prevent and detect STIs/RTIs. Where feasible, screening for common STIs/RTIs implicated in prelabour ROMs and through other adverse pregnancy outcomes is recommended at the first ANC visit and again later in pregnancy for women at high risk of preterm labour (see Chapter 3). The importance of primary prevention of STIs/RTIs in a healthy pregnancy should be emphasized to women and their partners.

Infections Following Childbirth

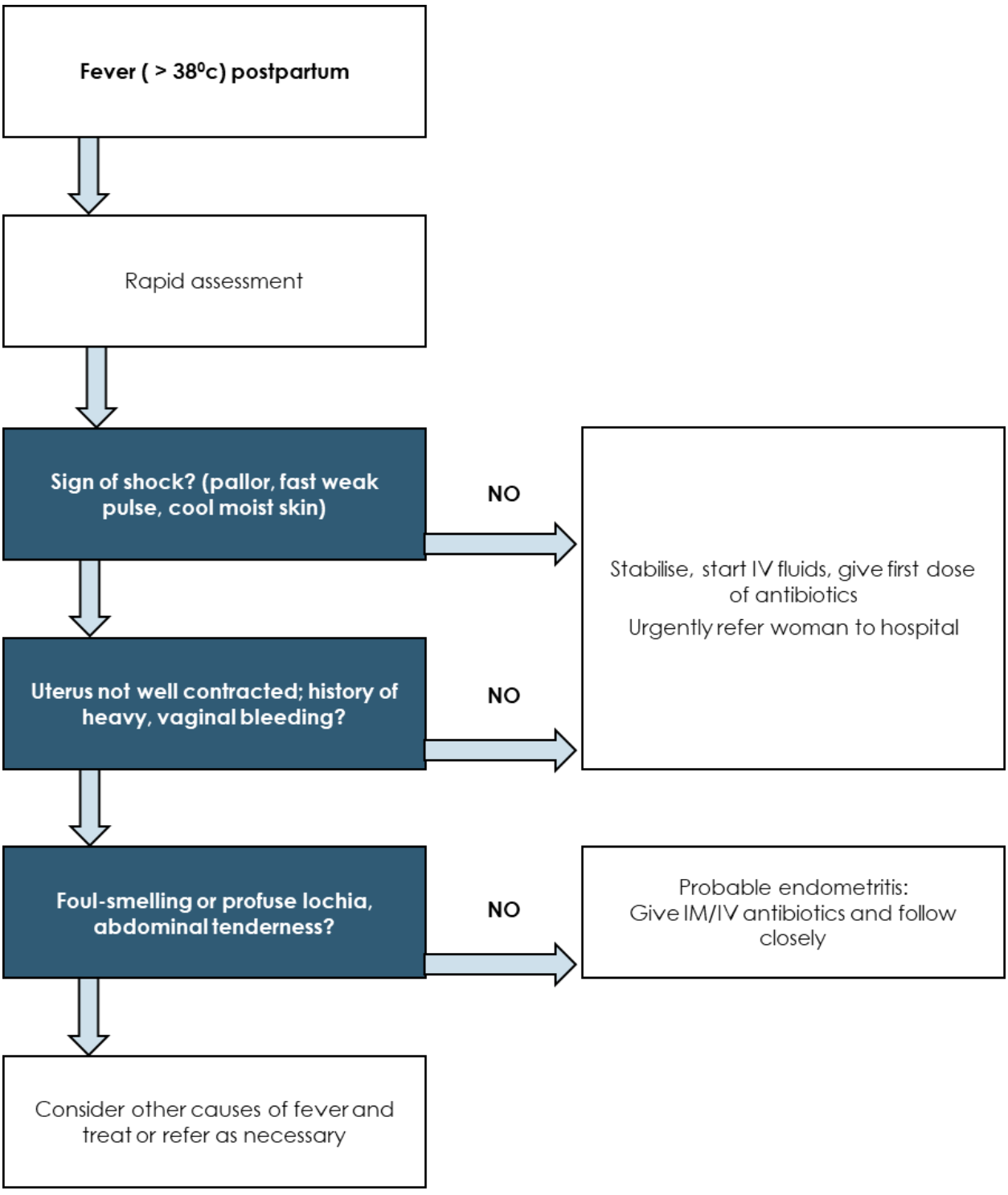
Postpartum Endometritis and Puerperal Sepsis

Postpartum endometritis (uterine infection) and puerperal sepsis are common causes of maternal morbidity and mortality, respectively, and are largely preventable with good ANC, delivery practices, and postpartum care. When care is delayed or inadequate, however, infection can progress quickly to become a generalized sepsis, which can result in infertility, chronic disability, and even death.

Postpartum endometritis is commonly caused by gonococci, chlamydia, anaerobic bacteria, Gram-negative facultative bacteria, and streptococci. In developed countries, most postpartum infections are related to caesarean sections. Elsewhere, postpartum endometritis more often follows vaginal delivery. Early postpartum endometritis occurs within the first 48 hours, and late infection occurs between 3 days and 6 weeks following delivery. Aggressive treatment should be given for all postpartum infections.

Women with signs of infection during the immediate postpartum period should be stabilized, given a first dose of antibiotics through an IV (or IM) method, and urgently referred to a hospital. Flow Chart 12 outlines the management of women presenting with fever between 24 hours and 6 weeks postpartum.

Flow Chart 12. Postpartum infection



See Treatment Table 9.1

Notes: intramuscular (IM), intravenous (IV)

Treatment Table 9.1. Antibiotic regimens for treatment of infection following miscarriage, induced abortion, or delivery (septic abortion, postpartum, endometritis)

Option 1	Option 2	Option 3	Option 4
Commonly available, least expensive; give all three drugs	Choose one drug from each box (= three drugs)	Give both drugs	Choose one drug from each box (= three drugs)
Ampicillin 2 g by IV or IM, then 1 g every 6 hours	**Ceftriaxone** 250 mg by IV or IM, every 8 hours	**Clindamycin** 900 mg by IV, every 8 hours	**Cefixime** 400 mg orally single dose, orspectinomycin1 g by IM, q.i.d
Gentamicin 80 mg by IV or IM every 12 hours	**Doxycycline** 100 mg orally or by IV, b.i.d; or tetracycline 500 mg orally q.i.d	**Gentamicin** 1.5 mg/kg of body weight by IV every 12 hours	**Doxycycline** 100 mg orally or by IV b.i.d; or tetracycline, 500 mg orally, q.i.d
Metronidazole[a] 500 mg orally or by IV every 8 hours	**Metronidazole**[a] 400–500 mg orally or by IV, b.i.d; or chloramphenicol, 500 mg orally or by IV, q.i.d		**Metronidazole**[a] 400–500 mg orally or by IV, b.i.d; or chloramphenicol, 500 mg orally or by IV, q.i.d

[a] Patients taking metronidazole should be counselled to avoid alcohol.

[b] The use of quinolones should take into consideration the patterns of *Neisseria gonorrhoea* resistance.

Notes: four times a day (q.i.d), intramuscular (IM), intravenous (IV), twice a day (b.i.d)

Treatment Table 9.2. Antibiotic regimens for treatment of infectious complications with viable pregnancy (chorioamnionitis, ROMs)

Option 1—safest for foetus when there are no signs of maternal infection	Option 2—best coverage when maternal signs of infection (fever, foul-smelling discharge) are present
Oral/IM combination that is safe in pregnancy Choose one from each box (= three drugs)	Commonly available, least expensive Give all three drugs until delivery. If a woman delivers vaginally, discontinue all antibiotic after delivery. If delivery is by caesarean section, continue antibiotics until she is free of fever for 48 hours.
Cefixime: 400 mg orally as a single dose OR **Ceftriaxone:** 125–250 mg by IM injection	**Ampicillin:** 2 g by IV or IM, then 1 g every 6 hours
Erythromycin:[a] 500 mg orally q.i.d for 7 days OR **Azithromycin** 1 g orally as a single dose	**Gentamicin** 80 mg by IM every 12 hours
Metronidazole:[b] 2 g orally as a single dose	**Metronidazole:**[b] 500 mg orally or by IV infusion every 8 hours

[a] Erythromycin estolate is contraindicated in pregnancy because of drug-related hepatotoxicity; only erythromycin base or erythromycin ethylsuccinate should be used.

[b] Patients taking metronidazole should be counselled to avoid alcohol.

Notes: four times a day (q.i.d), intramuscular (IM), intravenous (IV), rupture of membrane (ROM)

Vaginal Discharge in Pregnancy and the Postpartum Period

Vaginal discharge, as a symptom or sign of RTI, presents different challenges during pregnancy because physiological changes during pregnancy can affect the normal microbiological environment (flora) of the vagina. For example, discharge may be more abundant, and yeast infection is more common. Women with vaginal discharge should be carefully questioned and examined to make sure that the discharge is not an early sign of a more serious problem:

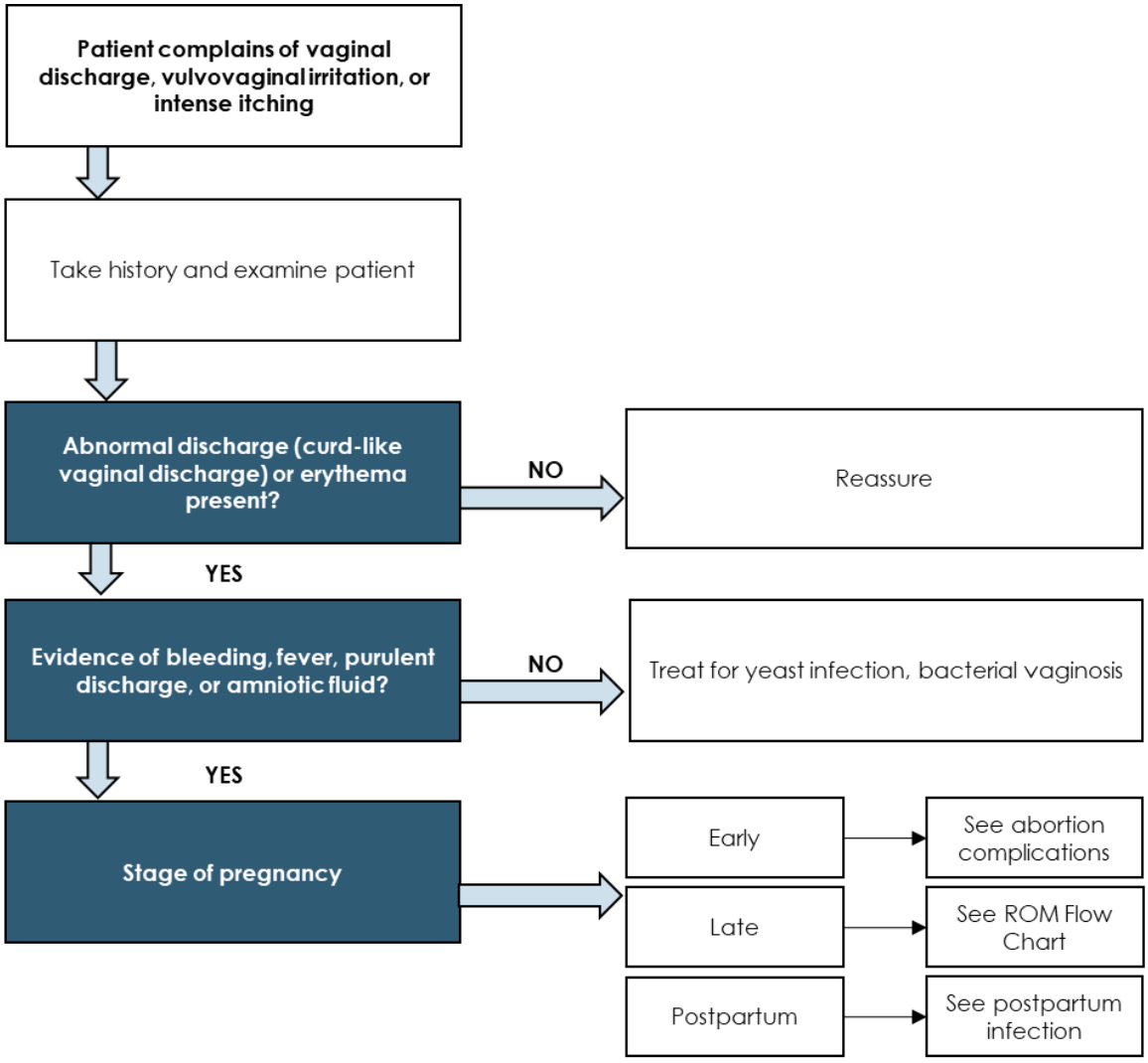
- In early pregnancy, discharge may mask spotting or light bleeding that could indicate ectopic pregnancy, threatened abortion, or cervical cancer.
- A watery discharge in late pregnancy could be amniotic fluid from an ROM.

A careful history and examination will usually provide clues to help distinguish simple vaginitis from a more serious condition. When discharge is accompanied by bleeding, fever, abdominal pain, or amniotic fluid leakage, the patient should be managed or referred for possible sepsis.

If pregnancy complications have been ruled out, all women with vaginal discharge should be treated for bacterial vaginosis, trichomoniasis, and yeast infection. Yeast infection is very common during pregnancy and is often recurrent, so if a woman comes back with the same symptoms, she should be treated for yeast infection only.

Flow Chart 13 outlines the management of vaginal discharge during pregnancy and in the postpartum period.

Flow Chart 13. Vaginal discharge in pregnancy and postpartum period



See Treatment Table 9.3 or Flow Chart 2 (VDS)

When to add treatment for cervical infection:

1. **If she tells you…**
   - Her partner has symptoms
   - She is a sex worker
   - She thinks she was exposed to an STIs/RTIs
2. **In the postpartum period, if a transcervical procedure is planned**
3. **If speculum exam reveals…**
   - Mucopurulent discharge
   - Cervix bleeds easily when touched

Notes: reproductive tract infection (RTI), rupture of membrane (ROM), sexually transmitted infection (STI) vaginal discharge syndrome (VDS)

Treatment Table 9.3. Recommended treatment for vaginal infection in pregnancy

• **Therapy for bacterial vaginosis and trichomoniasis** **PLUS** • **Therapy for yeast infection if curd-like white discharge, vulvovaginal redness, and itching present**			
Coverage	**First choice** Choose one from bacterial vaginosis/*T. vaginalis* box below, or one from each box if yeast infection is suspected	**Effective substitutes**	**If woman is pregnant or breastfeeding:** Choose one from bacterial vaginosis/*T. vaginalis* box below, or one from each box if yeast infection is suspected
Bacterial vaginosis	**Metronidazole**[a] 2 g orally in a single dose OR **Metronidazole** 400 mg or 500 mg orally, b.i.d for 7 days	**Clindamycin** cream 2%, one full applicator (5 g) intravaginally at bedtime for 7 days OR **Clindamycin** 300 mg orally b.i.d for 7 days	**Preferably after first trimester:** **Metronidazole** 200 mg or 250 mg orally, t.i.d for 7 days OR **Metronidazole** gel 0.75%, one full applicator (5 g) intravaginally, b.i.d for 5 days OR **Clindamycin** 300mg orally, b.i.d for 7 days
Trichomoniasis		**Tinidazole**[a] 2 g orally in a single dose OR **Tinidazole** 500 mg orally, b.i.d for 5 days	
***Candida albicans* (yeast)**	**Miconazole** 200 mg vaginal suppository, o.d for 3 days OR **Clotrimazole**100 mg vaginal tablet, two tablets a day for 3 days OR **Fluconazole** 150 mg oral tablet in a single dose	**Nystatin** 100,000 unit vaginal tablet, o.d for 14 days	**Miconazole** 200 mg vaginal suppository, o.d for 3 days OR **Clotrimazole**[b] 100 mg vaginal tablet, two tablets a day for 3 days OR **Nystatin** 100,000 unit vaginal tablet, o.d for 14days

[a] Patients taking metronidazole or tinidazole should be cautioned to avoid alcohol. Use of metronidazole is not recommended in the first trimester of pregnancy. Vaginal tablets/pessaries preferably should be applied during the night (before sleeping).

[b] Single-dose clotrimazole (500 mg) available in some places is also effective for yeast infection (CA).

Notes: once a day (o.d), three times a day (t.i.d), twice a day (b.i.d)

Chapter 10. Sexual Violence

Overview

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."*[15]

Service providers should note the following:

- Sexual abuse happens to both females and males (this is contrary to popular belief that only women are sexually abused). However, it is true that most victims of sexual violence are female. In many countries, eight times out of 10, the abuser/perpetrator is a male.
- Sexual abuse acts are common—happen frequently—but they are seldom reported.
- More often than not, the abuser/perpetrator is a member of the immediate family or a relative or someone well known to the victim.
- Both males and females are vulnerable in childhood, but women are much more at risk in adolescence and adulthood. Box 10.1 provides an overview of sexual violence, and Box 10.2 gives some information on the occurrence of sexual violence.

Box 10.1. Key points

- Sexual abuse is common but frequently not talked about by the person affected—health care workers should maintain a high index of suspicion. They should ask about experience of sexual violence or abuse.
- Clinic policies and practice guidelines should be developed in accordance with national legal requirements.
- Women or children who have been sexually abused may need shelter and legal protection. Psychosocial management includes counselling and supportive services, which should be available on site or by referral.
- Medical management includes prevention of pregnancy and infection, in addition to care of injuries. STI and HIV post-exposure prophylaxis and emergency contraception should be available.
- Forensic examination should be available to document evidence if the person chooses to take legal action. Staff should be trained in how to take forensic specimens or referrals should be made.
- Referral should be available if services cannot be provided onsite.

Note: sexually transmitted infection (STI)

Box 10.2. Sexual abuse—some statistics

[15] World Health Organization (WHO). 2003. Guidelines for medico-legal care for victims of sexual violence. WHO website. http://www.who.int/violence_injury_prevention/publications/violence/med_leg_guidelines/en/. Accessed September 16, 2018.

Box 10.2. Sexual abuse—some statistics

Studies from different parts of the world have found that 7%–36% of girls and 3%–29% of boys suffer from sexual violence in childhood, with a majority of studies reporting 1.5–3 times more sexual violence against girls than boys. *In Tanzania, the prevalence of sexual abuse experienced by young people before turning 15 years old was 10% in Mbeya and 12% in Dar es Salaam.*

Population-based studies report that between 6% and 46% of women have experienced attempted or completed forced sex by an intimate partner or an ex-partner at some time in their lives. In Tanzania, the prevalence of sexual violence in women by an intimate partner is reported to be 23% (ever experienced violence) and 12.8% (currently experiencing sexual violence).[16]

Common Characteristics of Survivors of Sexual Violence

Health service providers should be aware that sexual violence survivors may present with atypical symptoms: feelings of fatigue, gynaecological problem, headaches, frequent stomach-aches, and/or trouble sleeping. Survivors may also present with varying psychological characteristics such as depressed feelings, anxiety, lack of confidence, frequent nightmares, thoughts of hurting self, suicide attempts, thoughts of hurting others, and prone to accidents.

This chapter cannot cover all the medical, social, and legal aspects of sexual violence. Rather, it focuses on recommendations for preventing direct adverse consequences of sexual violence, particularly STIs and pregnancies. Annex 6 has guidance on establishing services and protocols for providing comprehensive care to survivors of sexual abuse and has examples of screening protocols that can be used to identify those exposed to gender-based violence.

Medical and Other Care for Survivors of Sexual Abuse/Violence

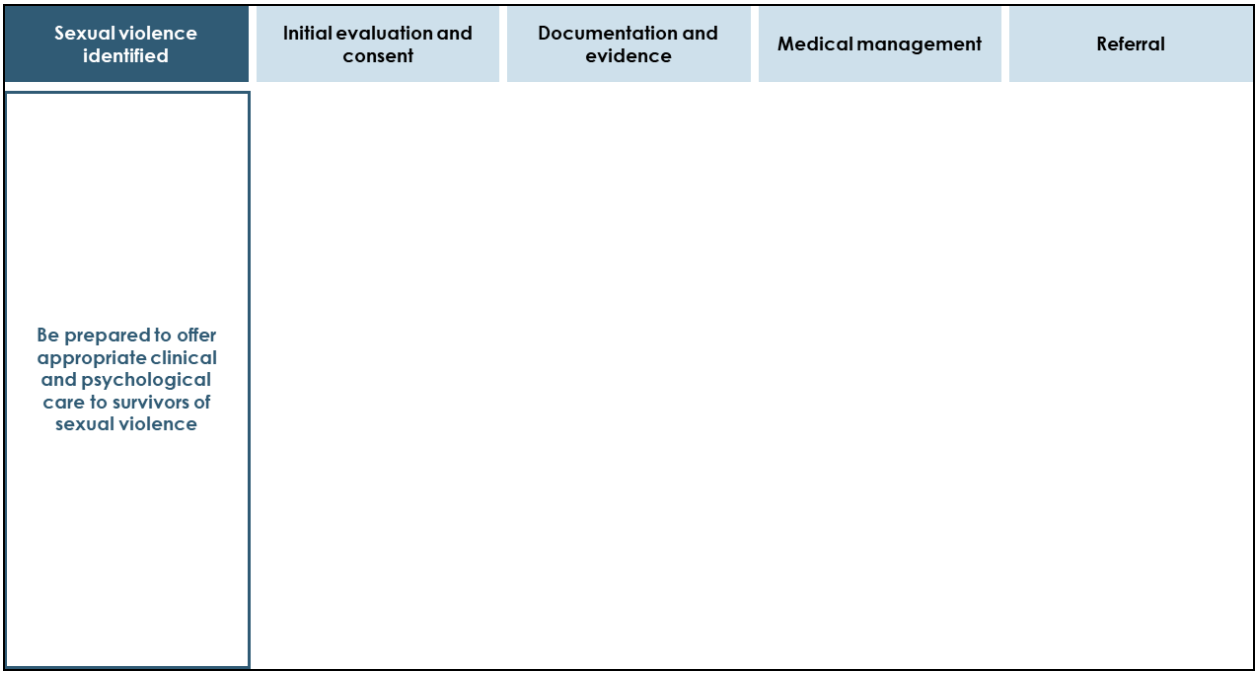
All health facilities should have up-to-date policies and procedures for managing persons who have survived or experienced sexual violence, which are in line with the National Sexual Offence Special Provision Act of 1998 (reviewed in 2002 and incorporated in the penal code Cap 16, Chapter 15 [Offences against Morality]), and Guideline for Prevention and Management of STIs and other RTIs. 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 to confidentially, sensitively, and effectively care for people who have experienced sexual violence. (See Flow Chart 12 for an overall guidance on clinically managing patients who have experienced sexual violence.)

The following services should be available, on site or through referral, for patients who have experienced sexual violence (see Figure 10.1):

- Essential medical care for any injuries and health problems
- Collection of forensic evidence
- Evaluation for STI including HIV 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

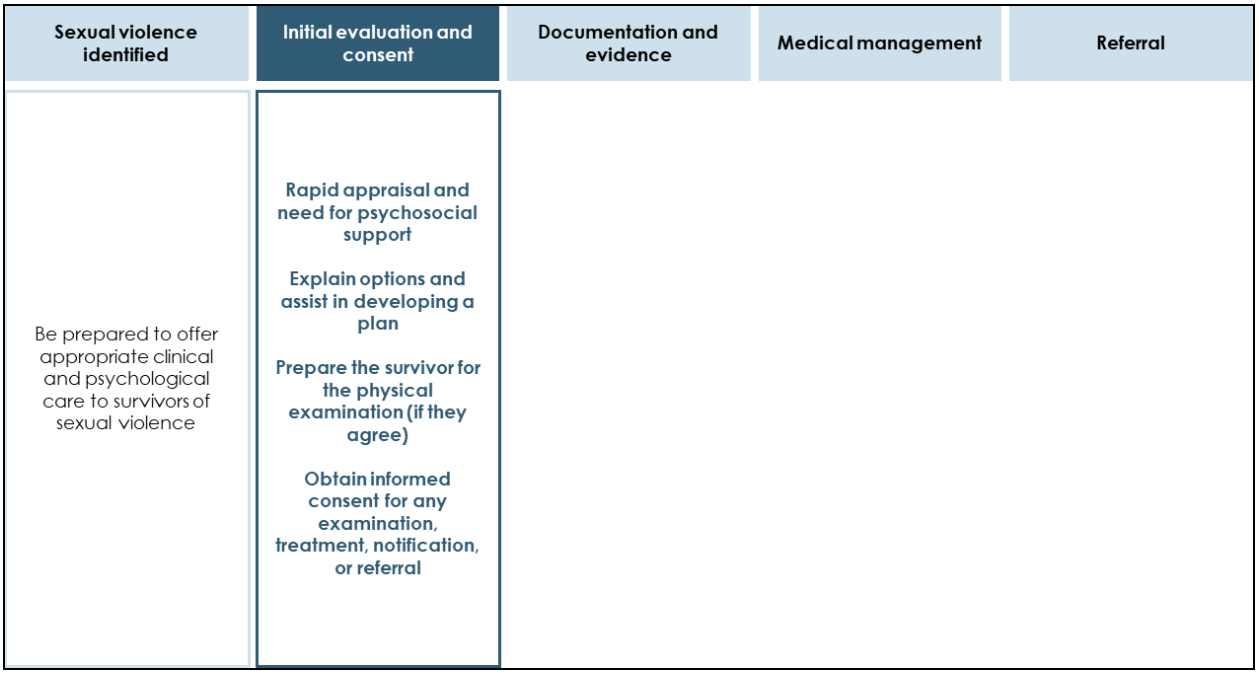
[16] World Health Organization. 2005. Multi-Country Study on Women's Health and Domestic Violence against Women, Initial Results on Prevalence, Health Outcomes and Women's Responses.

Figure 10.1. Step 1—Be prepared



Survivors of sexual violence have experienced a traumatic event and should be rapidly evaluated to determine whether they need emergency medical, psychological, or social intervention (see Figure 10.2). 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.

Figure 10.2. Step 2—Initial evaluation and consent



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 or not. Treatment can be started without examination if that is the patient's choice. For minors under the age of consent (under 18 years), usually consent from the parent or legal guardian is required. Mature minors do not need consent from the guardian or parent. These should not deny adolescents immediate access to medical services.

Where facilities or referrals 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 tests 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 undergoes legal proceedings. Ideally, a trained health care provider of the same sex should accompany the survivor during the history taking and examination.

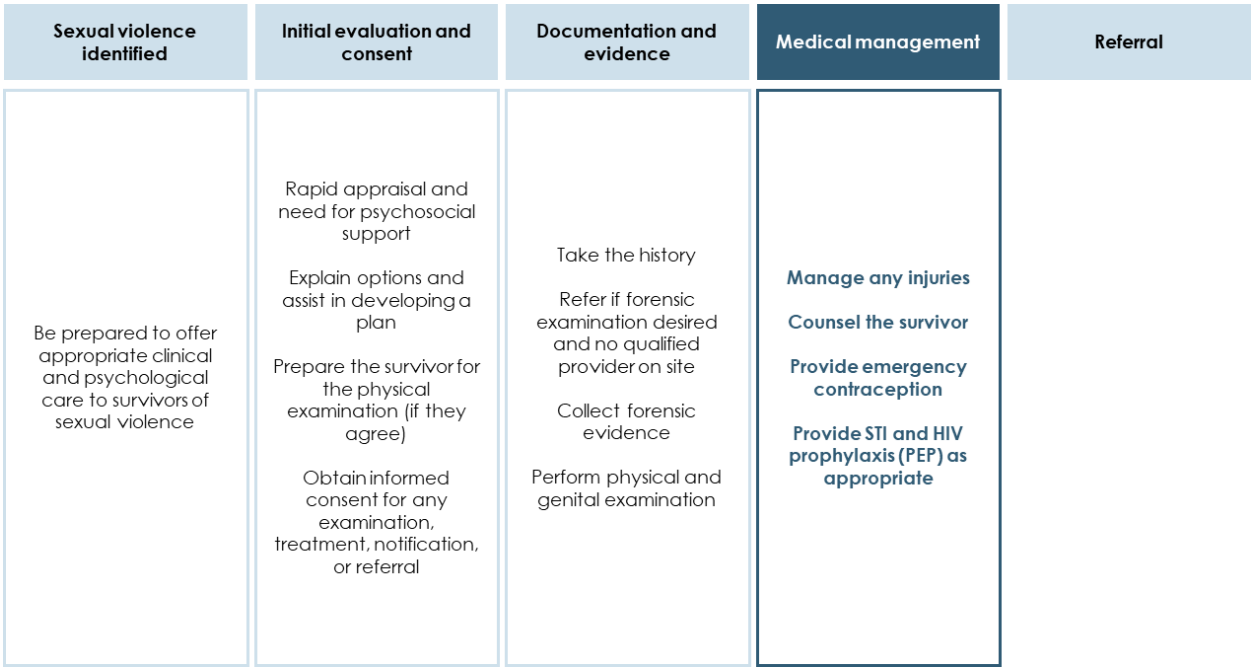
A careful written record should be made of all findings during the medical examination (see Figure 10.3). Pictures to illustrate findings may help later in recalling details of the examination.

Figure 10.3. Step 3—Documentation and evidence

Sexual violence identified	Initial evaluation and consent	Documentation and evidence	Medical management	Referral
Be prepared to offer appropriate clinical and psychological care to survivors of sexual violence	Rapid appraisal and need for psychosocial support Explain options and assist in developing a plan Prepare the survivor for the physical examination (if they agree) Obtain informed consent for any examination, treatment, notification, or referral	**Take the history** **Refer if forensic examination desired and no qualified provider on site** **Collect forensic evidence** **Perform physical and genital examination**		

The medical management of the survivor includes treatment of any injuries sustained in the assault and initial counselling (see Figure 10.4). Emergency contraception, STI presumptive treatment, and HIV post-exposure prophylaxis should be offered early to survivors of sexual violence according to national guidelines. 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.

Figure 10.4. Step 4—Medical management



Notes: post-exposure prophylaxis (PEP), sexually transmitted infection (STI)

Emergency Contraception

Emergency contraceptive pills can be effective if given up to 5 days after rape. However, the sooner they are taken, the more effective they are. Several regimens exists using levonorgestrel tablet (1.5 mg single dose or 0.75 mg stat, then 0.75 mg after 12 hours, within 72 hours of the rape, or combined oral contraceptive pills within120 hours of the rape).

A second option for emergency contraception is insertion of a copper-bearing IUCD within 5 days of the rape. This will prevent more than 99% of pregnancies. The IUCD may be removed during the woman's next menstrual period or left in place for continued contraception. If an IUCD is inserted (refer to current national family planning guidelines), give full STI treatment as recommended.

If more than 5 days have passed, counsel the woman and refer her to a gynaecologist. A woman who has been raped should first be offered a pregnancy test to rule out the possibility of a preexisting pregnancy.

Presumptive Treatment of STI

Another concrete benefit of early medical intervention following rape is to treat the person for a number of STIs. STI prophylaxis can be started on the same day as emergency contraception. Treatment may 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 10.1 lists options that are effective whether taken soon after exposure or after the appearance of symptoms.

Note: Effort should be made to examine the assailant, and when a presumptive diagnosis is made, the victim should receive presumptive treatment as shown in Treatment Tables 10.1 and 10.2. In

cases where the assailant cannot be examined, the presumptive treatment to be given will be guided by the most likely STI transmitted.

Treatment Table 10.1. Presumptive treatment options for STIs in adults

	Option 1	Option 2	Option 3
Coverage	All single dose, highly effective. Choose one from each box (= 3 or 4 drugs)[a]	Effective substitutes—possible resistance in some areas, or require multiple dosage	**If patient is pregnant, breastfeeding or under 16 years old:** choose one from each box (= 3 or 4 drugs)[a]
Syphilis	**Benzathine penicillin** 2.4 MU by IM injection	**Doxycycline**[c] 100 mg orally b.i.d for 14 days (in case of penicillin allergy only)	**Benzathine penicillin** 2.4 MU by single IM injection
Gonorrhoea/ chancroid	**Cefixime** 400 mg orally as a single dose OR **Ceftriaxone** 125 mg by IM injection	**Cefixime** 400 mg as a single dose OR **Spectinomycin** 2 g by IM injection	**Cefixime** 400 mg orally as a single dose OR **Ceftriaxone** 1 g stat by IM injection
Chlamydia/ Lymphogranuloma venereum	**Azithromycin** 1 g orally as single dose	**Doxycycline**[c] 100 mg orally b.i.d for 7 days OR **Tetracycline** 500 mg orally q.i.d for 7 days	**Azithromycin** 1 g orally as single dose OR **Erythromycin** 500 mg orally q.i.d for 7 days
Trichomoniasis	**Metronidazole**[b] 2 g orally as a single dose	**Tinidazole**[e] 2 g orally as a single dose	**Metronidazole**[b] 2 g orally as a single dose, or 400–500 mg t.i.d for 7 days

[a] Benzathine penicillin can be omitted if treatment includes either azithromycin 1 g or 14 days of doxycycline, tetracycline or erythromycin, all of which are effective against incubating syphilis.

[b] Metronidazole should be avoided in the first trimester of pregnancy. Patients taking metronidazole should be cautioned to avoid alcohol.

[c] These drugs are contraindicated for pregnant or breastfeeding women.

[d] The use of quinolones should take into consideration the patterns of *Neisseria gonorrhoea* resistance.

[e] Patients taking tinidazole should be cautioned to avoid alcohol.

Notes: four times a day (q.i.d), intramuscular (IM), three times a day (t.i.d), twice a day (b.i.d)

Treatment for possible STI in children is similar to that for adults. Recommended dosages are given in Treatment Table 10.2.

Treatment Table 10.2. Presumptive treatment options for STIs in children

Coverage	All single-dose antibiotics are highly effective. Choose one from each box (= 3 or 4 drugs)	Older children and adolescents
Syphilis	**Benzathine** penicillin 50,000 units/kg of body weight by single IM injection OR **Erythromycin** 12.5 mg/kg of body weight orally q.i.d for 14 days	> 45 kg, use adult protocol
Gonorrhoea/ chancroid	**Cefixime** 8 mg/kg of body weight as a single dose OR **Ceftriaxone** 125 mg by IM injection OR **Spectinomycin** 40 mg/kg of body weight (maximum 2 g) by IM injection	> 45 kg, use adult protocol
Chlamydia/ lymphogranuloma venereum	**Erythromycin** 12.5 mg/kg of body weight orally q.i.d for 7 days	12 years or older, use adult protocol
Trichomoniasis	**Metronidazole** 5 mg/kg of body weight orally t.i.d for 7 days	12 years or older, use adult protocol

Notes: four times a day (q.i.d), intramuscular (IM), sexually transmitted infection (STI), three times a day (t.i.d)

Post-Exposure Prophylaxis for HIV

The possibility of HIV infection should be thoroughly discussed as it is one of the most feared consequences of rape. If post-exposure prophylaxis services are available, rape survivors who wish to be counselled on the risks and benefits should be referred to those services within 72 hours (see Treatment Table 10.3). 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 post-exposure prophylaxis, two or three antiretroviral drugs are usually given for 28 days.

Treatment Table 10.3. Recommendations for chemoprophylaxis after accidental exposure to HIV

Type of exposure	Source of material	Antiretroviral prophylaxis	Antiretroviral regimen
Percutaneous	Blood^{+++}	Recommended	TDF (300 mg) plus 3TC (300 mg) plus EFV (600 mg)
Mucous membrane	Highest risk	Recommended	TDF plus 3TC plus EFV
	Increased risk	Recommended	TDF plus 3TC plus EFV
	No increased risk	Offer	TDF plus 3TC plus EFV

Type of exposure	Source of material	Antiretroviral prophylaxis	Antiretroviral regimen
	Fluid containing visible blood, other potentially infectious fluids++, or tissue	Offer	TDF plus 3TC plus EFV
Mucous membrane	Blood	Offer	Offer TDF plus 3TC plus EFV
	Fluid containing visible blood, other potentially infectious fluid++, or tissue	Offer	TDF plus 3TC plus EFV
	Other body fluids, e.g., urine	Do not offer	Do not offer
Skin	Increased risk ****Blood	Offer	TDF plus 3TC plus EFV
	Fluid containing visible blood, other potentially infectious fluid++, or tissue	Offer	TDF plus 3TC plus EFV
	Other body fluids, e.g., urine	Do not offer	Do not offer

Note 1: Any exposure to concentrated HIV (e.g., in a research laboratory or production facility) is treated as percutaneous exposure to blood with highest risk.

Note 2: tenofovir(TDF), lamivudine (3TC), efavirenz (EFV)

Note 3: Always reference prevailing national guidelines for post-exposure prophylaxis. Those found to be infected at baseline or during follow-up should be linked to a care and treatment for evaluation and initiation of antiretroviral therapy, regardless of their CD4 count.[17]

+**Recommend—**Post-exposure prophylaxis should be recommended to the exposed worker and counselling provided.

Offer—Post-exposure prophylaxis should be offered to the exposed worker and counselling provided.

Not offer—Post-exposure prophylaxis should not be offered because these are no occupational exposures to HIV.

***Regimens: tenofovir (300 mg), lamivudine [3TC] (300 mg), efavirenz (600mg) nocte—prophylaxis is given for 4 weeks.

+++ Highest risk—BOTH larger volume of blood (e.g., deep injury with large-in-diameter hollow needle previously insource-patient's vein or artery, especially involving an injection of source patient's blood) AND blood containing a high titre of HIV (e.g., source with acute retroviral illness or end-stage AIDS

Increased risk—EITHER exposure to larger volume of blood OR blood with a high titre of HIV

No increased risk—NEITHER exposure to larger volume of blood NOR blood with a high titre of HIV (e.g., solid suture needle injury from source patient with asymptomatic HIV infection)

**Possible toxicity of additional drug may not be warranted.

++Includes semen; vaginal secretions; and cerebrospinal, synovial, pleural, peritoneal, pericardial, and amniotic fluids.

****For skin, risk is increased for exposures involving a high titre of HIV, prolonged contact, an extensive area, or an area in which skin integrity is visibly compromised. For skin exposures without increased risk, the risk of drug toxicity outweighs the benefit of post-exposure prophylaxis.

+++Recommended expanded three-drug post-exposure prophylaxis for adults in Tanzania is TDF (300 mg) 3TC (300 mg),and EFV (600 mg) nocte.

Prophylactic Immunization Against HBV

HBV is easily transmitted through both sexual and blood contact. If HBV vaccine is available, it should be offered to survivors of rape within 14 days if possible. Three IM injections are usually given at 0, 1, and 6 months (see instructions on vaccine package as schedules vary by vaccine type). HBV vaccine can be given to pregnant women and to people with chronic or previous HBV infection. Where infant immunization programmes exist, it is not necessary to give additional doses of HBV vaccine to children

[17] National AIDS Control Programme, Ministry of Health and Social Welfare. 2015. National guidelines for the management of HIV and AIDS. 5th ed. AIDSFree USAID website. https://aidsfree.usaid.gov/sites/default/files/04_11_2016.tanzania_national_guideline_for_management_hiv_and_aids_may_2015._tagged.pdf. Accessed September 16, 2018.

who have records of previous vaccination. Hepatitis immune globulin is not needed if vaccine is given—always harmonize with the prevailing national immunization guidelines.

Tetanus Toxoid-Containing Vaccine

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 1 month later and for a third vaccination 6 months to 1 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.

Following the initial provision of care, referrals may be needed for additional services, such as specialized medical care, psychosocial, and legal support (see Figure 10.5). 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.

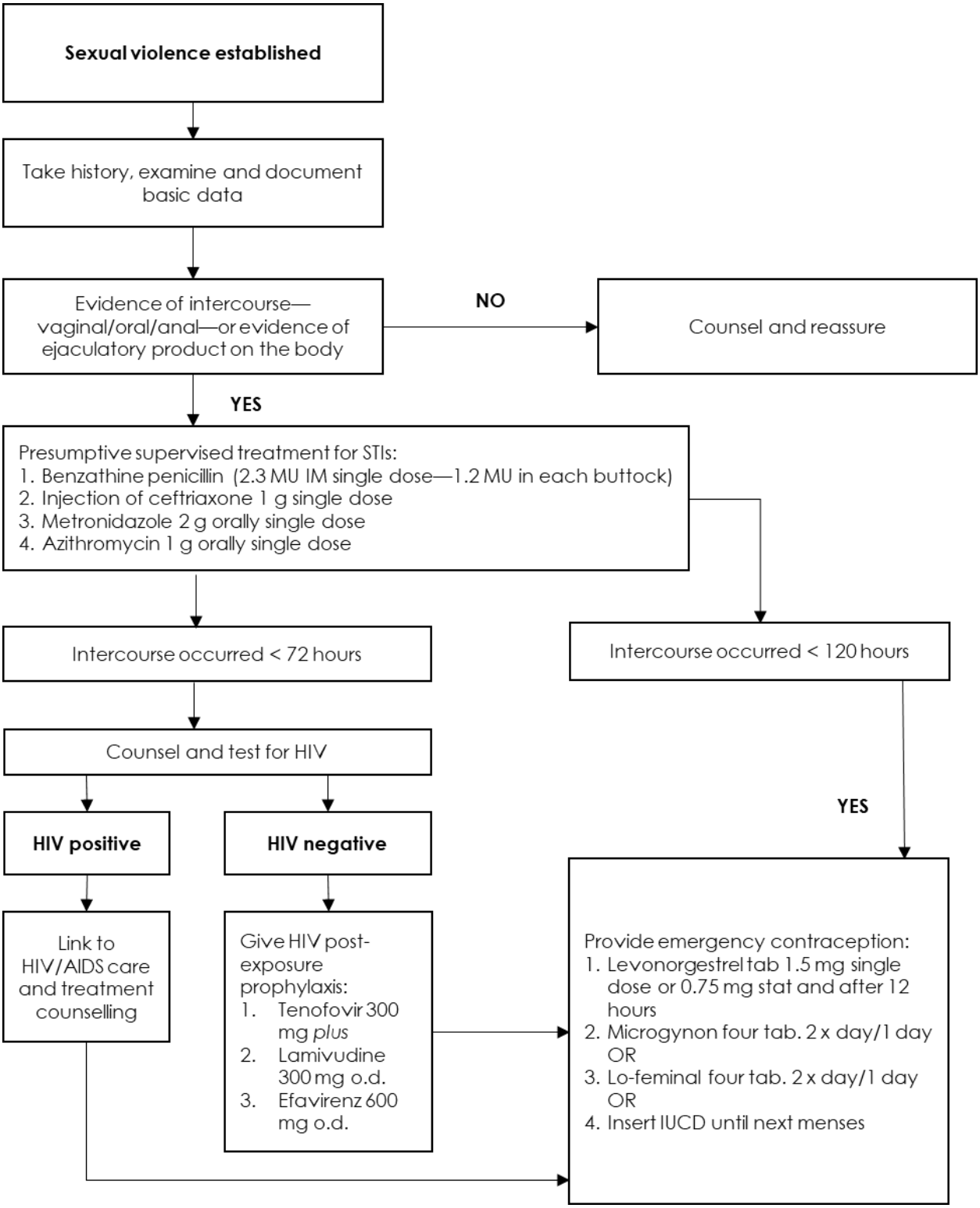
It is essential to arrange follow-up appointments and services during the first visit. The victim should be clearly told whom to contact if she has other questions or subsequent physical or emotional problems related to the incident. Adolescents, in particular, may need crisis support, as they may not be able or willing to disclose the assault to parents or legal guardians.

Figure 10.5. Step 5—Referral to special services

Sexual violence identified	Initial evaluation and consent	Documentation and evidence	Medical management	Referral
Be prepared to offer appropriate clinical and psychological care to survivors of sexual violence	Rapid appraisal and need for psychosocial support Explain options and assist in developing a plan Prepare the survivor for the physical examination (if they agree) Obtain informed consent for any examination, treatment, notification, or referral	Take the history Refer if forensic examination desired and no qualified provider on site Collect forensic evidence Perform physical and genital examination	Manage any injuries Counsel the survivor Provide emergency contraception Provide STI and HIV prophylaxis (PEP) as appropriate	**Psychosocial support** **Forensic examination** **Protective services** **Follow-up care of the survivor**

Notes: post-exposure prophylaxis (PEP), sexually transmitted infection (STI)

Flow Chart 14. Clinical management of survivors of sexual violence



Notes: intramuscular (IM), intrauterine contraceptive device (IUCD), intravenous (IV), once a day (o.d.)

Chapter 11. Ordering Medicines, Laboratory Reagents, and Supplies

Introduction

Ordering is the process for obtaining medicines, lab reagents, and related supplies to provide services.

Why Do You Order?

You order to avoid interruption of service provision. Adequate availability of medicines, laboratory reagents, and related STI/RTI supplies is an essential component in the management and control of STIs/RTIs. Management and control of STIs/RTIs are based on syndromes; however, laboratory still has a role depending on the setting and availability of resources. Laboratory investigations are essential in screening for syphilis in pregnant women, screening for HIV, and obtaining culture and sensitivity of Pap smear for early detection of cervical cancer and research.

What Do You Need to Know before Ordering?

Proper data collection and recordkeeping is a cornerstone in ordering medicines, laboratory reagents, and related supplies. Data and recordkeeping will assist you to determine prevalence of syndromes, calculate monthly consumptions, and estimate minimum and maximum stock levels; it also helps in determining the buffer/security stock level and lead time. Ordering should be done timely to avoid stock-out of medicine and other supplies.

Average monthly consumption is the summation of 3 consecutive months divided by three. This gives you an estimate for what is consumed for every commodity. From this finding, you will be able to calculate the minimum and maximum amount of medicine and supplies needed for the next 1 month, 3 months, or 6 months, depending on the level of the health facility ordering the medicine, lab reagent, and other supplies.

NOTE:
MOS—the monthly stock (minimum and maximum stock level)
SOH—stock on hang (i.e., current stock on the shelf)
AMC—average monthly consumption (see description above)

What is the Procedure for Ordering?

Determine the need based on the available data. Identify and complete the Integrated Logistic System forms. Use these forms and forward them according to established procedures(from health facility to the district level's Electronic Logistics Management Information System and Medical Stores Department for medicine and other supplies).

Receiving, Storing, and Issuing of Medicines, Laboratory Reagents, and Supplies

The procedure for receiving ordered medicines, laboratory reagents and other supplies should be followed according to steps identified at the health facility and according to guidelines governing the respective commodity. Management tools, such as registers, ledgers, and bin cards, are used to keep record of stored and issued medicines, laboratory reagents, and other supplies. The following is an example of this procedure:

1. Receive the delivery note from supplier.
2. Inspect the quantity and quality of delivered goods.
3. Raise goods-received note.
4. Put received goods in the store and sign goods-received note.
5. Enter goods into ledger and bin card.
6. When issuing, enter the total number of units dispensed/issued from the appropriate register.
7. Enter the total number of units received into the inventory for any reason other than delivery from Medical Stores Department/National AIDS Control Programme, removed from inventory to land, added/removed from inventory after item counting of the products.

Note: Always sign in the Medical Stores Department delivery note and claim form if necessary. Sign delivery note from other suppliers if not Medical Stores Department or Good Samaritans. Offer letters when receiving medicine and other STI/RTI commodities.

Chapter 12. Monitoring and Evaluation of STIs/RTIs

Introduction

Monitoring is routine follow-up of STI/RTI program interventions through the collection, analysis, and reporting of data to track progress against set measures. Monitoring helps to identify trends and patterns, enables the adaption of strategies, and informs decisions for programme management.

Evaluation, on the other hand, is the assessment of an ongoing or completed project, programme, or policy and its design, implementation, and results. The aim of evaluating STI/RTI programs is to determine the relevance and fulfilment of objectives, developmental efficiency, effectiveness, impact, and sustainability. A set of indicators and milestones have been identified to help track changes in controlling STIs/RTIs in Tanzania.

Monitoring and evaluation (M&E) is essential to ensure the quality of STI/RTI services delivered (see Box 12.1). M&E allows the program to follow the trends in STI/RTI outcomes, utilize program data to generate information needed for decision-making at different levels of care and management, develop strategic plans and redirect resources, and report on key indicators. The national M&E tool should be used at all health facilities for routine recording and reporting of key STI/RTI indicators.

Box 12.1. Key points

- Health care providers should know the objectives of M&E in delivering STI/RTI services.
- National STI registers, *MTUHA* (HMIS) Register Books, and other standardized forms should be utilized to record and report STI information.
- Health care facilities at all levels (facility, district, region, and national) should compile STI/RTI reports.
- Reports should be compiled periodically (monthly, quarterly, and annually)and submitted to relevant authorities, according to regulation.
- At the district level, STI/RTI reports should be reviewed and entered into the district health information system (DHIS2) in a timely manner.

Notes: District Health Information System 2 (DHIS2), Health Management Information System (HMIS), *Mfumo wa Taarifa za Uendeshaji wa Huduma za Afya* (*MTUHA*), monitoring and evaluation (M&E), reproductive tract infection (RTI), sexually transmitted infection (STI)

Monitoring STI/RTI Services

Monitoring involves properly recording and reporting the various steps and events involved in implementing the relevant activities. Monitoring should concentrate on key information in order to measure and report progress of activities. Monitoring should also be standardized, using well-designed formats for recording. The information collected should be analysed, interpreted, and utilized to make decisions at the point of data collection and at higher levels.

Objectives for M&E of STI/RTI Services

- Provide essential information to the clinic service provider for easy follow-up of clients and contact management.
- Provide essential information to the clinic service provider and supervisor about prevention and management of STIs/RTIs, testing requirements, drug consumption, and demand.
- Assess the effectiveness of the program through quantitative and qualitative methods.

- Improve the management of STI/RTI services as necessary and inform the policymaking decisions.
- Provide trends in STI outcomes and service statistics for use in planning STI management services as well as STI prevention and control activities.

Key Components of Monitoring

Recording

Data collection on STI/RTI interventions is done by health workers at health facilities using standardized tools. Data collection is coordinated by district and regional AIDS Control Coordinators (ACCs). Reporting is done on a monthly basis, using standardized forms, following this path: facility level to a district level and then to a higher level.

Standardised Formats/Recording Tools

The key information should be recorded for each STI/RTI client. The information should be compiled on a daily, monthly, quarterly, and annual basis. The following relevant forms and STI and *Mfumo wa Taarifa za Uendeshaji wa Huduma za Afya* (*MTUHA*) Register Books should be used to record and report STI services provided:

- **Daily STI register book**
  - This is a daily register in which STI episodes reported to a health facility and clients attending a health facility are registered. Information captured in this register will be compiled by a trained STI service provider at the end of every month and sent to a district medical officer by the seventh day of the following month. The data will be consolidated into STI monthly summary form (see the format in Annex6).

- ***MTUHA* Register Book**
  - Routine monitoring of STIs/RTIs and HIV/AIDS is done through the *MTUHA* Register Book and includes recording of STI and AIDS cases, syphilis screening of pregnant women attending reproductive and child health clinics, and screening of blood donors for HIV.

Reporting

- ***MTUHA* reporting form**
  - Reporting is done with the use of *MTUHA* books and separate STI, HIV, and AIDS forms— some of which (mainly those dealing with STIs) are reproduced in Annex 6. The forms are to be used only at sentinel sites and for supervision. Thus, for routine reporting, *MTUHA* forms are used.

- **Facility, district, and regional STI monthly summary forms**
  - These are monthly STI reporting forms that summarize data from the daily STI register. The facility in charge compiles and summarises the data into the monthly summary form and sends it to the district medical officer. At the district level, the district ACC verifies the data from different facilities and enters them into the DHIS2 (see the format in Annex 6).

Data Utilization

Routinely collected STI/RTI data provide information on demographic characteristics of the disease (i.e., sex, age, and geographical location). Furthermore, routine data allow the program to monitor disease progression and utilization of services. Reports can also be used for program evaluation, planning, and budgeting purposes. Data generated at all levels should be analysed and disseminated to relevant stakeholders to make evidence-based decisions for controlling STIs/RTIs. Regional and district ACCs should analyse, interpret, and facilitate the utilization of data in their respective regions and districts.

Roles and Responsibilities

In Tanzania, M&E activities for STIs/RTIs are carried out at national and decentralized levels. M&E units for controlling STIs/RTIs at national level are based at the MOHCDGEC.

Regional/District Level

- Coordinates STI/RTI M&E capacity-building (e.g., training and mentorship) at the regional/district level
- Coordinates STI/RTI data quality audits at the regional/district level
- Liaises with stakeholders concerning implementation of program monitoring system
- Manages dissemination of program monitoring data
- Advises on STI/RTI M&E issues at the regional/district level
- Analyses and presents M&E data for HIV, as requested, at the regional/district level
- Disseminates STI/RTI information at the regional/district level
- Promotes STI/RTI data use during decision-making and planning of STI/RTI interventions, and uses data for decision-making at the regional/district level
- Liaises with National AIDS Control Programme on all STI/RTI M&E issues at the regional/district level

Health Facility Level

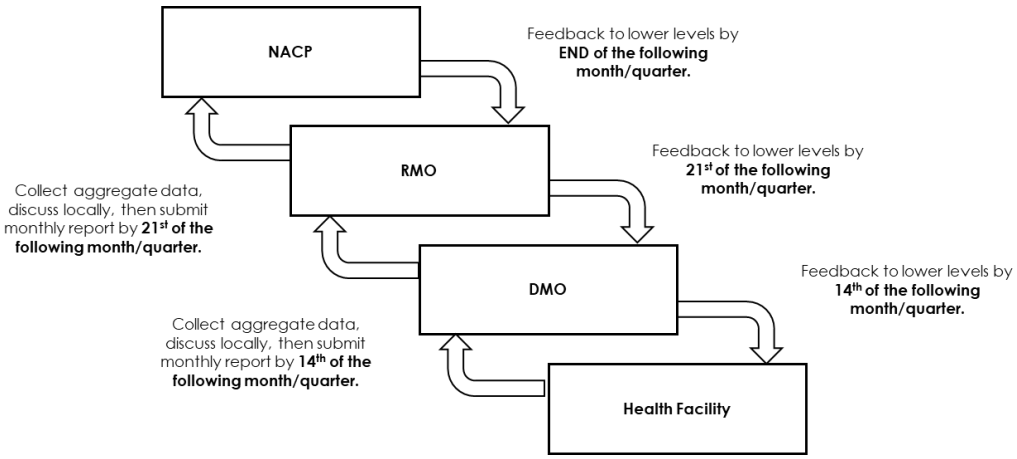
- Ensures that proper recording and reporting tools are used for STI/RTI care and treatment services
- Ensures completeness of all reporting forms and registers
- Ensures timely reporting based on agreed on reporting deadlines during a reporting month
- Liaises with the Health Management Information System (HMIS) focal person or district ACC at the district level on all STI/RTI M&E issues at the facility level
- Ensures the quality of data collected and reported

Flow of the Report from Health Care Facility to District/Region/National AIDS Control Programme

- Health care facility completes Monthly Summary Form by the seventh day of next month, in triplicate, and sends copies as follows:
  - First copy to district medical officer
  - Second copy to remain at the health facility

- District ACC reviews reports and then enters data in DHIS2 by fourteenth day of the next month.

Figure 12.1. Data flow from health facility to national level



Notes: district medical officer (DMO), National AIDS Control Programme (NACP), regional medical officer (RMO)

ANC Sentinel Surveillance

Sentinel surveillance is a systematic collection of data from a defined population at defined sites. The purpose could be to follow an epidemic or endemic disease, and the studied population could be antenatal women. HIV surveillance in Tanzania is using this method. Several regions have been selected for national surveillance. However, other regions that wish to investigate the HIV prevalence in the population can also set up a surveillance system if they have the means to do so. The MOHCDGEC demands that the rules for carrying out HIV sentinel surveillance are followed.

According to the protocol for ANC HIV surveillance in Tanzania, screening will be done for 3 consecutive months at each chosen sentinel site. It is assumed that this period will be enough to reach the target of 350–400 pregnant women per site. However, in rural areas with small a population, it may only be possible to enroll 200 pregnant women. Still, the survey should be limited to 3 consecutive months.

The third quarter of the year (July–September) has been designated as the time of the year when all surveillance surveys should be undertaken. However, regional/council health management teams could recommend other months of the year where necessary.

All pregnant women who attend an ANC sentinel site for the first time during a data collection period will be enrolled. Over-sampling of young pregnant women may introduce participation or selection bias and should be avoided. Data to be collected from each enrolled woman are sociodemographic characteristics and information necessary for comparison with behaviour surveillance data—included are age, parity, education, marital status, residence and duration of stay in that residence, and distance between the woman's residence and the clinic. A carbonized duplicate data collection form (Form A) will be used for data collection, and a laboratory investigation request form (Form B) will accompany blood specimens to the laboratory.

At enrollment, a woman is routinely given a clinic number, which is also put on the clinic register book. This same clinic number is put on the data collection form (Form A) and on the vacutainer tube, which will be used for blood collection. The same number is also recorded on a laboratory request form. The woman is questioned, and the information is entered in the data collection form (Form A). This will be followed by collection of 3–5 mL of blood from the woman using a vacutainer tube and needle.

The blood is tested for syphilis using SD BIOLINE 3.0. A midwife within the ANC clinic or a laboratory assistant at a laboratory within the ANC premises (local laboratory) will perform the Rapid Plasma Reagin (RPR) test.

HIV testing is performed with an enzyme-linked immune-sorbent assay and a double enzyme-linked immune-sorbent assay strategy to arrive at a correct result. If there are no refrigeration facilities, the blood could be collected using filter paper and transported to the regional laboratory once a week. However, before the introduction of this method, staff should be trained. HIV testing is done on leftover blood specimen collected for syphilis screening. The testing is unlinked and anonymous, and informed consent is not needed. It is also not possible to give HIV test results to individuals. Clients who need to know their HIV status needs to be linked to a proper counselling and testing service.

Table 12.1. Summary of monitoring system for STIs/RTIs and HIV/AIDS in place

Type of monitoring	Frequency	Information collected
Disease monitoring and, reporting (STI daily register, STI monthly summary form, *MTUHA* books, HTC register, DHIS 2)	Daily, monthly, quarterly	STI/RTI syndrome and sex, AIDS, and syphilis screening at reproductive and child health clinics; screening of blood for HIV
Condom use	Monthly	Number of condoms distributed
Sentinel surveillance	Every 2 years	HIV, syphilis, and other STIs among ANC attendees
Community-based surveys in the sentinel sites catchment area or in area of special interest	When need arise	Care-seeking behaviour information, sexual behaviour in a local context, and STI disease pattern
School-based surveys (questionnaire for secondary schools every second year)	When need arise	Sex behaviour: knowledge of STIs/RTIs, care-seeking behaviour
Survey in a sample of health institutions	Annually	Quality of care (SSI 1, SSI 2, and SSI 3): STI/RTI syndromes and clinical outcomes, care-seeking behaviour data in STI patients, and drug availability
National surveys: Demographic and Health Survey (DHS)/ Knowledge, Attitudes and Perception (KAP)/ Reproductive and Child Health Survey (RCHS)	To be determined	Knowledge on STI/RTI and HIV/AIDS sexual behaviour
Research studies	When need arises	Surveys on subjects, on areas of special interest, or of principle importance

Notes: antenatal care (ANC), District Health Information System 2 (DHIS2), DHS, HIV testing and counselling (HTC), KAP, *Mfumo wa Taarifa za Uendeshaji wa Huduma za Afya* (*MTUHA*), RCHS, reproductive tract infection (RTI), sexually transmitted infection (STI), STI service indicator (SSI)

Definitions of STI Service Indicators I, 2, and 3

- **STI Service Indicator 1 (SSI 1):** Percentage of patients with STIs at selected health care facilities who are appropriately diagnosed and treated according to national guidelines

  Numerator: Number of individuals presenting with a specific STI or STI symptoms in health facilities who are treated in an appropriate way (according to national guidelines)

  Denominator: Number of individuals presenting with a specific STI or STI symptoms in the visited health facilities

- **SSI 2:** Percentage of patients at selected health facilities seeking STI care who have received appropriate advice on condom use

  Numerator: Number of individuals seeking STI care in selected health facilities who have received appropriate advice on condoms use

  Denominator: Total number of individuals seeking STI care at the visited health care facilities

- **SSI 3:** Percentage of patients at selected health facilities seeking STI care who are referred for HIV testing

  Numerator: Number of individuals seeking STI care in health facilities who were referred for HIV testing

  Denominator: Total number of individuals seeking STI care at the selected health care facilities

Evaluation

Evaluation is the system of assessing actions in order to improve implementation of activities or planning for future activities. The purposes of conducting evaluation of STIs/RTIs services are to determine the STI/RTI services performance, effectiveness, and efficiency:

- Determine whether the objectives were achieved.
- Determine whether the approach should be continued or changed.
- Determine whether services can be extended elsewhere.

The timeline for conducting an evaluation of STI/RTI services is described below:

- Before implementation (inputs/diagnostics evaluation)
  - Assess development needs and potentials
  - Determine the feasibility of the plan

- During implementation (process/outplay evaluation)
  - Identify areas for change or modification
  - Detect deficiencies and immediately redesign of intervention strategies
- End of STI/RTI services (outcome/summative evaluation)
  - Assess the STI/RTI Services outcome.

Techniques for Evaluating STIs/RTIs Services

Various methods can be used to evaluate STI/RTI services, including quantitative and qualitative research methods. Routinely collected data in health facilities are essential in the evaluation of STI/RTI services.

Annex 1. Clinical Skills Needed for STI/RTI Management

Clinical Skills Needed for STI/RTI Management

- Contents
- History taking
- Common STI/RTI symptoms
- Examining clients

History Taking

The main purpose of history taking in STI/RTI case management is to obtain information about the client's symptoms—when they first occurred and their change over time. Because history taking with STI/RTI clients involves discussion of sensitive issues, having an environment conducive for sensitive discussions is important. A quiet room where a client can be interviewed in privacy is a basic requirement. Only people directly involved in the history taking should be present. The room must be furnished with good ventilation, enough light, and with at least a chair for the clinician and a chair for the client to sit on during the interview. In order to help the client feel at ease, the following aspects should be observed by the clinician:

- Greet the client in a friendly manner and offer them a chair.
- Show that you are interested and make sure that your body gives the same friendly and relaxed message as your words.
- Ask the client the reason for the visit.
- Speak in a language that your client can understand, and encourage your client to talk.
- Assure the client that the consultation is confidential.
- Ask the client's permission to question their about STI/RTI or their sexual behaviour.
- Phrase the questions politely.
- Avoid using medical terms.
- Ask a specific and clear question so that the client knows exactly what information is needed.
- Ask questions one at a time.
- Deliver questions in a moral-free tone.
- Avoid leading(closed-ended or hinting at a desired answer) questions, and let the client answer in their own style.

Table A1.1. below illustrates in detail the specific information required.

Table A1.1. Information required during history taking with STI/RTI clients

Information on	Content
Personal characteristics	**Ask for:** • Name • Sex • Age • Address • Occupation
Present illness	• Ask about present complaints, when they started and whether they changed over time. • Allow the client to give the story of their illness uninterruptedly. Probe (ask more questions) on areas you feel adequate information has not been provided. • Review other body systems.
Past medical history	• Ask about previous STI episodes. • Ask about any current or long-term medication. • Ask about drug allergy (observe alert card).
Social and sexual history	• Ask about last sexual intercourse: when it took place, whether and what preventive measures were taken, and whether partner had any symptoms. • Ask about the number of sexual partners in the last 3 months. • Ask about alcohol intake and drug and substance use. • Ask females about the number of children and age of last born child, menstrual history, and use of contraceptive methods.

Notes: reproductive tract infection (RTI), sexually transmitted infection (STI)

Common STI/RTI Symptoms

Many clients with an STI/RTI complain of symptoms associated with specific syndromes. Health care providers can use the syndrome algorithms in Chapter 8 and Chapter 9 for guidance on management (see Table A1.2).

Table A1.2. Symptoms associated with specific syndromes

Women	Men	Syndrome
Vaginal discharge that is abnormal in colour, odour, amount, or consistency; itching or irritation of the vulva or vagina.		Vaginal discharge (Flow Charts 2 and 11)
	Urethral discharge Painful urination (dysuria)	Urethral discharge (Flow Chart 1)
Lower abdominal pain		Lower abdominal pain (Flow Chart 3)
Genital ulcers, sores, or blisters		Genital ulcer (Flow Chart 8)
Painful Swelling, lumps, or ulcer in the groin area		Inguinal bubo (Flow Chart 7)
Discharge and/or pain from anal and rectal area		Anorectal syndrome (Flow Chart 5)

Women	Men	Syndrome
Pain in swallowing, sore throat, ulcers, or swelling of the oral cavity		Oropharyngeal syndrome (Flow Chart 6)

Other symptoms and signs that may suggest an RTI or may influence management are outlined below:

- Painful urination (dysuria) in women may indicate a vaginal or cervical infection, or urinary tract infection (UTI). If vaginal discharge is also present, use the vaginal discharge flow chart. If not, examination or tests for cervical infection or UTI may be needed.
- Signs of infection accompanied by a missed period (amenorrhoea) or irregular bleeding may indicate pregnancy. Women should be managed according to the appropriate flow chart.
- Discharge, sores, or warts in and around the anus can be caused by many of the STIs that cause genital infection. Treatment is the same as for genital infection.
- Ulcers and other lesions in and around the mouth may be signs of syphilis or herpes.
- Throat infection (common due to gonorrhoea) is also possible with other organism.

Physical Examination of an STI/RTI Client

Physical examination of a client enables the service provider to confirm the symptoms the client has described and to check for clinical signs of an STI. Also, other problems may be revealed even if the client had not complained about them. Because the client will feel highly sensitive about the clinical examination of the genital area, having an environment conducive to this examination is absolutely essential. In addition to what is required for history taking, an examination couch, a screen/curtain, and a good light source are also required, at a minimum. Other requirements for the examination include the availability of speculum, proctoscopy, spatula, torch, KY jelly, gloves, gauze and cotton wool, soap, water, dustbin, bucket, and hypochlorite solutions/or household bleach. It must be ensured that the examination process is not interrupted by persons who are not directly involved in the clinical examination.

To reassure clients, who are reluctant to be examined, and to win their confidence, the service provider needs to behave professionally before and during the examination. The following should be observed:

- The service provider should explain the importance of each step of the examination and its procedure.
- The client should be treated with respect and courtesy.
- The service provider should be calm, friendly, and smart.
- Clients should be placed on an examination couch.
- The service provider should be gentle during the examination.
- Clients should not be overexposed.
- Service providers should preferably seek consent for a third person or a nurse to be present during the examination.

In order to have a successful examination, the service provider should have the following abilities:

- Be able to prepare and set the equipment and materials
- Be able to prepare the client for the examination
- Be able to prepare themselves for the examination

- Be able to examine the client by observing general appearance and conducting head-to-toe assessment using the principles of inspection, palpation, percussion, and auscultation

There are five components of an STI/RTI examination, depending on the equipment and supplies available:

- Buccal examination
- External genital examination
- Speculum examination
- Anal examination
- Bimanual examination

Table A1.3. Steps for conducting physical examination on a client with a sexually transmitted infection (STI)

Female client	Male client
• With the client sitting on an examination couch, examine for enlarged lymph nodes in the anterior and posterior triangles of the neck, the submental, epitrochlear, and suboccipital areas. • Examine the mouth for thrush, sore throat, and for any other abnormality. • Ask the client to remove her clothing from the chest down, lay herself down on the couch, and use a sheet to cover the parts of the body that you are not examining. • Inspect for any rashes, swellings, and ulcers at the chest, back, thighs, abdomen, buttocks, groins, and genitals. • Palpate the axillae to examine for enlarged lymph nodes. • Gently palpate the abdomen for tenderness and the presence of any pelvic masses, taking care not to hurt the client. • Examine the pubic hair for nits/lice. • Palpate the inguinal areas, noting any tenderness and/or swelling of lymph nodes. • Don a clean pair of gloves. • With the knees of the client bent and separated, inspect the vulva, perineum, and anus for abnormal discharge, ulcers, swellings, or any other abnormalities. • For all enlarged lymph nodes, note the location, number, consistency, and whether they are painful.	• Ask the client to remove his shirt. • With the client sitting on an examination couch, inspect the skin for any rash and examine for enlarged lymph nodes in the axillae, anterior, and posterior triangles of the neck, submental, epitrochlear, and suboccipital areas. • Examine the mouth for thrush, sore throat, and for any other abnormality. • Ask the client to put on his shirt, stand up, and lower his pants so that he is stripped down to the knees. • Inspect for any rashes, swellings, and ulcers at the thighs, buttocks, groins, and genitals. • Palpate the inguinal region for the presence of lymph nodes or bubos. • Examine the pubic hair for nits/lice. Ask the client to remove his shirt. • Don a clean pair of gloves. • Palpate the scrotum, feeling for the testis, epididymis, and the spermatic cord, noting any enlargement or tenderness. • Examine the penis for rashes or sores, and then ask the client to retract the foreskin if uncircumcised. • Inspect the glans penis, coronal sulcus, frenulum for any visible abnormalities. • Check for discharge, noting its colour and nature. • In case of no obvious urethral discharge, ask the client to milk the urethra and note any discharge appears. • With the knees of the client bent and separated, inspect the perineum and anus for abnormal discharge, ulcers, swellings, or any other abnormalities. • For all enlarged lymph nodes, note location, number, consistency, and whether painful.

Table A1.4. Signs and management—external examination

Signs to look for when doing an external examination	Management
Painful swallowing	Oropharyngeal syndrome (Flow Chart 6)
Discharge and redness of the vulva (common signs of vaginitis) When the discharge is white and curd-like (yeast infection likely)	Vaginal discharge (Flow Chart 2) (for pregnant women, Flow Chart 11)
Ulcers, sores or blisters	Genital ulcer (Flow Chart 6)
Swelling or lumps in the groin (inguinal lymphadenopathy))	Inguinal bubo (Flow Chart 7)
Discharge or any other abnormality in anal area	Anorectal syndrome(Flow Chart 5)

How To Do a Speculum Examination on a Female Client

- Be sure the speculum has been properly disinfected or sterilized before you use it (see Annex 2). Wet the speculum with clean warm water or a lubricant, if available, before inserting it.
- Insert the first finger of your gloved hand in the opening of the woman's vagina (some clinicians use the tip of the speculum instead of a finger for this step). As you put your finger in, push gently downward on the muscle surrounding the vagina. Proceed slowly, waiting for the woman to relax her muscles.
- With the other hand, hold the speculum blades together between the pointing finger and the middle finger. Turn the blades sideways and slip them into the vagina. Be careful not to press on the urethra or clitoris because these areas are very sensitive. When the speculum is halfway in, turn it so that the handle is down. Note: on some examination couches, there is not enough room to insert the speculum handle down—in this case, turn it so the handle is up.
- Gently open the blades a little and look for the cervix. Move the speculum slowly and gently until you can see the cervix between the blades. Tighten the screw (or otherwise lock the speculum) so that it will stay in place.
- Check the cervix, which should look pink, round, and smooth. There may be small, yellowish cysts, areas of redness around the opening (cervical os), or a clear mucoid discharge; these are normal findings. Look for signs of cervical infection by checking for yellowish discharge or easy bleeding when the cervix is touched with a swab. Note any abnormal growths or sores.
- Notice if the cervical os is open or closed, and whether there is any discharge or bleeding. If you are examining the woman because she is bleeding from the vagina after birth, induced abortion, or miscarriage, look for tissue coming from the opening of the cervix.
- To remove the speculum, gently pull it toward you until the blades are clear of the cervix. Then bring the blades together and gently pull back, turning the speculum gently to look at the walls of the vagina.
- Be sure to disinfect your speculum after each examination.

Table A1.5. Signs and management—speculum examination

Signs to look for when doing an external examination	Management
Vaginal discharge and redness of thevaginal walls (common signs of vaginitis) Discharge is white and curd-like (yeast infection likely)	Vaginal discharge, (Flow Chart 2) (for pregnant women, Flow Chart 11)
Ulcers, sores, or blisters	Genital ulcer (Flow Chart 6)
If 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	Complications of abortion (Flow Chart 8)
Tumours or other abnormal-looking tissue on the cervix	Refer for Pap smear or cytology

How To feel the Reproductive Parts Inside the Abdomen: 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, gently push 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, appropriately dispose of the gloves. Wash your hands well with soap and water.

Table A1.6. Signs and management—bimanual examination

Signs to look for when doing bimanual examination	Management
Lower abdominal tenderness when pressing down over the uterus with the outside hand	Use the lower abdominal pain flow chart (Flow Chart 3) 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)	Use the lower abdominal pain flow chart (Flow Chart 3).
Any abnormal growth or hardness to the touch	Refer for Pap smear or cytology.

Table A1.7. Symptoms and signs of reproductive tract infections (RTIs) in women

Syndrome	Symptoms	Signs
Vaginitis (Flow Chart 2)	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 (Treatment Table 2)	Usually none Sometimes burning on urination or spotting of blood after intercourse	Mucopurulent cervical discharge Cervical bleeding to touch
Lower abdominal pain (Flow Chart 3)	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 (Flow Chart 6)	Genital ulcers, sores, or blisters	
Inguinal bubo (Flow Chart 7)	Swelling, lumps, or ulcers in the groin area	

Examining a Male Client

- Wash your hands before the examination, and don clean gloves.
- Tell the client what you are going to do as you do each step of the examination.
- Ask the client to stand up and lower his underpants to his knees. Some providers prefer that the man lays himself down for the examination.
- Palpate the inguinal region (groin), looking for enlarged lymph nodes and bubos.
- Palpate the scrotum, feeling for the testis, epididymis, and spermatic cord on each side.
- Examine the penis, noting any rashes or sores.
- Ask the client to pull back the foreskin if present, and look at the glans penis and urethral meatus.
- If you do not see any obvious discharge, ask the client to milk the urethra.

- Ask the client to turn his back to you and bend over, spreading his buttocks slightly. This can also be done with the client lying on his side with the top leg flexed up toward his chest.
- Examine the anus for ulcers, warts, rashes, or discharge.
- Wash your hands following the examination.
- Record findings, including the presence or absence of ulcers, bubos, genital warts, and urethral discharge, noting colour and amount.

Table A1.8. Signs to look for when examining men

Signs to look for	Management
Swelling of tonsils	Oropharyngeal syndrome (Flow Chart6)
Urethral discharge	Urethral discharge (Flow Chart 1)
Ulcers, sores, or blisters	Genital ulcer (Flow Chart 8)
Swelling or lumps in the groin (inguinal lymphadenopathy) and swelling of testicles	Inguinal bubo (Flow Chart 9)
Anal discharge	Anorectal syndrome (Flow Chart 5)

Annex 2. Disinfection and Standard Precautions

Disinfection and Standard Precautions

- Contents
- Prevention of infection in clinical settings
- High-level disinfection
- Standard precautions

Prevention of Infection in Clinical Settings

Wash Your Hands

Washing hands is the most important way to kill germs on your skin. You need to wash your hands even more thoroughly and for a longer time before and after every procedure, especially in the following situations:

- Before and after helping someone give birth
- Before and after touching a wound or broken skin
- Before and after giving an injection, or cutting or piercing a body part
- After touching blood, urine, stool, mucous, or fluid from the vagina
- After removing gloves

Use soap or other disinfectant to remove dirt and germs. Count to 30 as you scrub your hands all over with the soapy lather. Do not use a brush or soft stick to clean under your nails. Rinse your hands using running water. Do not reuse water.

Disinfect or Sterilize Equipment and Instruments

Cleaning instruments and equipment to get rid of nearly all the germs is called high-level disinfection. Instruments must first be washed and then disinfected if they are to be used to do the following:

- Cut or pierce skin
- Give an injection
- Cut the cord during childbirth
- Examine the vagina, especially during or after childbirth, a miscarriage, or an induced abortion
- Perform any transcervical procedure

High-Level Disinfection

There are three steps to follow to achieve high-level disinfection.

1. Soaking

Soak instruments for 10 minutes. If possible, use a 0.5% solution of bleach (chlorine) (see below). Soaking instruments in bleach solution will help protect you from acquiring an infection when cleaning the dirty instruments.

How to make a disinfection solution of 0.5% bleach:

- If the label on your bleach says:
  - 2% available chlorine—use one part bleach to three parts water
  - 5% available chlorine—use one part bleach to nine parts water
  - 10% available chlorine—use one part bleach to 19 parts water
  - 15% available chlorine—use one part bleach to 29 parts water
- Mix just enough solution for one day. Do not use it again the next day. It will no longer be strong enough to kill germs.

2. Washing

Wash all instruments with soapy water and a brush until each one looks very clean, and rinse each one with clean water. Be careful not to cut yourself on sharp edges or points. Wear gloves when washing instruments; if possible, wear heavy gloves.

3. Disinfecting

Steam or boil the instruments for 20 minutes.

- To steam the instruments, you need a pot with a lid. The water does not need to cover the instruments, but use enough water to keep steam coming out of the sides of the lid for 20 minutes. Do not overload. No instrument should protrude above the rim of the pot.
- To boil the instruments, you do not need to fill the whole pot with water. But you should make sure the water covers everything in the pot for the entire time. Put a lid on the pot.
- For both steaming and boiling, start timing 20 minutes after the water, with the instruments, is boiling. Do not add anything new to the pot once you begin to count the time.

Standard Precautions

The same precautions against spreading infection—i.e., universal precautions—should be used with all patients whether they appear sick or well and whether you know their HIV or other infection status. A number of RTIs can be spread from patient to health care provider or to other patients if standard precautions are not followed. HBV, HCV, and HIV are incurable infections that are easily transmitted by reusing contaminated sharps. Because RTIs are often asymptomatic, it is not possible to know which patient has an infection. For this reason, universal precautions should be followed for all patients regardless of known or suspected infection status. Use precautions with every person you see. Every time you have to cut the skin or touch body fluids, follow the advice below. This includes any time you must give an injection, stitch skin or tissue, help with childbirth, or examine a woman's vagina. If you follow these rules, there is no risk of spreading infection from one person to others, or of being infected yourself:

- Avoid touching body fluids, such as blood, vomit, stool, urine, and pus.
- Do not share anything that touches blood. This includes razors, needles, any sharp instruments that cut the skin, and toothbrushes. If you must share such things, disinfect them before another person uses them.
- Keep wounds covered with a clean bandage or cloth.
- Use gloves or a piece of plastic to handle dirty bandages, cloths, blood, vomit, or pus.
- Wash your hands with soap and water after changing dirty bedding and clothes.

- Keep bedding and clothing clean. This helps keep sick people comfortable and helps prevent skin problems. Carefully handle clothing or sheets stained with blood, diarrhoea, or other body fluids. Separate these clothing or sheets from other laundry for washing. Thoroughly dry laundry in the sun if possible or iron after drying.

Annex 3. Laboratory Tests for STIs/RTIs

Laboratory Tests for STIs/RTIs

Syphilis Testing

Box A3.1. Perform SD BIOLINE test and respond to results

- Seek consent to collect blood to screen for antibodies to syphilis.
- Explain procedure of blood collection.
- Use a sterile needle and syringe. Draw up 5 mL of venous blood. Put in a sterile plain test tube.
- Let the collected blood stand for 20 minutes to allow serum to separate (or centrifuge 3–5 minutes at 2,000–3,000 rpm). In the separated sample, serum will be on top.
- Use provided sampling pipette to withdraw some of the serum. Take care not to include any red blood cells from the lower part of the separated sample.
- Hold the pipette vertically over a test card circle. Squeeze teat to allow one drop (50 mL) of serum to fall onto a circle and add a specific buffer solution one drop wooden applicator.

Important: *Carefully label each sample with a patient name or number.* One sample should be done on one test device. Holding the buffer bottle vertically, allow exactly one drop of antigen to fall onto each test sample. Leave on a bench for 10 minutes. Read the test starting with the control line followed by the test line. Document the result and give result to clients.

- Make sure antigen has not expired.
- Room temperature should be 22.8°C–29.3°C.

Interpreting Syphilis Test Results

Syphilis tests detect antibodies, which are evidence of current or past infection. Syphilis tests are not needed to diagnose patients with genital ulcers (who should be managed using Flow Chart 1 in Chapter 8). Treponemal tests (such SD BIOLINE Syphilis 3.0) are preferred for screening. These tests detect almost all cases of early syphilis.

Note: All patients with reactive SD BIOLINE should be treated. We recommend the use of SD BIOLINE Syphilis 3.0 test because it does not require a skilled person and test storage and transportation are easy. The test minimizes false positives, and the interpretation of the result is simple (see Box A3.2).

Box A3.2. Interpreting results

Box A3.2. Interpreting results
After 10 minutes, test device, including control and positive line when the client is positive—for comparison. **Example test device** 1. Nonreactive (no line on test position):negative for syphilis 2. Reactive (two lines: one control position and one test position):positive for syphilis **Note:** Determine if the woman and her partner have received adequate treatment. If not, treat woman and partner for syphilis with benzathine penicillin. Treat newborn with benzathine penicillin. Follow up with newborn in 2 weeks. Counsel on safer sex. Initiate HIV testing and counselling.

Criteria for Bacterial Vaginosis

Bacterial vaginosis can be diagnosed using simple clinical criteria with or without the aid of a microscope.	
Collect specimen	Note colour and consistency of vaginal discharge. Take a sample of discharge from the side walls or deep in the vagina where discharge pools (or use discharge remaining on speculum). Touch pH paper on discharge or swab or speculum, and note the pH.
What to look for	**The diagnosis of bacterial vaginosis is based on the presence of at least three of the four following characteristics:** • Homogeneous white-grey discharge that sticks to the vaginal walls • Vaginal fluid pH > 4.5 • Release of fishy, amine odour from the vaginal fluid when mixed with 10% potassium hydroxide (positive whiff test) • "Clue cells" visible on microscopy of a Gram-stained smear
Important	Look for evidence of other vaginal or cervical infections—multiple infections are common.

Wet Mount Microscopy

Direct microscopic examination of vaginal discharge or urethral discharge can aid in diagnosis of yeast infection (*Candida albicans*), bacterial vaginosis, and trichomoniasis.	
Collect specimen	Take a sample of discharge with a swab from the urethra or the side walls or deep in the vagina where discharge accumulates.
Prepare slide	Mix specimen with one or two drops of saline on a glass slide and cover with a coverslip.
What to look for	• Examine at 10X magnification, and look for typical jerky movement of motile trichomonas. • Examine at 40X magnification to look for budding yeast cells and trichomonas. • To make identification of yeast cells easier in wet mount slides, mix the vaginal swab in another drop of saline and add a drop of 10% potassium hydroxide to dissolve other cells.
Important	Look for evidence of other vaginal or cervical infections—multiple infections are common.

Gram-Stain Microscopy of Vaginal or Urethral Smears

Collect specimen	A Gram-stain slide can be prepared at the same time as the wet mount by rolling the swab on a separate slide.
Prepare slide	• Heat fix. • Stain with crystal violet (60 seconds) and rinse. • Stain with Lugols iodine (60 seconds) and rinse. • Decolorize briefly with acetone-ethanol for few seconds (until the liquid runs clear). • Stain with dilute Carbol Fuschin/neutral red or Safranin (60 seconds) and rinse. • Gently blot dry and examine under oil immersion (1,000X).
What to look for	• Lactobacilli only—normal • Mixed flora, mainly lactobacilli with a few short rods (coccobacilli)—considered normal • Presence of clue cells; mixed flora, mainly *Gardnerella*-like and anaerobic bacteria with a few lactobacilli—treat for bacterial vaginosis • Presence of clue cells; mixed flora of Gram-positive, Gram-negative, and Gram-variable rods; no lactobacilli—treat for bacterial vaginosis
Important	Look for evidence of other vaginal or cervical infections—multiple infections are common.

Use of Gram Stain for Diagnosis of Cervical or Urethral Infections

1. The Gram-stain method has a higher sensitivity for the diagnosis of urethral infections, due to *Neisseria gonorrhoea* or suggesting *Chlamydia trachomatis* in men, compared to cervical infection in females—even where well-trained technicians are available due to presence of normal vaginal flora.
2. The costs associated with the method, including the cost of maintaining microscopes, outweigh the benefits in terms of improved quality of care.
3. Use Culture and Sensitivity Test if available in facility.

Annex 4. Medications

Medications

Medications in Pregnancy

During pregnancy, the mother and the foetus form one biological unit, and the health of the foetus depends on the health of the mother. It is important to treat the mother whenever needed, while protecting the unborn baby to the greatest possible extent.

Drugs can have harmful effects on the foetus at any time during pregnancy. During the first trimester, drugs may produce congenital malformations (teratogenesis); the greatest risk is between the third and the eleventh week of pregnancy. Few drugs have been shown conclusively to be teratogenic in humans, but no drug is safe beyond all doubt in early pregnancy. Drugs should be prescribed for a pregnant woman only if the expected benefits to her are thought to be greater than the risk to the foetus. All drugs should be avoided, if possible, during the first trimester. Drugs that have been used extensively in pregnancy and appear to be usually safe should be prescribed in favour of new or untried drugs, and the smallest effective dose should be used. The following list includes information about the use of some common drugs in pregnancy (see Table A4.1). Absence of a drug from the list does not imply that it is safe.

Table A4.1. Drug safety in pregnancy

Acyclovir	No studies have shown their safety in pregnancy, so should be contraindicated
Amoxicillin	No evidence of teratogenicity
Ampicillin	Not known to be harmful
Azithromycin	Limited data in pregnancy; use only if potential benefit outweighs risk
Benzathine	Not known to be harmful
Benzylpenicillin	Not known to be harmful
Cefixime	Single dose of cefixime is considered safe in pregnancy
Ceftazidime	Not known to be harmful
Ceftriaxone	Not known to be harmful
Chloramphenicol	Third trimester: neonatal "grey baby" syndrome
Ciprofloxacin	Avoid—arthropathy in animal studies; safer alternatives available
Clindamycin	Not known to be harmful
Clotrimazole	Avoid in first trimester; use vaginally during second and third trimester—not shown to cause birth defects
Cloxacillin	Not known to be harmful

Doxycycline	**Contraindicated in pregnancy and breastfeeding:** • First trimester: effects on skeletal development in animal studies • Second and third trimesters: dental discoloration in children; maternal hepatotoxicity with large parenteral doses
Erythromycin	Not known to be harmful
Famciclovir	Animal studies did not show any risk of foetus—use only when potential benefit outweighs risk
Fluconazole	Avoid in first trimester—multiple congenital abnormalities reported with long-term high doses
Gentamicin	• Use in second and third trimesters may been associated with auditory or vestibular nerve damage although the risk is probably very small • Use only if potential benefit outweighs risk and monitoring of serum gentamicin concentration is essential
Metronidazole	• First trimester: avoid • Second and third trimesters: avoid high-dose regimens (> 1 g)
Nystatin	No information available, but absorption from gastrointestinal tract negligible
Ofloxacin	Avoid—arthropathy in animal studies; safer alternatives available
Podophyllum resin	Avoid—neonatal death and teratogenesis have been reported
Streptomycin	Use in second and third trimesters may be associated with auditory or vestibular nerve damage although the risk is probably very small; use only if potential benefit outweighs risk and monitoring of serum streptomycin concentration is essential)
Sulfamethoxazole + trimethoprim	• First trimester: theoretical teratogenic risk (trimethoprim is a folate antagonist) • Third trimester: neonatal haemolysis and methaemoglobinaemia; suggestion of increased risk of kernicterus in neonates appears to be unfounded
Tinidazole	• Manufacturer advises to avoid in first trimester • Second and third trimesters: avoid high-dose regimens (> 1 g)
Trimethoprim	First trimester: theoretical teratogenic risk (folate antagonist)
Valaciclovir	Animal studies did not show any risk of foetus—use only when potential benefit outweighs risk
Vancomycin	Use only if potential benefit outweighs risk—monitoring of plasma vancomycin concentration essential to reduce risk of foetal toxicity
Zidovudine and other antiretrovirals	Avoid if possible in first trimester; benefit of treatment considered to outweigh risk in second and third trimesters

Antibiotic Treatments for Gonorrhoea

WHO recommended treatments for urogenital and rectal gonorrhoea			
	Dosage	**Safe in pregnancy?**	**Resistance**
Cefixime	400 mg orally as a single dose	Yes	No
Ceftriaxone	1 g by IM injection	Yes	No
Spectinomycin	2 g by IM injection	Yes	
Other effective treatments for urogenital and rectal gonorrhoea			

WHO recommended treatments for urogenital and rectal gonorrhoea			
	Dosage	**Safe in pregnancy?**	**Resistance**
Cefotaxime	1 g by IM injection	Yes	No
Ceftizoxime	1 g by IM injection	Yes	No
Cefuroxime	1.5 g by IM injection	Yes	No
Levofloxacin	250 mg orally as a single dose	No	Extensive quinolone Resistance in parts of the WHO Southeast Asia and Western Pacific Regions
Norfloxacin	400 mg orally as a single dose	No	
Ofloxacin	400 mg orally as a single dose	No	
Trimethoprim/ Sulfamethoxazole	80/400 mg orally, 10 tablets as a single dose each day for 3 days	No	Resistance in many regions

Note 1: intramuscular (IM), World Health Organization (WHO)

Note 2: Penicillin—ask for information on history of allergy to penicillin injection.

Note 3: The use of quinolones should take into consideration the patterns of Neisseria gonorrhoea resistance. Treatment of gonorrhoea: 30 regimens, involving 21 antimicrobial drugs, have been shown to be effective for rectal and urogenital infections. Few regimens have been shown to be highly effective against pharyngeal infections. Among those antimicrobial agents available for the treatment of uncomplicated gonococcal infections, ceftriaxone (1 g), cefixime (400 mg),and ofloxacin (400 mg) appear to offer the best balance of proven efficacy and safety. In Tanzania, ceftriaxone injection is used as a second line drugs.

Annex 5. STI/RTI Reference Tables

STI/RTI	Aetiological agent	Acute manifestations	Possible complications	Effect on pregnancy and newborn
Sexually transmitted infections				
Gonorrhoea	*Neisseria gonorrhoea*	**In women:** cervicitis, urethritis **In men:** Urethritis	**In women:** PID, infertility, ectopic pregnancy, chronic pelvic pain **In men:** epididymitis, prostatitis, urethral strictures **In both women and men:** disseminated gonococcal infection, arthritis, endocarditis, meningitis	**Pregnancy:** Spontaneous abortion, Postpartum endometritis, prelabour rupture of membranes, preterm delivery **Newborn:** ophthalmia neonatorum
Chlamydial infection	*Chlamydia trachomatis*	**In women:** cervicitis, urethritis **In men:** urethritis	**In women:** PID, infertility, ectopic pregnancy, chronic pelvic pain **In men:** epididymitis, prostatitis, urethral strictures **In both women and men:** disseminated gonococcal infection, arthritis, endocarditis, meningitis	**Pregnancy:** prelabour rupture of membranes, preterm delivery, post–caesarean section endometritis **Newborn:** transient vaginal infection
Trichomoniasis	*Trichomonas vaginalis*	**In women:** vaginitis **In men:** urethritis	**In women:** not known **In men:** prostatitis, urethral strictures, possibly infertility	**Pregnancy:** prelabour rupture of membranes, preterm delivery, post–caesarean section endometritis **Newborn:** transient vaginal infection

STI/RTI	Aetiological agent	Acute manifestations	Possible complications	Effect on pregnancy and newborn
Syphilis	*Treponema-pallidum*	**In both women and men:** painless oral and anal genital ulcers, secondary (disseminated) syphilis—skin rash, malaise, headaches, muscle aches, weight loss, low-grade fever	**In both women and men:** neurological, cardiovascular, and other systemic complications, resulting from tertiary (late) syphilis	**Pregnancy:** spontaneous abortion, postpartum endometritis, prelabour rupture of membranes, preterm delivery **Newborn:** congenital Infection abnormalities
Chancroid	*Haemophilus ducreyi*	**In both women and men:** genital ulcer (often painful), painful inguinal adenitis	**In women:** rectovaginal fistula, inguinal abscess **In men:** inguinal abscess	None known
Lymphogranuloma venereum	*Chlamydia trachomatis*	**In both women and men:** small, painless genital ulcer, nonspecific urethritis, acute lymphadenitis with bubo formation **In women:** cervicitis	**In both women and men:** fistulas, rectal strictures, genital elephantiasis	None known
Donovanosis	*Klebsiella granulomatis*	**In both women and men:** genital ulcer (could be cervical lesion in women)	**In both women and men:** Pseudoelephantiasis, stenosis of the urethra, anus, or vagina (in women)	None known
Genital herpes	HSV	**In both women and men:** multiple vesicle lesions, ulceration, pain, itching, dysuria	**In both women and men:** aseptic meningitis, transverse myelitis, disseminated infections	**Pregnancy:** dissemination of infection (especially if acquired in the third trimester), spontaneous abortion, preterm delivery **Newborn:** neonatal herpes, encephalitis, disseminated infection, skin, eye, and mouth infection

STI/RTI	Aetiological agent	Acute manifestations	Possible complications	Effect on pregnancy and newborn
Genital warts/cervical lesions	HPV	**In both women and men:** genital and anal warts **In women:** squamous intraepithelial lesions of the cervix	**In women:** cervical cancer, vaginal and vulvar carcinoma, anal carcinoma **In men:** penile and anal carcinoma	**Pregnancy:** not known **Newborn:** Laryngeal papillomatosis
HBV	HBV	**In both women and men:** acute hepatitis	**In both women and men:** chronic hepatitis, cirrhosis, liver cancer	**Pregnancy:** not known **Newborn:** perinatal hepatitis B
HIV/AIDS	HIV	**In both women and men:** headache, muscle ache, sore throat, fever, and swollen lymph nodes	**In both women and men:** AIDS	**Pregnancy:** possible increased progression of AIDS **Newborn:** perinatal transmission of HIV
Bacterial vaginosis	*Gardnerella vaginalis, anaerobic bacteria, genital mycoplasma, streptococci*	Vaginitis	Increased risk of PID (postabortion)	**Pregnancy:** preterm delivery, prelabour rupture of membranes, chorioamnionitis, postpartum endometritis **Newborn:** low birthweight
Vulvovaginal candidiasis	*Candida albicans*	Vaginitis	None known	**Pregnancy:** increased susceptibility to *Candida* **Newborn:** neonatal thrush
Anorectal discharge	*Neisseria gonorrhea, Chlamydia trachomatis*	Anal fissure, rectal prolapse	Rectal abscess	Faecal incontinence
Oropharyngeal infection	*Neisseria gonorrhoea, Candida albicans, Klebsiella spp.*	Odynophagia, dysphagia	Tonsillitis	

Notes: hepatitis B virus (HBV), herpes simplex virus (HSV), human papillomavirus (HPV), pelvic inflammatory disease (PID), reproductive tract infection (RTI), sexually transmitted infection (STI),

Annex 6. STI Tools

STI Screening Tool – English

SEXUALLY TRANSMITTED INFECTIONS (STIs)/REPRODUCTIVE TRACT INFECTIONS (RTIs) SCREENING QUESTIONNAIRE

Patient's name: ……..…… Reg. Number: ……

Age: …… **Sex:** Male/Female

Date of Visit																
	Y	**N**	**Y**	**N**	**Y**	**N**	**Y**	**N**	**Y**	**N**	**Y**	**N**	**Y**	**N**	**Y**	**N**
Abnormal vaginal discharge/ Any urethral discharge?																
Burning or pain when passing urine?																
Any genital ulcer?																
Lower abdominal pain or pain during sex (deeper in the pelvis) for Female																
Itching, pains or swelling in the vulva? Any new growth?																
Anorectal discharge or pain during defecation / discomfort in																
Any pain on swallowing or dry throat?																
NB: If Client answer YES to any of the questions above, conduct proper examination and manage using appropriate STIs/RTIs MANAGEMENT FLOW CHART or refer to Clinician																

STI Screening Tool – Swahili

FOMU YA KUSAIDIA UTAMBUZI WA UWEZEKANO WA KUWEPO KWA MAGONJWA YA NGONO NA VIA VYA UZAZI

Jina la mteja: ……..…… Namba ya usajili: ……

Umri: …… Jinsi: Me/Ke

Tarehe ya hudhurio																
Weka alama ya vema	**N**	**H**	**N**	**H**	**N**	**H**	**N**	**H**	**N**	**H**	**N**	**H**	**N**	**H**	**N**	**H**
Je, Unatokwa na usaha/majimaji yasiyo ya kawaida ukeni /Uumeni ?																
Je, Unapata maumivu wakati wa kujisaidia haja ndogo?																
Je, Una kidonda/kipele kwenye uume au uke?																
Je, Unapata maumivu chini ya kitovu au wakati wa kujamiiana? (Kwa wanawake)																
Je, Una viotea au kuwashwa sehemu za ukeni/ uumeni ?																
Je,Unapata maumivu au kutokwa na majimaji katika njia ya haja kubwa ?																
Je, Unahisi maumivu wakati wa kumeza au koo kukauka?																
ZINGATIA: Kama jibu ni ndiyo kwa mojawapo ya maswali hayo hapo juu , mpime na kumtibu kwa kufuata chati ya mtiririko (flowchart) wa tiba ya magonjwa ya ngono na via vya uzazi au toa rufaa kwenda kwa mganga.																

Daily STI Register

THE UNITED REPUBLIC OF TANZANIA MINISTRY OF HEALTH, COMMUNITY DEVELOPMENT, GENDER, ELDERLY AND CHILDREN

NATIONAL AIDS CONTROL PROGRAMME

DAILY STI/RTIs REGISTER

Duration: ___ /___ / _____ - ___ /___ / _____
DD MM YYYY DD MM YYYY

Facility Name: _____

Council: _____

Region: _____

INSTRUCTIONS:

Date – Enter the date a client attends clinic

Serial number – Enter number of clients attended

Client registration number – Enter specific STI/RTI registration number of every client from the section the client attended in a facility. This number is used to identify the particular client treated for STI.It should not be issued to another client within the year.

Name – Enter first, middle and surname of the clien

Address – Write physical address of the client

Age – Enter the age in years/months

Sex – Enter (M) Male or (F) Female

Client referred from - Specify where the client has been referred from

Type of attendance – Enter New client, contact or follow up

Symptoms and Signs – Enter the presenting major symptoms and signs

Diagnosis – Enter the diagnosis (Syndrome)

Drugs issued – Enter the amount of all drugs issued

Counselled and advised on condom use – Tick if the client was counseled and advised on condom use

Number of condom provided – Enter the amount of condom issued to the client

Counselled and tested for HIV – Tick if the client was counseled and tested for HIV.

Comments – Enter your comments on management of the client

Providers' Name and signature – Enter your name and signature

The register form can also be
downloaded from
the website of National AIDS Control Programme
(NACP)
http://www.nacp.go.tz

Date (dd/mm/yyyy)	Serial number	Client registration number	Name	Address	Age (years)	Sex (male=M; female=F)	Client referred from (**IP, TB, ANC, CTC, VMMC, Community, HTS** ..)	Type of attendance Tick (√) applicable			Symptoms and signs
								Contact	Follow up		
									Cured	retreatment 3rd line	

Diagnosis (Syndrome)	Tick Medicines Prescribed																	Comments	Provider's name and Signature
	Cefixime	Doxycycline	Metronidazole	Azithromycin	Erythromycin	Benz.Peniciline	Erythromycin Syrup	Clotrimazole Pess.	Clotrimazole cream	Ceftriaxone	Podophyllin	Acyclovir	Others(Speify)	condom use	Number of Condoms provided	Counselled and tested for HIV			

Facility Monthly STI/RTI Summary Form

THE UNITED REPUBLIC OF TANZANIA MINISTRY OF HEALTH, COMMUNITY DEVELOPMENT, GENDER, ELDERLY AND CHILDREN

NATIONAL AIDS CONTROL PROGRAMME

FACILITY MONTHLY STI/RTI SUMMARY FORM

Facility: _____

District: _____

Region: _____

The Monthly Summary Form can also be downloaded from the website of National AIDS Control Programme (NACP) http://www.nacp.go.tz

MINISTRY OF HEALTH COMMUNITY DEVELOPMENT, GENDER, ELDERLY AND CHILDREN
NATIONAL AIDS CONTROL PROGRAMME
FACILITY MONTHLY STI/RTI SUMMARY FORM

HEALTH FACILITY: _____ TYPE *(tick):* ___ Hosp ___HC. __Disp.___ Clin. OWNERSHIP *(tick):* Gov ☐ Par ☐ FBO/NGO ☐ Private. ☐ COUNCIL**:** _____ REGION:_____	OFFICER REPORTING: Name: _____ Designation: _____ Tel. No. _____ Designation: _____ Tel. No. _____ Email:_____ Verified By: _____ Designation:_____ Tel. No. _____ Designation: _____	Reporting Month: _____ Year: _____ Submission Date: _____

	INDICATOR	AGE GROUP AND SEX																						TOTAL		GRAND TOTAL (M + F)
		<1		1 - 4		5 - 9		10 -14		15 - 19		20 - 24		25 -29		30 - 34		35 - 39		40 - 49		>= 50				
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
A	Number of new clients with Genital Discharge syndrome																									
B	Number of new clients with Genital Ulcer Disease																									
C	Number of new clients with Pelvic Inflamatory diseases																									
D	Number of new clients with VDRL/RPR +VE																									
E	Number of new clients with Anorectal syndromes																									
F	Number of new clients with Oralpharyngeal syndrome																									
G	Number of new clients with Ophthalamia neonatorum (Neonatal Conjuctivitis)																									

	syndrome																									
H	Number of new clients with other STIs																									
I	**TOTAL NEW CLIENTS TREATED THIS MONTH (A+B+C+D+E+F+G+H)**																									

J	Number of Episodes re-treated - 2nd line																									
K	Number of Episodes re-treated - 3rd line regimen																									
L	Number of Episodes referred for 3rd- line regimen																									
M	Number of Contacts treated																									
N	Number of clients counselled and advised on condom use																									
O	Number of STI/RTI clients provided with condom																									

P	Number of condoms provided																									
Q	Number of clients counseled and tested for HIV																									
R	Number of clients referred from other services (i.e. IP, TB, VMMC,HTS, FP,ANC AND COMMUNITY)																									

Glossary

Adnexa	Ovaries, fallopian tubes, and supporting structures
Algorithm	Sequence of logical steps that should be taken when dealing with a given task
Anal sex	Penetration of the penis into the anus
Birth plan	Plan for giving birth that takes into account the woman's or couple's preferences, as well as special circumstances and possible complications or emergency situations
Clue cells	Vaginal cells covered with bacteria; commonly present in woman with a vaginal infection
Complicated abortion	Spontaneous or induced abortion that results in complications, such as infection or bleeding
Dilatation and curettage	Technique that may be used for induced abortion; it involves stretching the cervical channel and scraping the interior of the uterine cavity to remove products of conception
Dry sex	Sexual practice that involves penetrative vaginal sex where the woman has a dry vagina; sometimes herbs are used to increase the dryness—dry sex increases the risk of sexually transmitted infections, including HIV
Dual method use	Using a barrier method for protection against STI and another method for contraception
Dual protection	Prevention of both STI, including HIV, and unwanted pregnancy; can be achieved by the correct and consistent use of condoms alone or by the simultaneous use of two methods, one of which must be a condom
Dual risk	Risk of both pregnancy and STI, including HIV
Dyspareunia	Painful intercourse
Dysuria	Difficult or painful urination
Ectopic pregnancy	A pregnancy in which the fertilized egg implants outside of the uterus, and the placenta and foetus begin to develop there; most common site is within a fallopian tube
Epididymitis	Inflammation of the epididymis; occasional complication of untreated urethral infection
Female reproductive tract	Includes vulva, vagina, uterine cavity, and the fallopian tubes (see Figure 1.1)
Forensic examination	Examination to look for evidence that can later be used in legal proceedings; should be done by specially trained professional
HIV voluntary counselling and testing	Counselling before HIV test, testing itself, and post-test counselling—conducted when results of the test are given to the patient
Incidence rate	Number of new cases of a disease in a defined population over a specified period of time
Index patient	Original patient diagnosed for a particular infection
Induced abortion	Intentional termination of pregnancy, before foetus reaches the state of viability, by mechanical (surgical) means or by drugs
Infertility	Inability to conceive; usually assumed to exist if pregnancy is not achieved after 12 months of regular sexual intercourse without birth control
Infestation	Development of a pathogenic agent on the body, e.g., body lice
Integrated services	Availability of multiple health services—for instance, family planning and STI treatment—through a single facility or at a single visit
Integration	Incorporation of other services into already existing services

Lochia	Postpartum discharge which is often blood-stained, but not foul smelling
Lower genital tract infection	Includes vaginal and cervical infections
Manual vacuum aspiration (MVA)	Technique for evacuating the contents of the uterus through a specially designed hand-held syringe
Medical eligibility criteria	Criteria for a woman's eligibility to use a contraceptive method, based on the relative health risks and benefits of using such a method for a woman with a given condition
Milking the urethra	Checking for penile discharge by placing the fingers of one hand several centimetres behind the scrotum and bringing them upward and forward toward the base of the penis
Mobile population	Group of people who often move far from their families, e.g., due to nature of work, seeking asylum, or employment
Morbidity	A state of disease
Mother-to-child transmission	Transmission of HIV from an infected mother to her infant during pregnancy, labour or after delivery through breast milk
Outpatient	Patient who receives treatment without being hospitalized
Oral sex	Sex done through the oral cavity
Parenteral therapy	Therapy given by some means other than through the gastro intestinal tract; usually refers to drugs given intravenously, intramuscularly, or subcutaneously
Pathogen	A microorganism, such as a bacterium, that lives on and feeds from a host and causes disease
Postabortion	Period of time that immediately follows abortion, usually no longer than 2 weeks
Postabortion care	Care given to manage complications of abortion; key elements include emergency treatment of abortion complications, family planning counselling and services, and links to comprehensive reproductive health services
Postpartum	First 6 weeks after childbirth
Preferred method	Contraceptive method that patient thinks she would like to use
Prelabour rupture of membranes	Rupture of membranes before labour has begun: (1) preterm when foetus is immature less than 37 weeks, or (2) term when foetus is mature, i.e., greater than 37 weeks
Presumptive treatment	Treatment with a full curative dose of drugs (e.g., antibiotics) based on assumption that person is infected, but not on evidence of disease
Preterm rupture of membrane	Rupture of membranes before 37 weeks of gestation (before pregnancy is carried to term)
Prevalence rate	Number of cases of a disease existing in a given population at a specific point or period of time
Primary infertility	Infertility in a couple who has never conceived
Prophylactic treatment	Often refers to a partial dose of drugs (in comparison to the full curative dose) that may prevent a process that can lead to disease
Prophylaxis	Prevention of disease or of a process that can lead to disease
Screening	Examination of usually symptom-free individuals to detect those with signs of a given disease
Secondary infertility	Infertility in a couple who has previously conceived at least once
Sepsis	Presence of pathogenic organisms or their toxins in the blood

Serial monogamy	Situation in which a person has a series of consecutive sexual relations of various durations, such that they have multiple partners over time, but never more than one partner at any single point in time
Sexual violence	Any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic a woman's sexuality by 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
Signs	Abnormalities indicative of disease identified by health care provider on examination of the patient
Spontaneous abortion	Abortion that was not artificially induced; miscarriage
Swab	A rolled piece of cotton or gauze attached to the end of a stick or clamp, used for applying medications or collecting biological samples from a surface
Symptom	Abnormal phenomenon experienced by patient and indicative of disease
Teratogenicity	Ability to cause defects in a developing foetus—a potential side effect of many drugs
Transcervical procedure	Any procedure that requires passage of an instrument or device through the cervix into the uterus (e.g., IUCD insertion, MVA, endometrial biopsy)
Transmission	Passage of disease-causing microorganisms from one person to another
Upper genital tract infection	Includes infection of endometrium, fallopian tubes, ovaries, and surrounding tissues
Vulnerable groups	Groups of populations more at risk of acquiring STI, including HIV, compared to the rest of the population

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