THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF HEALTH AND SOCIAL WELFARE

NATIONAL GUIDELINES FOR MANAGEMENT OF SEXUALLY TRANSMITTED AND REPRODUCTIVE TRACT INFECTIONS

National AIDS Control Programme (NACP) &
Reproductive and Child Health Section

First Edition, March 2007

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF HEALTH AND SOCIAL WELFARE

NATIONAL GUIDELINES FOR MANAGEMENT OF SEXUALLY TRANSMITTED AND REPRODUCTIVE TRACT INFECTIONS

First Edition, March 2007

National AIDS Control Programme (NACP) &
Reproductive and Child Heath Section

First Edition, March 2007
ISBN 9987-650-51-1

TABLE OF CONTENTS

LIST OF ABBREVIATION

AIDS	-	Acquired Immunodeficiency Syndrome
BTC	-	Belgian Technical Cooperation
BV	-	Bacterial Vaginosis
CA	-	Candida albicans
CRP	-	C-reactive Protein
EC	-	Emergency Contraception
ELISA	-	Enzyme-Linked Immunosorbent Assay
FGM	-	Female Genital Mutilation
FP	-	Family Planning
FTA-Abs	-	Fluorescent Treponema antibody absorption test
GUD	-	Genital Ulcer Disease
HBV	-	Hepatitis B Virus
HCG	-	Human Chorionic Gonadotropin
HIV	-	Human Immunodeficiency Virus
HP	-	Health Provider
HPV	-	Human Papilloma Virus
HSV	-	Herpes Simplex Virus
IM	-	Intramuscular
IU	-	International Unit
IUCD	-	Intrauterine Contraceptive Device
IV	-	Intravenous
JICA	-	Japan International Cooperation Agency
LGV	-	Lymphogranuloma Venereum
MCH	-	Maternal and Child Health
MHA-TP	-	Microhaemagglutination assay for antibodies to Treponema pallidum
MTCT	-	Mother to Child Transmission
MTUHA	-	Mfumo wa Taarifa za Uendeshaji wa Huduma za Afya (Health Management Information System)
MOHSW	-	Ministry of Health and Social Welfare
MVA	-	Manual Vacuum Aspiration
NACP	-	National AIDS Control Programme
ONN	-	Ophthalmia Neonatorum
PCR	-	Polymerase Chain Reaction
PEP	-	Post Exposure Prophylaxis
PID	-	Pelvic Inflammatory Disease
ROM	-	Rupture of Membrane
RPR	-	Rapid Plasma Reagin
RTI	-	Reproductive Tract Infection
SSI	-	STI Service Indicator
STI	-	Sexually Transmitted Infection
TPPA	-	Treponema pallidum particle agglutination
TPHA	-	Treponema pallidum haemagglutination test
TV	-	Trichomonas vaginalis
UNFPA	-	United Nations Population Fund
UTI	-	Urinary Tract Infections
VCT	-	Voluntary Counselling and Testing
VDRL	-	Venereal Disease Research Laboratory
WBC	-	White Blood Cells
WHO	-	World Health Organization

LIST OF FLOW CHARTS

ACKNOWLEDGMENT

This practice guide is a collaborative effort of various institutions and individuals including development partners who participated in consultations or reviews. The Ministry of Health and Social Welfare would like to thank the following organizations for their valuable financial and technical contribution towards the production of the document.

- World Health Organization (WHO),
- United Nations Population Fund (UNFPA)
- Japan International Cooperation Agency (JICA)

Specifically however, the Ministry would like to recognize the individual contribution from the following experts and consultants who were involved in the finalization of the document;

- Dr. Joan J. Mngodo - Consultant
- Ms. J.M. Bategereza - Consultant
- Dr. A. Gavyole - WHO
- Dr. Benoit Soro - WHO
- Dr. Theopista John - WHO
- Ms. Julia Samuelson - WHO
- Ms. Saiqa Mullick - WHO
- Asst. Prof. Shinichi Takenaka - JICA
- Dr. Nelly Iteba - UNFPA
- Prof. W. Urassa - MUCHS
- Ms. Eunice Pallangyo - Aga Khan University
- Mr. Mosses Busiga - Pathfinder International
- Dr. Mohamed Abdallah Seif - Zanzibar AIDS Control Programme
- Dr. Phillo Nchimbi - Mbeya City Council
- Mr. Noel Kasanjala - Muhimbili School of Nurse Teachers
- Dr. Rowland O. Swai - NACP
- The Late Dr. M. Nyang'anyi - NACP
- Dr. M.D. Kajoka - NACP/BTC
- Ms. Mary Mshana - NACP
- Dr. H. Temba - NACP

Also the secretarial work would not have been possible without the efforts of Ms. Edith Minja, Ms. K.M. Salim and Mr Mikihiro Toda.

Finally, the Ministry wishes to thank all those who contributed in one way or another to the preparation of these guidelines as it is not possible to mention all of them here.

Dr. Z.A. Berege
Ag. CHIEF MEDICAL OFFICER
Ministry of Health and Social Welfare
Tanzania

FOREWORD

Sexually Transmitted Infections (STIs) and other Reproductive Tract Infections (RTIs) are highly prevalent in many communities worldwide. They cause considerable morbidity, while increasing the risk of acquiring HIV infection and are costly to the individual and the society in general.

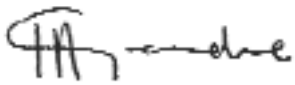
In Tanzania, the HIV/AIDS Surveillance Report of year 2004, reported a total of 208,384 episodes of STIs/RTIs from different health facilities throughout the country. A total of 17,323 ANC attendees were tested for syphilis and among them 1,265 women tested positive giving an overall syphilis prevalence of 7.3% among this group.

There is no doubt therefore that, well coordinated and effective prevention and management of STIs/RTIs should be given high priority in all countries.

These "National Guidelines for Management of STIs and RTIs" have been developed for use by all planners, managers and service providers in all health programmes and service delivery points involved in prevention, diagnosis and management of STIs/RTIs in Tanzania. The guidelines are also intended to be a reference manual, a resource to education and to remind health care workers of the need to consider STIs/RTIs when providing other reproductive health services. Service providers can use the document as a self education tool on the prevention, treatment and diagnosis of STIs/RTIs. The document can also be used for pre-service and in-service education training, and as a source of update and evidence based recommendations.

The publication reflects the involvement of a substantial number of experts from within Tanzania and International institutions who reviewed and debated on the aspects of the document to ensure the recommendations are based on the best available evidence as well as on what are considered favourable public health outcomes.

I urge all users of these guidelines to provide feedback on the appropriateness of the contents as new knowledge and experience is generated to make it a living document.



Hilda Ausi Gondwe
PERMANENT SECRETARY
Ministry of Health and Social Welfare
Tanzania

PREFACE

Terminology Used

Sexually Transmitted Infections (STIs) are a group of infections that are predominantly transmitted through unprotected sexual contact with an infected person. Reproductive Tract Infections (RTIs) are infections of the genital tract. Not all sexually transmitted infections are reproductive tract infections; and not all reproductive tract infections are sexually transmitted; STI refers to the way of transmission whereas RTI refers to the site where the infections develop.

Reproductive tract infections (RTIs) is a broad term that includes sexually transmitted infections as well as other infections of the reproductive tract that are not transmitted through sexual intercourse. Conversely, because STIs in most cases have much more severe health consequences than other RTIs, the term STIs is used throughout the guidelines to highlight the importance of STIs within reproductive tract infections. When information provided in the document is relevant to sexually transmitted infections only, the term STI is used alone.

Rationale

Effective management of STIs and RTIs is one of the cornerstones of their control, as it prevents the development of complications and sequelae, decreases the spread of those infections and HIV in the community and offers a unique opportunity for targeted education about reproductive health.

Early and appropriate treatment of STIs/RTIs at the first contact between patients and health care providers is, therefore, an important public health measure. In the case of adolescent patients, there is the potential to influence future sexual behaviour and treatment–seeking practices at a critical stage of their development. These guidelines have been developed for use in all health service delivery points involved in diagnosing and managing STI/RTI clients. Throughout this document, women, men and adolescents are all considered for primary and secondary prevention services in order to achieve public health outcomes through the prevention and treatment of STIs/RTIs.

These guidelines are also intended to be a reference, resource to education and to remind health care workers of the need to consider STIs/RTIs when providing other reproductive health services. It recommends prevention and care practices for patients who have or may be at risk of acquiring an STI/RTI. It can be used for pre-service or and in-service health provider education and training, as a source of up to date, evidence based recommendations, and as a self education tool for health care provider on the prevention, diagnosis and treatment of STIs/RTIs.

Prevention of STIs/RTIs and their complications require a common approach within reproductive health services. The clinical appearance of different 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 non–sexually transmitted RTIs difficult.

In reproductive health settings such as antenatal and family planning clinics, non- sexually

transmitted RTIs are usually more common than STIs. Different approaches to management are needed to provide appropriate care and minimize stigma.

Objectives of the Guidelines

The objectives of the guidelines are to enable the user of the document to:

- Use it as a reference manual and resource material for providing STI/RTI services
- Recommend prevention and care practices for clients who have or may be at risk of acquiring STIs/RTIs.
- Use for pre-service and or in-service health provider education and training.
- Use as a source of updating service providers of STI/RTI services.
- Use as an evidence based recommendation and self education tool for health care providers on the prevention, treatment and diagnosis of STI/RTI.
- Use as a management tool for harmonizing and improving policies, programmes, and training on the prevention and management of STI/RTI.

Structure of the Guidelines

The Guidelines are divided into three main sections:

Section 1: Presents basic information on aetiology, clinical presentation and management of STIs/RTIs and their complications. It also reviews the knowledge and skills that health care providers should have in order to diagnose and prevent STIs/RTIs

Section 2: Provides guidance on addressing STIs/RTIs through the reproductive health clinic. It also suggests ways of reaching men, adolescents and others who do not typically use reproductive health services.

Section 3: Deals with STI/RTI management - how to diagnose and treat STIs/RTIs related problems and includes flowcharts and treatment tables. This section is organized using a problem oriented approach to permit rapid access to information.

SECTION 1

STI/RTI BASICS

Section 1 presents basic information on aetiology, clinical presentation and management of STIs/RTIs and their complications. It also reviews the knowledge and skills that health care providers should have in order to detect and prevent STIs/RTIs

CHAPTER 1

INTRODUCTION TO STIs/RTIs

OVERVIEW

This chapter introduces the basic facts about STIs/RTIs and HIV/AIDS emphasizing on their aetiologies, transmission modes, symptoms, signs and common complications. It also provides information on public health importance of STIs particularly, regarding prevalence of STIs/RTIs in the country, impact of STIs/RTIs on socio-economic situation, linkages between STIs/RTIs and HIV/AIDS and barriers to STIs/RTIs control at the community level.

Key points

- Reproductive tract infections are caused by organisms normally present in the reproductive tract, or transmitted during sexual contact or invasive medical procedures. These different but overlapping categories of RTIs are called endogenous, sexually transmitted, and iatrogenic, reflecting how they are acquired and spread.
- 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, preterm labour, miscarriage, stillbirth, congenital infection may lead to chronic disability (such as infertility and ano-genital cancer) and death. Increased risk of HIV acquisition and transmission is another consequence of STIs/RTIs.
- To reduce the burden of STIs/RTIs, efforts are needed in both health care facilities and in the community.
- Effective prevention and case management practiced by health care providers reduce the STI/RTI burden in several ways. Effective treatment reduces STI transmission in the community. Safe and appropriate clinical procedures mean fewer iatrogenic infections.
- Community education and outreach are needed to promote prevention of infection and use of health care services and thus further reduce disease transmission within the community.

WHAT ARE STIs/ RTIs?

Definition of STIs

Sexually Transmitted Infections (STIs) are a group of infections that are predominantly transmitted through unprotected sexual contact with an infected person.

Definition of RTIs

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

much more common than endogenous or iatrogenic infections.

These different categories of infections are included together in these guidelines for several reasons:

- Prevention of STIs/RTIs and their complications requires a common approach within reproductive health services.
- The clinical presentation of different 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 non-sexually transmitted RTIs difficult.
- In reproductive health settings such as antenatal and family planning clinics, non-sexually-transmitted RTIs are usually more common than STIs. Different approaches to manage these infections are needed to provide appropriate care and minimize stigma. Health care providers should recognize that labelling a condition as sexually transmitted may be inaccurate and have serious social consequences for the couple.

Table 1.1: Types of STI/RTI

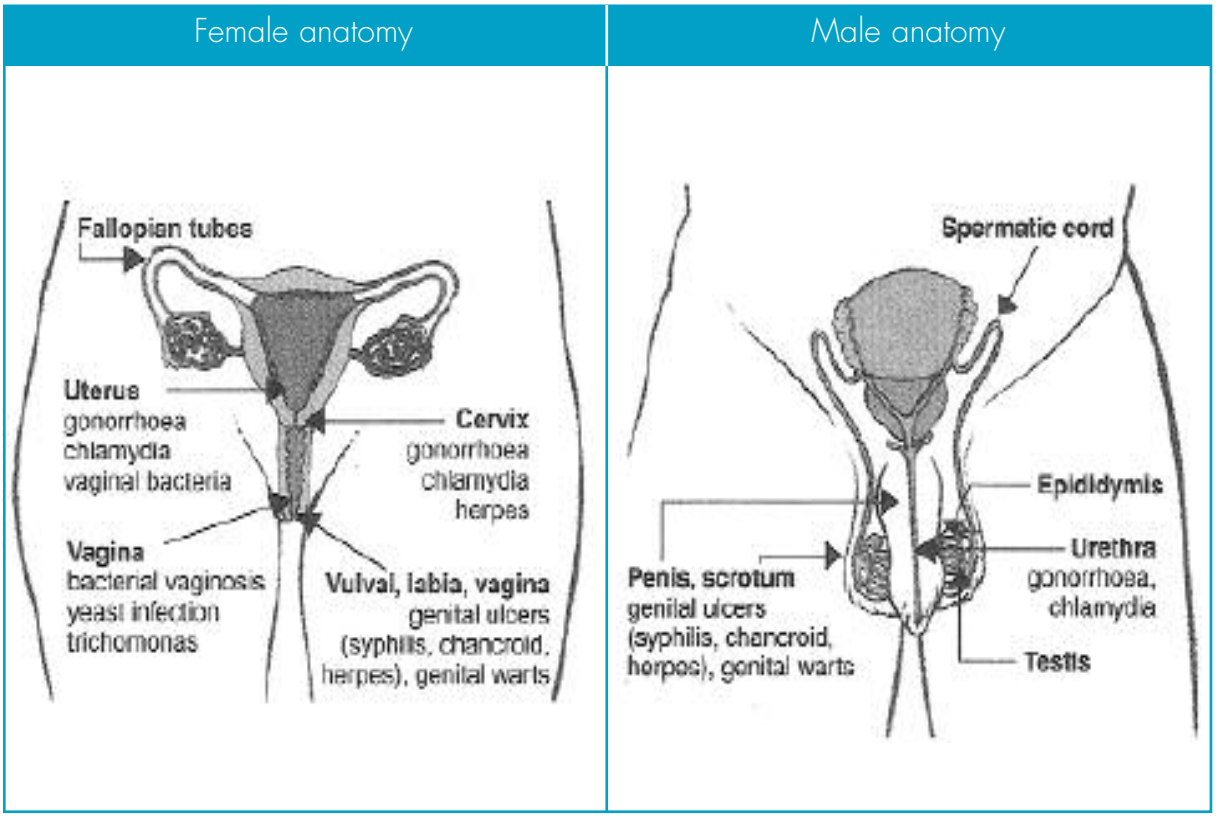
Mode of transmission	Where they come from	How they spread	Common examples
Endogenous infections	Organisms normally found in vagina	Usually not transmitted from person to person, but immunocompromising factors can cause overgrowth which lead to symptoms	• Yeast infection •Bacterial vaginosis
Sexually transmitted infections	Sexual partners with STI(s)	Unprotected sexual contact with infected partner(s)	• Gonorrhoea • Chlamydia • Syphilis • Chancroid, • Trichomoniasis • Genital herpes • Genital warts • HIV infection • Scabies • Pubic lice

Continues on next page

Continued from last page

Mode of transmission	Where they come from	How they spread	Common examples
Iatrogenic infections	Inside or outside the body: • Endogenous (vagina) • STI (cervix or vagina) • Contamination from outside	• By medical procedures or • Following examination or intervention during pregnancy, childbirth, postpartum period or in family planning (e.g., IUCD insertion) and gynaecology settings. Infection may be pushed through the cervix into upper genital tract. • Contaminated needles or other instruments, e.g. uterine sounds, may introduce infection if infection control is poor.	Pelvic inflammatory disease (PID) following abortion or other transcervical procedure. Also,due to complications and infections occurring during pregnancy and postpartum period.
Vertical transmission	Mother to Child	• During pregnancy • During delivery • During breast feeding	• Congenital syphilis • Ophthalmia neonatorum • Herpes genitalis • HIV infection
Through blood transfusion and or its products	Organisms found in blood or blood products	• Contact with infected blood or blood products. • Transfused with infected blood.	• HIV Infection • Syphilis • Hepatitis B • Hepatitis C

Figure 1.1 below shows the sites of STIs/RTIs in male and female reproductive organs with examples of causative organisms.



PUBLIC HEALTH IMPORTANCE OF STIs/RTIs

Sexually Transmitted Infections and Reproductive Tract Infections remain a public health problem of major significance in many countries of the world. Failure to diagnose and treat STIs/RTIs at an early stage may result into serious complications and consequences including infertility, foetal wastage, ectopic pregnancy, ano-genital cancer, premature delivery, as well as neonatal and infant infections. STIs are also known to enhance the spread of HIV infection in communities. On the other hand, there are other RTIs that 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 marital disharmony.

Over 340 million curable and many more incurable STIs occur each year among women worldwide. Non-sexually-transmitted RTIs are even more common. Tanzania is not exceptional to this situation. The national HIV/STI surveillance report No.20 year 2005, reported a total of 325,998 STI episodes from different health facilities throughout the country. In Tanzania, between 10-20% of the sexually active population contract STIs each year. The surveillance of HIV and syphilis infections among antenatal clinic attendees in 2003/04 showed an overall prevalence of syphilis to be 7.3% among the group (3). STIs/RTIs are responsible for serious sequelae in women, men and neonates. Some of the common ones are:

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

- Stillbirth
- Blindness
- Cancers

Also STIs/RTIs facilitate sexual acquisition and transmission of HIV infection. The impact of STIs on the socio-economic situation include: increased cost for health services, reduced economic productivity, relationship/marriage problems, STIs/RTIs associated stigma and discrimination of infected people. Furthermore, STIs/RTIs affect the success of other health programmes. The control of STIs/RTIs is therefore a public health priority. Therefore, a comprehensive STI/RTI control and prevention programme is very vital.

Box 1.2 Factors that facilitate STI/RTI transmission in the community

Risky sexual behaviours such as

- Having multiple partners
- Changing partners
- Having sexual contact with casual partners/transactional sex workers
- Not practising safe sex (condoms are not used due to dislike, unavailability, unaffordability, cultural/religious beliefs, myths)
- Alcohol and drug abuse resulting to impaired wise decision-making in sexual matters

Socio-economic

- Occupation (professions that force persons to be away from their sexual partners for a long time)
- Transactional sex: Exchanging sex for money, materials and favours
- Lack of information on STIs

Cultural

- Female genital mutilation (FGM)
- Rituals such as cleansing, widow inheritance

Biological

- Age (adolescence/youth are at most risk)
- Gender (females are more likely to be infected compared to males)

Political

- War and political instability create mobility and migration that adversely influences change 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 post abortion infections are more common where safe services and follow-up care are not available.

Endogenous

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

There are several common STI syndromes which are caused by infections that primarily affect the reproductive tract, some are sexually transmitted and others are not (see Table 8.2). Some can easily be cured using antibiotics or other agents, while others are incurable. An understanding of these differences is essential in order to provide effective care and good advice to patients with reproductive tract complaints. The table does not include STIs such as HIV and hepatitis B which are not clearly linked to one distinct syndrome.

Most STIs are symptomatic. They can present with one or more of the following symptoms and signs: painful micturition, vaginal discharge, urethral discharge, abdominal pain, genital ulceration, genital itching, swelling of inguinal lymph nodes and scrotal swelling.

However, a number of individuals can be infected without symptoms. It is a fact that infected but asymptomatic individuals can also infect their sexual partner(s).

HEALTH CONSEQUENCES OF STIs/RTIs

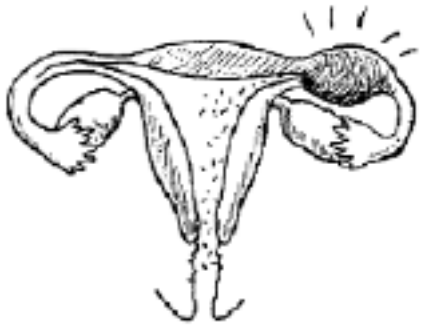
Box 1.3 Complications of upper genital tract infection in women

1. Pelvic inflammatory disease. Some of the most serious consequences of STI/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, and resulting tissue damage and scarring may cause infertility, chronic pelvic pain and increased risk of ectopic pregnancy.

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

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

4. 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.



Box 1.4 The Relationship between STIs/RTIs and HIV

1. HIV is transmitted in the same way as other STIs; prevention of STIs also reduces sexual transmission of HIV infection. 2. 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 infection as well as the chances of transmitting it to others by as much as 50–300 times per contact when a genital ulcer is present, for example.	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 caused by genital ulcers. • HIV can attach to white blood cells that are present in inflamed genital tissue and discharges. • Large amounts of HIV are found in ulcers and genital fluid (semen, cervical secretions) of people with certain STIs.

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 complications than communities where services are poor, disrupted or not used by people at risk. Reducing the burden of STI/RTI requires more than good clinical management of individual patients, however acceleration of prevention of STIs/RTIs in the community is essential. Box 1.5 lists some important barriers to 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.	Economic and social policies that reduce family separation may reduce risk and vulnerability.
Low status of women limits economic options and leads to risky sexual behaviour. Women may exchange sex for money or other forms of support. Low status also means little control over decisions and less ability to negotiate with partners.	Educational and employment opportunities for girls reduce the economic pull of sex work, empower women and reduce STI risk.
Poor health care services have little to offer for prevention and care of STI/RTI.	Improved health care services mean better prevention and care.
People do not have easy access to health care facilities.	Reducing barriers such as cost, distance, limited clinic hours and long waiting times means better access to care.
People do not use health care facilities (poor health-care-seeking behaviour).	Better awareness of STI/RTI symptoms and complications, and promotion of improved health care services will convince more people to use services.

STIs/RTIs INTERVENTION STRATEGIES

The components of comprehensive National STI Control Strategy should include the following:

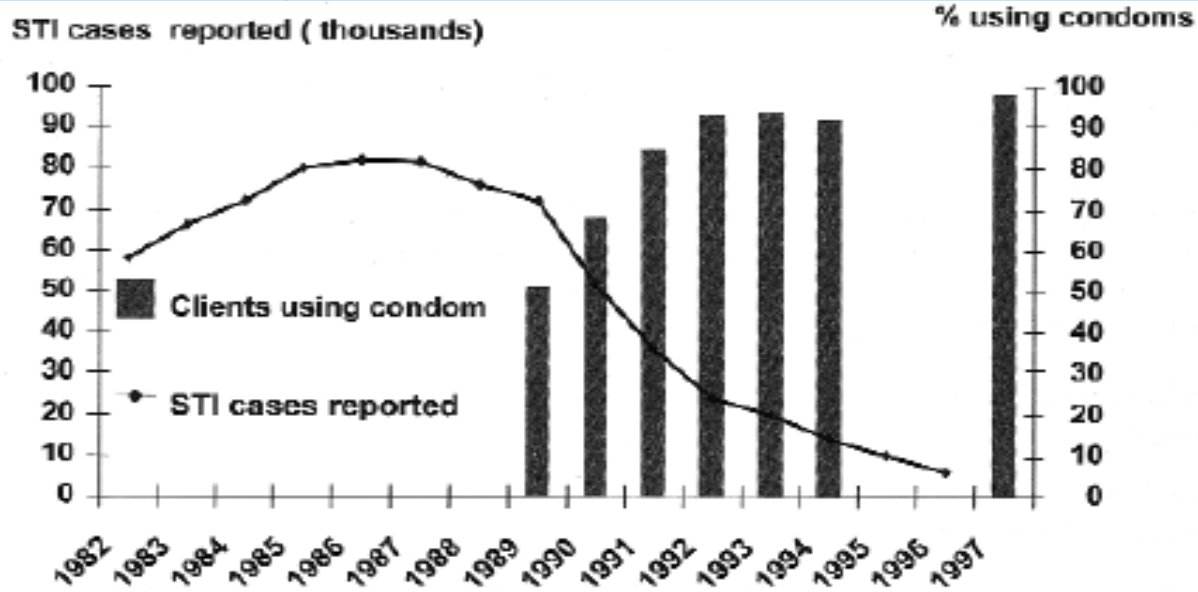
- Training of service providers
- Effective primary prevention of STIs/RTIs
- Promotion of appropriate STIs/RTIs care seeking behaviour
- Effective case management
- Contact management
- Routine prevention of ophthalmia neonatorum
- Availability and affordability of drugs
- STI case finding and screening
- Monitoring and supervision

Some countries have greatly reduced the prevalence and transmission of common STIs/RTIs by addressing social and cultural factors. Thailand recently reduced the incidence of the most common STIs by over 90% by promoting increased condom use and improving STI treatment among commercial sex workers (see Box 1.6 and Figure 1.2). Maternal morbidity due to complications of childbirth and abortion has declined dramatically in countries where safe services are available. High rates of preventable reproductive morbidity and mortality in other countries make prevention and control of these infections a public health priority.

Box 1.6 Effective STI control and HIV prevention in Thailand

In response to a rapidly growing HIV epidemic in the late 1980s, Thailand took steps to reduce sexual transmission of HIV and other STIs. Condom use was strongly promoted, particularly in commercial sex networks, and STI diagnosis and treatment were strengthened. Within five years, condom use reported by sex workers had risen from 14% to 94% and STI rates were declining (see Figure 1.2). During this period, HIV prevalence declined in both high-risk groups and pregnant women (not shown). Strong government commitment and the use of targeted strategies to reach the populations where most STI transmission was taking place were important elements of Thailand's success.

Figure 1.2. Clients using condoms and reported STI cases-Thailand



Source: Sentinel Serousveillance, Division of Epidemiology, Ministry of Health, Thailand

THE ROLE OF HEALTH CARE SERVICE PROVIDERS IN REDUCING THE BURDEN OF STI/RTI

There are a number of challenges to providing effective STI/RTI services to the people who need them (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 to treat themselves or seek treatment at pharmacies or from traditional healers. Even those who come to a clinic 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 aim to help health service providers to respond to STI/RTI more effectively on one hand and to promote early treatment seeking behaviour in the community.

Many of these 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:

- Raise awareness in the community about STIs/RTIs and elaborate how they can be prevented especially among populations who may be at high risk.
- Promote early use of health services to cure STIs/RTIs and prevent complications. Teach people how to recognize 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 STI/RTI when patients attend 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.
- Manage symptomatic STI/RTI effectively. Follow syndromic management guidelines for STI/RTI case management.
- Counsel patients on staying uninfected after treatment. Encourage them to comply with treatment, assist with partner notification and treatment, and reinforce prevention.

A combined strategy of effective community interventions and improved clinical services can have a large impact on 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 STI/RTI problem. The combination of strategies benefits everyone.

CHAPTER 2

DETECTION (DIAGNOSIS) OF STIs/RTIs

OVERVIEW

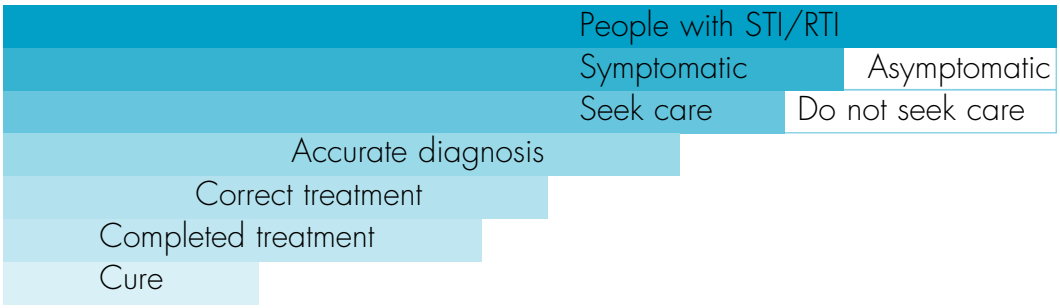
A significant proportion of women and men with STIs/RTIs do not have symptoms, or have minimal symptoms and do not realize that anything is wrong. They may visit a clinic for other reasons or not at all. Yet identifying and treating such patients prevent the development of complications for the individual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

Some people with STIs/RTIs have symptoms and seek treatment, while others do not (Figure 2.1). Promoting symptom recognition and early use of appropriate health care services is an important way of reducing the burden of STI/RTI.

Key points

- Health care providers should know how to identify people with signs, symptoms or risk of STI/RTI.
- 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 abortion, stillbirth or preterm delivery should be screened for bacterial vaginosis and trichomoniasis in addition to syphilis.
- Every opportunity should be taken to detect cervical infections by careful speculum examination and, when possible, laboratory tests.
- Pap smear for early detection of cervical cancer should be done at least once for women around 40 years old.
- HIV counselling and testing (CT) services should be offered to clients with STI/RTI with respect to human rights.
- Herpes simplex virus infection is a major cause of genital ulcer disease globally and also in Tanzania.

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



In men and women, silent asymptomatic infections can be more serious than symptomatic ones. Syphilis, gonorrhoea, human papilloma virus infection, genital herpes and chlamydia have serious consequences, yet are often asymptomatic (see Chapter 1). Even pelvic inflammatory disease frequently has mild or no symptoms.

Reproductive health services have an important role to play in detecting asymptomatic STI/RTI. Since many women attend reproductive health clinics for family planning, antenatal

services and postpartum care, there is an opportunity to identify women with an STI/RTI who would benefit from treatment. Measures should also be taken to detect STIs in men who come for other health services. This chapter presents some strategies for identifying STI/RTI in patients who come to the clinic for other reasons. Table 2.1 and Table 2.2 give some examples of these approaches.

Reproductive health services should reach out to men whenever possible. While men are more likely to have symptoms than women, asymptomatic STI is possible. More commonly, men may ignore symptoms if they are not severe. Health care providers can raise awareness about symptoms and encourage men to come for check-ups if they have symptoms. More information on examining men and women is given in Annex 1.

Some reproductive health settings have the resources to screen for asymptomatic infections. One example is the "well woman clinic", which may include speculum and bimanual examination to look for signs of cervical infection or PID, a Pap smear for early diagnosis of cervical cancer, or screening tests for syphilis or gonorrhoea. Even where this is not possible, however, detection and treatment of STI/RTI can be improved with minimal additional cost and effort. A no-missed-opportunities approach using strategies in Table 2.1 should be taken. This means that health care providers should look for evidence of STI/RTI whenever they do examinations for other reasons.

Table 2.1. Some examples of STI/RTI detection and treatment strategies

Method	Example: no missed opportunities
History-taking	Ask about STI/RTI symptoms or concerns at each health facility visit.
Clinical screening	General examination including speculum and bimanual examination to look for signs of STI/RTI not noticed by the client.
Laboratory screening	Serological screening for syphilis. Microscopy of genital discharge. Pap smear for early detection of cervical cancer. Testing and counselling for HIV.
Presumptive treatment on basis of risk criteria	Treatment of partners of STI patients, vulnerable populations who have had unprotected exposure, etc. Survivors of sexual violence. Treatment of women having a transcervical procedure.
Combination strategies	Presumptive treatment of vulnerable populations at first visit followed by regular visits for speculum/bimanual examination and Gram stain of cervical smear.

Table 2.2 provides more information on some common screening tests that can be performed in some conditions. Syphilis tests, gonorrhoea culture and Pap smears 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 STI/RTI screening options for women / men

Infection/condition	Screening method	In 100 cases, number that will be detected[c]	Comment
Syphilis	Non-treponemal specific serological screening tests[a]	80–86 (primary infection) 100 (secondary) 80 (latent infection) 71–73 (late stage)	Positive test indicates a high likelihood of syphilis infection, although not necessarily current, active disease. Patients who test positive should receive treatment. Confirmatory test with a treponemal specific test can also be done where available.
Cervical infection (gonorrhoea and/or chlamydia)	Culture for Neisseria gonorrhoea	95	Accurate; requires laboratory with CO_2 jars, incubator and culture media.
	Chlamydia test[b]	60–70	Expensive; misses many cases (false negatives).
	Chlamydia PCR	95	Very expensive; high technology
	Clinical examination	30-40	Inexpensive; misses many cases (false negatives).
Cervical dysplasia	Pap smear	80	Effective for early detection and prevention of cervical cancer.

a. RPR (rapid plasma reagin), VDRL (Venereal Disease Research Laboratory) tests.
b. For example, ELISA (enzyme-linked immunosorbent assay) or direct immunofluorescence test.
c. Under ideal conditions and depending on stage of disease. Field performance usually lower.

It is important to keep in mind some issues that may come up when screening or presumptively treating for STIs/RTIs. Women or men who have come to the clinic or health facility for other reasons may not be prepared to hear that they may have an infection especially one that is sexually transmitted. They may be 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 reputation of the clinic in the community. It is important to remember that no screening test is 100% accurate, and many are much less so. This should be carefully explained to patients and the possibility of error should be acknowledged. Most importantly, health care providers should avoid labelling problems as sexually transmitted when this is uncertain. A more cautious approach and one often more acceptable to patients and their partners is to explain that many symptoms are non-specific;

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. Recommendations for partner notification and treatment can be found in Chapter 5.

SYPHILIS

Syphilis in both men and women 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 infection in pregnant women. Among pregnant women in the early stages of syphilis who are not treated, an estimated two-thirds of pregnancies end in abortion, stillbirth, or neonatal infection. Co-infections of syphilis and HIV infections may alter the clinical presentation and treatment modalities of syphilis.

INDICATIONS AND OPPORTUNITIES FOR SCREENING

- Screening for syphilis during pregnancy should be done at the first antenatal 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 antenatal clinic should be tested at delivery. Although this will not prevent congenital syphilis, it permits early diagnosis and treatment of newborns.
- Women who have had a spontaneous abortion (miscarriage) or stillbirth should also be screened for syphilis; in many areas, identification and treatment of syphilis remove a major cause of adverse pregnancy outcome.
- Men and women with STI syndromes other than genital ulcer should be screened for syphilis. Screening is unnecessary for patients with ulcers who should be treated syndromically for both syphilis and chancroid without testing.
- Because of the serious complications of syphilis in pregnancy, the first priority should be to ensure universal antenatal screening.

AVAILABLE SCREENING TOOLS

- Non-treponemal tests, such as rapid plasma reagin (RPR) and venereal disease research laboratory (VDRL), are the preferred tests for syphilis screening. RPR can be performed without a microscope (see Annex 3). These tests detect almost all cases of early syphilis but false positives are possible (Table 2.2).
- Treponemal tests (e.g. *Treponema pallidum* haemagglutination assay (TPHA) / *Treponema pallidum particle* agglutination assay (TPPA), if available, can be used to confirm non-treponemal test results (see Annex 3).
- Quantitative (RPR) titres can help evaluate the response to treatment (see Annex 3).

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

RECOMMENDATIONS

Syphilis testing should be done on-site where possible to maximize the number of patients who receive their results and are treated. Ideally:

- Patients should receive their test results the same day before leaving the clinic.
- Patients with reactive (positive) results should be treated immediately (see treatment of syphilis in pregnancy in chapter 8)
- All patients must be asked for a history of allergy to penicillin (see Treatment in Chapter 8 for effective substitutes).
- Sex partners of those found with positive results 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, on-site syphilis screening and treatment has been shown to greatly increase the number of women effectively treated and to reduce the incidence of congenital syphilis (Box 2.1).

Box 2.1 Benefits of improved antenatal syphilis screening

A study conducted in Mwanza, Tanzania showed that pregnant women who had not been screened for syphilis during pregnancy and had active syphilis at delivery, were significantly more likely to have stillbirth when compared to seronegative mothers (25% vs. 1.0%) $p<0.001$.

Furthermore the study demonstrated that women who had higher titre active syphilis were at greater risk of having low birth weight or pre-term live births (RR 3.0 and 6.1% respectively) when compared to other serological patterns.

It was also shown that there was no increased incidence for adverse pregnancy outcome for those treated for high titre active (or 0.76) or low titre active syphilis (or 0.95) when compared to seronegative mothers showing that treatment with single dose Benzathine penicillin was effective in preventing adverse pregnancy outcomes especially when given early in pregnancy.

(Watson-Jones et al 2002)

If syphilis screening is already established in antenatal clinics, it 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 from clinic records:

$$\text{Screening coverage\%} = \frac{\text{Number of pregnant women tested}}{\text{Number of women coming for first antenatal visit}} \times 100$$

$$\text{Treatment coverage\%} = \frac{\text{Number of syphilis test-reactive women treated}}{\text{Number of women with reactive test}} \times 100$$

VAGINAL INFECTIONS

Vaginal infections (yeast infection, bacterial vaginosis and trichomoniasis) are very common in women of reproductive age, are almost always symptomatic and rarely cause complications.

In non-pregnant women, there is no need to look for asymptomatic cases. Asymptomatic women should not be treated for yeast or bacterial vaginosis on the basis of microscopy findings alone.
In pregnant women, however, bacterial vaginosis (BV) and trichomoniasis may cause complications such as premature rupture of membranes and preterm delivery. Women at risk for these conditions should be screened regardless of symptoms.

Indications for screening

- Pregnant women with suggestive symptoms or those with a history of spontaneous abortion or preterm delivery should be screened.

Available screening tools (see Annex 3)

- BV can be detected by Gram stain microscopy of a vaginal smear or 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

Recommended approach

- Pregnant women with a history of spontaneous abortion or preterm delivery should be screened for BV and trichomoniasis. Those who test positive should be treated after the first trimester of pregnancy with metronidazole, 500 mg two times a day for seven days, to reduce risk of adverse pregnancy outcome.
- Women with symptomatic vaginal discharge in the second or third trimester should be treated (without screening) as above for BV, trichomoniasis, and yeast infection (see Flowchart 9 in Chapter 9).
- Non-pregnant women with abnormal vaginal discharge should be managed according to Flowchart 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 (Table 3.3). Speculum examination may also reveal signs of other infections, including cervical ulcers and genital warts.

Indications and opportunities for screening

Screening may be done:

- Any time a speculum examination is performed for other reasons;
- During pregnancy.

People with frequent exposure to STIs, such as sex workers, should be screened regularly.

Available screening tools

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

Recommended approach

- A careful speculum examination should be done to look for signs of cervical infection (Table 2.3). Speculum examination skills are reviewed in Annex 1. Some asymptomatic internal ulcers and genital warts may also be detected on speculum examination.
- A swab should be collected from the cervical canal (endocervix). If the swab appears yellow 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 (Table 2.2)
  - tested for chlamydial infection (Table 2.2)
  - 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 (non-clear, yellowish discharge from endocervix). Friability (easy bleeding) when the cervix is touched with a swab. Positive swab test (yellow discoloration of swab inserted in endocervix).	When any of these signs are present, patient should be treated for both gonorrhoea and chlamydia. **Note:** at least half the women with cervicitis do not have these signs, and some women with these signs do not have gonorrhoea or chlamydia.

Screening is one of the few ways 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, chlamydial or human papilloma infections as women with discharge. Despite lack of symptoms, consequences can be severe if infection reaches the upper genital tract for the case of gonorrhoea or chlamydia and cervical cancer in case of HPV.

PELVIC INFLAMMATORY DISEASE (PID)

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

• Indications for screening

Screening should be performed:

- any time a speculum or bimanual pelvic examination is performed, or when women have vague complaints of lower abdominal discomfort, back pain, spotting between periods, or pain during sexual intercourse;
- prior to transcervical procedures.

• Available screening tools

Careful abdominal and bimanual pelvic examinations are the only tools 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, uterine or adnexal tenderness. Women with these signs should be managed without delay using the lower abdominal pain flowchart (Flowchart 3 in Chapter 8).

CERVICAL CANCER SCREENING

Cervical cancer is a recognized complication of STI, related to infection with a few specific strains of human papilloma virus. Screening and treatment of early stages (cervical dysplasia) is effective in reducing morbidity and mortality from cervical cancer. There are recent data suggesting that an effective vaccine can reduce persistence of some of the subtypes associated with cervical cancer.

• Indications for screening

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

• Available screening tool

Cytology by Papanicolaou smear (Pap smear) is currently recommended. Newer techniques such as visual inspection of the cervix are being evaluated and may be feasible screening strategies. Screening for cervical cancer is also an opportunity to look for signs of other cervical infections. HPV sub-typing can be done using serology and PCR.

• Implementing screening

Cervical cancer screening requires staff who can perform speculum examination and are trained in smear collection techniques, as well as availability of cytology services for reading smears. Women with a positive smear should be referred for further diagnosis and treatment.

HIV COUNSELLING AND TESTING

Testing for HIV infection has several potential benefits, from promoting prevention to improving access to care and treatment, prevention of mother-to-child-transmission (see Chapter 7). HIV testing should be offered to all STI/RTI clients, should always be conducted by trained health care provider with respect for privacy, confidentiality and informed consent.

• Indications for screening

In all communities, HIV counselling and testing services should be available:

- As part of routine antenatal care or linked to those services;
- For anyone who wants to know their HIV status (including partners of pregnant women).
- For all patients presenting to STI /RTI services

• Available screening tools

There are many kinds of HIV tests available. The Ministry of Health and Social Welfare and WHO, both 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

Counselling and testing for HIV should be available to STI/RTI clients on-site or through referral. Counselling and testing for HIV includes:

- Pre-test counselling;
- HIV test with confirmatory test;
- Post-test counselling and referral for care and treatment if indicated.

Counselling and testing for HIV should be done after obtaining the consent of the client. HIV testing should never be done 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 STI/RTI management. It is intended to guide in planning, conducting, 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 STI because of their behaviour, yet this behaviour may be difficult to change because of factors or circumstances including gender, cultural expectations, poverty, migration and family disruption that may limit their options and increase their vulnerability. To effectively reduce risk and vulnerability, people may need not only specific information about STI transmission but also support in making changes in their lives. Health care providers can help by providing:

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

There is a big difference between health education and counselling. Health education is the provision of essential information related to the prevention or treatment of STI/RTI and need not take much time. The contents of a health education session are usually similar for each client. Counselling, on the other hand, requires time to establish trust, assess the person's individual situation, and relate prevention information directly to the person's lifestyles and psycho-social environment. Busy health care providers rarely have the time to adequately counsel every patient with an STI/RTI.

Clinic-based interventions are the subject of this chapter and are outlined in Table 3.1. Chapter 5 addresses education at the community level.

Key points

- Health education for STI/RTI prevention should address:
  - correct and consistent condom use,
  - reducing the number of sex partners or delaying sexual activity,
  - recognizing symptoms and early use of services
- Providing essential health education for STI/RTI takes little time. All patients with an STI/RTI should be given information about completing their treatment and preventing reinfection.

Continues on next page

Continued from last page

- The partners of patients who are treated for infections that are clearly sexually transmitted should also be treated. Partner treatment is not needed for non-sexually-transmitted RTI, however, care must be taken not to mislabel infections as sexually transmitted when they are not.
- Counselling should always be flexible, be adapted to the needs and circumstances of each patient, and take into account barriers to behaviour change.

- Counselling should stress the importance of STI prevention in:
  - maintaining fertility,
  - ensuring safe pregnancy and preventing congenital infection,
  - reducing risk of HIV infection, and
  - helping people find ways to lead enjoyable sex lives.

- Sexuality must be clearly and directly addressed in STI/RTI prevention.

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 about symptoms and how to recognize them	Encourage fewer sex partners	Promote condom use (including during treatment to prevent reinfection)	Examine barriers to prevention
			Discuss solutions and build skills for safer sex
Promote early use of services	Support delay in starting sex (for young people)	Encourage referral of partners for treatment	Make a plan and follow up

PRIVACY AND CONFIDENTIALITY

Privacy and confidentiality are essential for all aspects of patient care from history taking, physical examination, education and counselling. This is especially true for potentially stigmatizing conditions such as STI/RTI. All patients have a right to privacy and confidential services, but some such as adolescents, 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 might reveal information to parents or elders. Patients will avoid a health care facility altogether sometimes travelling to a distant clinic to preserve anonymity if they feel that their privacy and confidentiality are not respected or that service providers are critical and 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. The space where

interviews, examinations and counselling take place should be separated from waiting rooms, so that people waiting cannot see or hear what takes place between the provider and the patient. Forms and records should be stored securely and clinic staff should avoid talking about patients both inside and outside the clinic. Patients should be treated with the same respect whether or not an STI is detected or suspected, and regardless of age or marital status. Where health care providers are likely to know patients' extended families or 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 3.1 lists some general skills that health care providers should develop in order to educate and counsel patients. Many of them are also useful for history-taking and examination. Education and counselling often start early in the consultation, when the health care provider asks questions about risk, symptoms and signs of infection. Remember that adolescents in particular may not admit to being sexually active, and may not recognize, or be comfortable talking about, symptoms of infection or pregnancy. Counselling of individuals should be based on their personal needs and concerns, and related to practical steps they can take to reduce their risk of acquiring infection and developing complications.

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 3.2 includes a checklist of essential information that should be provided during patient education. In addition:

- If a client has come for family planning, she should be offered information about STI/RTI, how to prevent infection and how to recognize signs of infection. Stress that consistent condom use is the only way to avoid both pregnancy and exposure to sexually transmitted infections (dual protection).

- If the patient is pregnant, she needs to understand the importance of preventing STI/RTI in pregnancy and of detecting syphilis, HIV and other infections that could be a danger to her or the pregnancy.

- Patients who come to the clinic with STI/RTI symptoms should be urged to follow recommended treatment, discuss prevention and, if the infection is sexually transmitted, refer partners for treatment (see Chapter 8).

More specific advice on integrating education and preventive counselling into family planning and antenatal visits can be found in Chapter 6 and Chapter 7.

Box 3.1. Skills for education and counselling

- Welcome your patient warmly by name and introduce yourself.
- Assure your patient that privacy and confidentiality will be respected.
- Sit close enough to be able to talk comfortably and privately.
- Make eye contact and look at the patient as s/he speaks.
- Use language that the patient understands.
- Listen to the patient and take note of body language (posture, facial expression, looking away, etc.). Try to understand feelings, experiences and points of view.
- Be encouraging. Nod, or say "Tell me more about that."
- Use open-ended questions.
- Provide relevant information.
- Try to identify the patient's real concerns.
- Suggest various options to the patient.
- Respect the patient's choices.
- Always verify that the client has understood what has been discussed by having her repeat the most important information.
- Do not:
  - keep moving in and out of the room;
  - encourage other providers to interrupt;
  - write notes continuously as the patient is speaking;
  - make judgemental comments or negative facial expressions.

Box 3.2: Selected areas for Health Education Session on STI

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
Need for compliance to medication	• Explain exactly how the medication will be taken • Explain that treatment can only be effective if all the medication is taken as prescribed • Let patient take the first dose in front of you, if possible.
Need to return for follow up	• Explain that persistence of symptoms indicate treatment failure or reinfection • Explain the importance to return to adjust the treatment
Importance of partner referral	• Explain that sexual partner(s) are likely to be infected as well • Explain why it is important to treat sexual partner(s) as well • Discuss with client modalities of partner referral and assure confidentiality

Continues on next page

AREA	CONTENT
Preventive education	• Make client aware about risky sexual behaviour • Make client aware about the high prevalence of STIs/HIV in the community • Explain that even health looking partners can be infected • Discuss with client on safer sex practices • Demonstrate proper condom use • Discuss with client her/his constraints in adapting safer sex practices and possible ways of overcoming these constraints
Advantage of regular medical assessment	• Make the client aware that asymptomatic STIs are common or that client might overlook symptoms and signs • Explain that regular medical assessments will help to identify and to treat these conditions.
Referral to related services	• Make client aware of what expertise or services do exist in the community to get further help or advice about related problems • Explain to client the need to visit a referral site when indicated.

Much of this information can be presented to groups of patients while they are waiting in the clinic to be seen. A health educator or other staff member can be trained to present basic sexual health information, including on STI prevention, using a flipchart or posters to reinforce messages. In some clinics, information can be presented using videos or audio tapes. Whatever the method, patients should be given a chance to discuss the information and ask questions in private during the examination or counselling session. Such group presentations can help patients identify their concerns and ask specific questions. Health education should continue during the consultation and examination. For example, techniques for negotiating condom use can be discussed if the patient complains that she has trouble getting her partner to use them. Be sure to summarize important points at the end of the visit and offer patients a chance to ask questions.

CLIENT EDUCATION ABOUT SAFE SEX

We know that certain behaviours increase the risk of STI transmission. Some of these involve unprotected sexual contact with body fluids in the vagina, mouth, or anus. With others, such as sex work, it may be hard for the person to use condoms or other prevention methods.

Safe sex (Box 3.3) can be more pleasurable for both partners because it is less likely to cause worry, discomfort, or disease. Emphasize that safer sex is real sex and couples can talk about sex together to learn different ways of pleasing each other.

Box 3.3. What is safe sex?

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

Some safe sex practices

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

CLIENT EDUCATION FOLLOWING STI/RTI TREATMENT

Clients who are being treated for an STI/RTI need additional information to help ensure they complete their treatment and avoid reinfection. Box 3.4 summarizes essential information for clients who are being treated for an STI/RTI.

Box 3.4.Client education as part of STI/RTI case management

Encourage clients to seek treatment from their clinic or doctor. Discourage self-medication or getting medication from unlicensed sources.

Encourage clients to complete their course of treatment. Stopping treatment too early, as soon as symptoms disappear, is a common reason for treatment failure. Discourage sharing of medicines.

Avoid labelling an infection as sexually transmitted when the diagnosis is not certain. Most RTIs are not sexually transmitted, and patients (and their partners) should understand this.

Encourage partner treatment when appropriate (see 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 (Box 3.3) and condom use, and may require more in-depth counselling.

COUNSELLING

Health care providers have an important role to play in supporting women and men to 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 make sense to have a person specifically assigned to counsel patients. Such a person may provide other services, such as HIV counselling and testing. Effective counselling must deal with issues of risk and vulnerability (Box 3.5).

Box 3.5. Elements of effective counselling

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

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

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

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

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

- Preventing pregnancy may be the main concern for young, single clients who may be unaware of their risk of STI (see Box 3.6). Education about STI risk may increase motivation to use condoms for dual protection, or to delay onset of sexual activity.
- Women and men in their early reproductive years, whether or not they are currently using contraception, are often concerned about their future ability to have children. Emphasizing the importance of STI prevention in maintaining family health and fertility may be effective motivation.
- Pregnant women and their partners who are concerned about maintaining a healthy pregnancy can be motivated to prevent infection to reduce the risk of congenital infection.
- Pregnancy prevention is not an issue for some people. A woman who has undergone tubal ligation, is postmenopausal or currently pregnant may still be at risk of STI and require advice on prevention.

Box 3.6. 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 her/his problems with.
- Be sensitive to the possibility of sexual violence or coercion. Sex with much older partners may be more likely to be coerced and may carry a higher risk of HIV or STI.
- Make sure the young person understands normal sexual development, and how pregnancy occurs.
- Make sure the young person understands that it is possible to say "no" to sex.
- Discuss issues related to drug and/or alcohol use and sexual risk-taking.
- It may be useful to involve peers in education.
- Check that the adolescent can afford any medicines necessary to treat an RTI and will be able to take the full course of treatment. Young people are particularly likely to stop or interrupt treatment if they experience unexpected side-effects.
- Ensure follow-up is offered at convenient times.

CONTACT NOTIFICATION, REFERRAL & MANAGEMENT

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

- Each STI/RTI client must have been infected by a sexual partner who should also be treated.
- Each STI/RTI client is a potential source of infection to the sexual partner(s) until the treatment is completed. These partners should therefore be treated.
- A treated STI/RTI client is cured but not immune. This means that s/he can be re-infected if the sexual partners still have the STI/RTI, a reason why these partners should be treated.

The purpose of notifying the client's sexual partner(s) is therefore to break the chain of STI/RTI transmission and to reduce the chance of the client being re-infected. For practical purposes we define the STI/RTI client as index case because s/he is the first person diagnosed with an STI in this network of partnerships. We define her/his sexual partners who could be the source of the infection or who could have been infected by the index case as contacts.

The objectives of contact referral include:

- To identify the number of contacts of the index case
- To notify the contacts about the need for medical assessment
- To treat the contacts according to their STI/RTI symptoms and signs (syndrome) or according to the diagnosed STI/RTI syndrome of the index case.
- To provide health education to the contacts

Identification of the Number of Contacts

As mentioned above, contacts are all sexual partners of the client who could be the source of infection for the current STI/RTI episode of the client or could have become infected from the client's STI/RTI. It is, therefore, important to consider the time frame during which these events could have happened. Approximately incubation period of STI/RTI vary and depend

much on several factors such as strain of the causative agents, immunity of the infected individuals. It is, therefore, advised that all sexual partners of index patient should be regarded as contacts for referral.

The identification of the number of contacts critically depends on the client's information. The STI/RTI service provider should be sensitive in her/his questions 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 who of the contacts could be the potential source of infection.

Index patient refers to the STI/RTI client, while contact refers to sexual partner notified and referred by the index case.

Types of contact referral and notification:
The client referral system should be used because of its low cost and practicability. It is also the method recommended by WHO.

- The STI/RTI service provider provides the client (index case) with a referral card for each contact named. These referral cards contain the register number of the index case.
- The client informs the contacts by handing over the referral card and explaining the importance to attend for medical assessment and treatment.
- The contacts present the referral card to the service provider when they come for treatment.

Observe the following principles of contact notification and referral:
Confidentiality, non-coercion approaches, non-judgemental attitudes
A successful contact referral system will also depend on:

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

Contact Management:
The STI/RTI service provider should show her/his appreciation 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 index case plus other diagnosed STI/RTI syndrome.
- Contact without signs or symptoms: Treat according to equivalent syndrome of index patient

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

RISK AND VULNERABILITY

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

An understanding of these factors permits a realistic approach to counselling that takes into account circumstances in a person's life that may be difficult to change. Knowledge of risk can also help with decisions about STI management (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 in a stable mutually monogamous relationship.
STI/RTI detection (Chapter 2)	Priority for STI screening (where available) should be people with multiple partners or other risk. Women over 35 should be given priority for cervical cancer screening because they are at higher risk.	Apart from syphilis testing in pregnancy, asymptomatic patients without obvious risk do not need to be screened for STI.
STI/RTI management (Chapter 8)	An adolescent with vaginal discharge, whose boyfriend has a discharge, should receive additional treatment for cervical infection, and counselling on partner treatment and STI prevention.	A woman with vaginal discharge who is monogamous and has a stable family life is probably at low risk for STI and should be treated for the common vaginal infections (see Flowchart 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.

Unfortunately, there is no perfect way to evaluate a person's risk. Table 3.3 may help providers manage clients, using their clinical skills and knowledge of the community, and the client's own assessment in thinking about risk. 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: • sex workers, clients of sex worker and partners of either; • people who engage in risky sexual behaviour for money, gifts or favours. These people may not consider themselves sex workers or at risk; • migrant workers and other people in occupations that involve frequent travel and separation from family; • Adolescents and young adults.
Information collected from patient	Increased exposure may be suggested by a patient: • having multiple sexual partners; • having a recent new sexual partner; • having a partner with STI symptoms.
Provider judgement	Health care providers can use their clinical judgement and knowledge of the community, together with the above factors, to evaluate risk.
Patient thinks s/he 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 s/he thinks s/he may be at risk for STI. Asking about risk may open the door to more questions and discussion, or a client may simply acknowledge being at risk even when s/he denies to discuss the details.

SUPPORTING BEHAVIOUR CHANGE

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

Health care providers can use their counselling skills to support women and men to agree on adopting safer sex behaviour that meets their needs. Box 3.7 gives some pointers that may be useful in helping clients negotiate safe sex.

Box 3.7. Negotiating for safer sex

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

Focus on safety

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

Use other people as examples

Knowledge that others are practicing safer sex can make it easier to start.

Ask for help if you need it

Inviting another trusted person to help discuss safer sex with a partner may make it easier.

Condom negotiation is one example. Box 3.8 suggests some responses to common objections that partners may raise when asked to use condoms.

Box 3.8 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. Why do you want to use one?	Condoms are for everyone who wants to protect themselves.
	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 STI/RTI

Section 2 provides advice on addressing STI/RTI 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 is intended to give 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 RTIs 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, STIs/RTIs may develop following medical procedures or following examination or intervention during pregnancy, childbirth, the postpartum period, family planning procedures (e.g. IUCD) and gynaecological interventions.
- 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.

Key points

- A comprehensive approach to management of 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 STI.
- Adolescents should receive support for decisions to delay sexual activity.
- The risk of iatrogenic infection can be reduced by good 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.

HOW TO PREVENT SEXUAL TRANSMISSION OF STIs/RTIs

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

- Delaying sexual activity especially for young people
- Decreasing the number of sexual partners;
- Using condoms correctly and consistently.

STI/RTI prevention also involves prompt recognition and effective treatment of 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 less chance it will be transmitted to other people.

Delaying Sexual Activity

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

Sexual and reproductive health education should be addressed in schools. This education will enable youths to understand their bodies and how to prevent themselves from getting STIs and unwanted pregnancy by delaying sex.

Decreasing the number of sexual partners

Limiting the number of sexual partners can help reduce exposure to STI. For example, people in mutually monogamous relationships (where both partners have no other sex partners) have no risk of STI if both are free of infection. Sexual abstinence is another way to avoid risk of STI (although other RTIs are still possible).

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

Condom use, promotion, negotiation and demonstration

Condom is a sheath worn in the genitalia for prevention 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 condom is a cornerstone in STI/HIV prevention and control. The condom strategy requires that:

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

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

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. "discordant couples". Besides sexual abstinence or the restriction to non penetrative 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.

Correct condom use demands abiding to the following advice (see also fig. 4.1):

- Use a new condom for each act of intercourse, do not wash or attempt to re-use a condom.
- Tear the condom package (open) 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.
- If needed, use only water based lubricants such as glycerine or KY jelly and avoid oil based lubricants.
- 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.

Female condoms (Figure 4.2) are becoming more widely available and have the advantage for women that their use is more in their control than 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 its strength being affected. It is pre-lubricated, 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. However, it should be noted that the female condom cannot be used at the same time with the male condom, which means it cannot provide back-up protection if the male condom breaks or slips.

Research into other female-controlled methods is under way. Vaginal microbicides (chemicals that kill RTI organisms) are being tested for their safety and effectiveness in protecting against STI and HIV, as are other barrier methods such as the diaphragm.

For proper condom storage, observe the following:

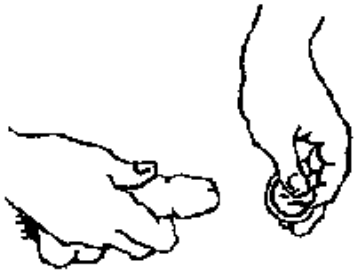
- Condoms should be protected from direct sunlight, moisture and excessive heat.
- Do not keep your condom in a tight pocket, in your wallet or car for a long period it might be too hot.
- Do not use condoms which are dry, dirty, brittle, yellowed, sticky, melted or otherwise damaged.
- Condoms should be used before the expiry date or within five years of the manufacture date.

For proper condom disposal, one should 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 4.1. Instructions for use of a male condom



1. Remove the condom from the package carefully, to avoid tearing

2. Squeeze the air out of the tip of the condom

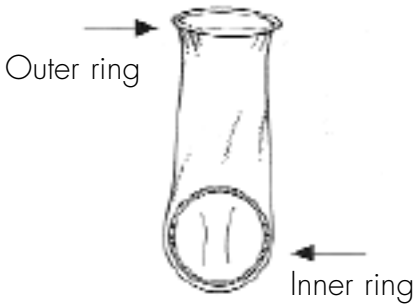
3. Unroll the condom onto the erect penis

4. After ejaculation, withdraw the penis from the vagina while the penis is still erect. Hold on to the rim of the condom while withdrawing to prevent it from slipping off and semen spilling into the vagina.

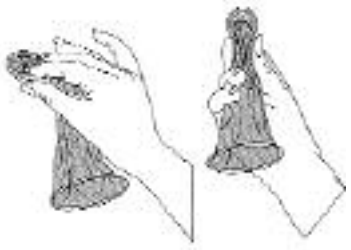
5. Remove condom from penis, and tie a knot in it to prevent spills or leaks. Dispose of condom safely (where it cannot cause any hazard)

Figure 4.2. Instructions for use of a female condom

The female condom is a soft, loose-fitting sheath with flexible polyurethane ring at each end. The inner ring at the closed end is inserted into the vagina. The outer ring at the open end remains outside the vagina during intercourse and covers outer genitalia



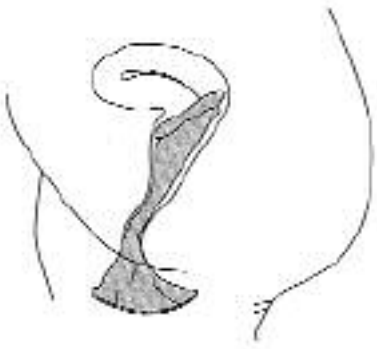
1. Remove the female condom from the package, and rub it between two fingers to be sure the lubricant is evenly spread inside the sheath. If you need more lubrication, sqeeze two drops of the extra lubricant included in the package into the condom sheath.



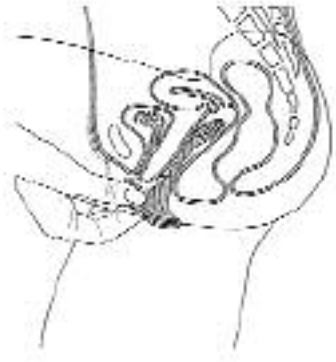
2. The closed end of the female condom will go inside your vagina. Squeeze the inner ring (closed end) between your thumb and middle finger. Insert the ring into your vagina.

3. Using your index finger, push the sheath all the way into your vagina as far as it will go. It is in the right place when you cannot feelt it.

Do not worry, it cannot go too far.



4. The ring at the open end of the female condom should stay outside your vagina and rest against your labia (the outer lip of the vagina). Be sure the condom is not twisted. Once you begin to engage in intercourse, you may have to guide the penis into the female condom. If you do not, be aware that the penis could enter the vagina outside the condom's sheath. If this happen, you will not be protected.



5. After intercourse you can remove the female condom at any time. If you are lying down, remove the condom before you stand to avoid spillage. Before removing condom from vagina, make sure you twist it to prevent semen from spilling.

Dispose of the female condom safely (where it cannot cause any hazard). Do not reuse it.

Condom promotion and negotiation techniques

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

- An increase of awareness of the high STI/HIV prevalence in the local community.
- The understanding of penetrative sex as the major transmission route.of STI
- The understanding of exposure to unprotected penetrative sexual intercourse as the key risk behaviour.

Addressing misconceptions and myths about condoms

Condom promotion should address common misconceptions and myths about condom itself. Some of these misconceptions on the one hand and opposing facts on the other hand are listed in the table below.

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 re-tested electronically for safety by the Tanzania Bureau of Standards (TBS) before being utilized 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 with premature ejaculation.
• Most condoms are made too small for most men	• Most condoms can be stretched to 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 non-living things including condoms
• Condoms fall off and get lost in the woman's body	• If the penis is withdrawn while still hard and while holding the base of the condom, the condom will not slip off. If for some reason it did, it could be removed using one' finger.
• Condoms irritate the genitalia	• Clients who feel irritation of genitalia should seek advice from a health service provider

Further, condom promotion should be sensitive towards social, cultural and religious norms and values. Condom promotion should not be offending: the STI service atmosphere obstacles that might hinder the client to use the most reliable protective tool in sexual encounters. 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 partners 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 the condom on, most of time the man dominates 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 in particular on:

- 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, the STI service provider should strengthen their negotiation skills which include the following:

- Choosing the best moment to discuss condom use. Both partners should feel comfortable. It is usually better to discuss before sexual activities and things get passionate.
- Keeping an open mind, being prepared to listen to partner's concerns.
- Preparing rational responses to all arguments that the partner may use against her (this will increase self-confidence).
- Finding strength in numbers. Many millions of condoms are used every year in Tanzania. Let the partner(s) know that the man from today cares about himself and others, and that he is doing it with condoms now.
- Being assertive rather than aggressive. She should try to persuade rather than intimidate.
- Avoiding sexual activities when she or her partner is drunk.
- Being confident and firm. Establishing her personal limits in advance, what she will and won't do so that her health and well-being are always foremost and cannot be compromised.
- Having enough condoms readily available.
- Identifying friends or family members with whom she can openly share her experiences.

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

- By informal discussions with community members about STI/HIV prevention.
- As a resource person by locally organized seminars or special events.
- By collaborating and supporting local Peer Health Educators (PHEs) or other key actors involved in condom distribution or selling.
- By encouraging owners to display educational materials in drug stores, bars, hotels, etc.

- By encouraging local artists to make art, theatre, music, etc to sensitize the community.

- By approaching business people and asking them to stock and distribute condoms.

Every service provider ensure 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

HOW TO PREVENT IATROGENIC RTIs

As discussed in Chapter 1, many STI/RTI complications occur when sexually transmitted, endogenous or other organisms reach the upper genital tract. The most effective way to prevent STI/RTI complications, such as infertility and ectopic pregnancy, is to prevent upper genital tract infections from occurring (Table 4.1). This involves:

- STI prevention and management (Chapter 4 and Chapter 8);
- Good antenatal care and safe delivery practices (Chapter 7 and Chapter 9);
- Safe performance of transcervical procedures (Chapter 4);
- Good post-abortion care and management of complications (Chapter 9).

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

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

Intervention	Methods to prevent infections and complications
STI prevention Counsel on:	Counsel on: • delaying sexual activity • reducing numbers of partners • using condoms correctly and consistently
STI management Safe delivery practices	Early detection and treatment of STI Use aseptic technique Manage postabortion infection effectively
Safe transcervical procedures	Use aseptic technique Rule out infection prior to procedure
Postabortion care	Use aseptic technique Manage postpartum infection effectively

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 intrauterine device (IUD) 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, the risk of introducing infection to the upper genital tract is minimal.

However, women who harbour pathogens such as *N. gonorrhoeae* 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:

- using appropriate infection prevention procedures and aseptic techniques, and
- treating any existing cervical infection.

Reducing risk of infection in clinical practice

Appropriate infection prevention procedures and aseptic techniques (Box 4.1) provide protection against transmission of infection.

Box 4.1. Infection prevention techniques for transcervical procedures

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

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.

One of the safe approaches to avoid the spread of infection to the upper genital tract is to rule out or treat any cervical infection that may be present, prior to performing a transcervical procedure (see Chapter 2 and Annex 1). It is important to 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 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 that:

- pregnant women and women using oral contraceptives may get frequent yeast infections because of changes in vaginal acidity (pH);

- certain medical conditions e.g. diabetes may increase the risk of yeast infections as may long-term use of steroids.

Less commonly, recurrent yeast infections may be a sign of a more serious illness that reduces immunity (such as long-term chronic illness or HIV infection). These should be considered only if there are other symptoms; yeast infection alone is common and usually easily prevented or treated.

Health care providers can offer advice about some simple ways to prevent endogenous infection.

- Douching can disrupt the normal flora of the vagina and cause overgrowth of other microorganisms (bacterial vaginosis). Use of detergents, disinfectants, and vaginal cleaning or drying agents should be avoided. Cleaning the external genital area with soap and water is sufficient for hygiene.

- Antibiotics can also disrupt the normal vaginal flora and permit overgrowth of yeast. Women taking antibiotics especially long courses of broad-spectrum antibiotics may also need treatment for yeast infection.

CHAPTER 5

PROMOTING PREVENTION OF STI/RTI AND USE OF SERVICES

Overview

As noted in Chapter1, communities with good access to effective prevention and treatment services have lower rates of STI/RTI and their 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 the clinic. This involves:

reducing barriers in utilization of STI/RTI services;

- raising awareness of STI/RTI and promoting use of services;
- reaching groups that do not typically use reproductive health services.

Key points

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

REDUCING BARRIERS IN UTILIZATION OF STI/RTI SERVICES

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

- **Laws, policies, culture, religious beliefs and regulations: -** do they place restrictions on young people or women using services, or require a parent's or husband's permission?

- **Location: -** can people reach the clinic easily? Mobile or satellite clinics can extend the reach of clinical services.

- **Hours: -** are opening hours of the clinic convenient for working people, students, and others? Special clinic sessions in the evening or at the weekend may make it possible for some people to attend who 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 rates of STI/RTI and their complications remain high.

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

- **Stigma: -** people are often afraid to use services because of critical or judgemental attitudes of staff. Non-respectful 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 discourages 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 confidentiality of information (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 STIs/RTIs drugs: -** can people get the tests and treatment they need on-site? 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 the health care providers?

Addressing these barriers will make it easier to promote 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. Prevention efforts, as well as promotion of clinic services for STI/RTI detection and treatment, must therefore be directed to people in the community.

Health care workers should promote early use of services for people with symptoms or concerns about STIs/RTIs by:

- raising awareness of STIs/RTIs and their 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 (Box 5.1). 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 kinds of people and convincing them of the value and importance of early use of STI/RTI services.

Box 5.1. Messages to promote use of services for prevention and treatment of STIs/RTIs

People in the community should be aware of STIs/RTIs and know how to prevent and treat them	Prevention is better than cure —The most effective strategy is to prevent infection in the first place by reducing exposure (delaying initiation of sex, reducing number of partners and/or using condoms consistently).
	Early treatment is better than late treatment— When STIs/RTIs do occur, early identification and treatment can eliminate infection before it causes complications or spreads to other people.
	Diagnosis and treatment of complications are possible even if the first two levels of prevention fail. However, interventions at this level are often less effective and more expensive than those applied earlier.

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

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 STI/HIV and AIDS include:

Occupation: Commercial sex work, long distance truck driving, uniformed (army) and migrant labour or other work with a high level of mobility including camping.

War and political instability: Creates insecurity and mobility, which adversely influences sexual behaviour, e.g. refugees.

Biological: STI is commonly transmitted 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 exposed (i.e. vaginal) during penetrative sex.

Age: Young people are prone to STI/HIV and AIDS infection during sexual intercourse due to their genital immaturity. They are especially at high risk when they engage themselves with older people who belong to a cohort with high prevalence of STI/HIV and AIDS.

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 for improved income.

Alcohol and other abusive drugs: The capacity for rational decision-making is reduced, the tolerance for risky behaviours is increased.

Social factors: Lack of sexual education in schools, families or other social institutions, increases the vulnerability of individuals exposed to other influencing factors. Women are particularly vulnerable due to their disadvantaged socio-economic status and usually limited rights including sexual rights in relationships with men. Also for men, sexual behaviour is influenced by their socialization, role expectations or failure to fulfil them.

Vulnerable groups: Vulnerable groups at risk of STI include adolescents, youths, commercial sex workers and their clients, rape survivors, prisoners, refugees, camping and High Transmission Areas (HTAs) residents and visitors.

Other vulnerable groups that STI services address are pregnant women and children. Infected pregnant women with STI/HIV and AIDS are likely to transmit the infections to their newborn babies.

INVOLVING MEN

Men tend to have more sexual partners than women and thus more opportunity to acquire and spread STI. Men are also more likely to have symptoms when they have an STI and may seek treatment at clinics, from private doctors or directly from pharmacies or drug vendors. Access for men to quality services for prevention and treatment is thus an important component of STI control.

Reproductive health clinics should, as a minimum, offer treatment to the sexual partners of women who use their services. Some reproductive health services that traditionally served women only are now increasingly reaching out to men with a variety of preventive and curative services including involving male partners in decision-making about dual protection (against both infection and pregnancy). Some reproductive health clinics provide special times or places for men to attend for advice and care.

In addition to broadening services to include men, reproductive health clinics should support improvement of services where men go for care (private doctors, pharmacies), and create mechanisms for easy referral, partner treatment and other needs (see Box 5.2).

Creating or supporting special services for men where they work (occupational health clinics) or meet (outreach to bars and entertainment districts) also helps ensure that they get appropriate STI care. Condoms should be made easily available where men socialize. Clinics should work with local pharmacies, drug vendors and traditional care providers to ensure that they are aware of STI guidelines and the importance of partner management (see Box 5.3).

Box 5.2. Reaching men

Men may be more receptive to STI prevention messages if they understand that STIs threaten their health and fertility, and may endanger the lives of their wives, girlfriends and children.	Two objectives for reproductive health programmes or workplace interventions for men are: • To 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 reach men with information about prevention, especially about use of condoms in commercial and casual sex encounters. This reduces the chance they will take an STI home.

Box 5.3. 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. Sex workers and their clients also often take antibiotics or other treatments in the belief that these will prevent 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). Secondly, drugs may be sold in insufficient dosages to make treatment more affordable. As a result, the infection is not cured (although symptoms may disappear for a while) and the germs become more resistant to common antibiotics.

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

ADOLESCENTS AND YOUTH

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 Sexual and Reproductive health programme

- Sexual and Reproductive Health (SRH) for many years has been a neglected area due to customs and culture, and therefore, the rationale for promotion of SRH in adolescents/youths is that:

- It reduces HIV infection among youths below 24 years, since more than half of the new HIV infections occur among this age group.

- Reduction of prevalence of STIs among young people. Highest rates of STIs are reported among young people and females in the 15-19 age groups (WHO).
- Reduction of risks and problems related to abortions.
- It empowers young people to avoid sexual abuse and exploitation.
- It aims at increasing the age of sexual debut.

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

- Lack of knowledge about sexual and reproductive health.
- Inadequate services and information that cater for the particular needs of young people.
- Lack of confidence (self esteem, assertiveness) and skills to put knowledge into practice.
- Macho (aggressively masculine) culture encourages sexual activity at a young age, multiple partners and reluctance to use condoms.
- Services do not reach out to young men.
- Men are not encouraged to act with responsibility when it comes to sexual and reproductive health.
- Culture practices that discourage women from acquiring information on sexuality.
- Education campaigns and clinics for STIs have primarily targeted only to older men and sex workers.
- Social stigma discourages women from seeking treatment or information about STIs.
- Lack of user friendly STI services.
- Lack of youth centres/recreation facilities where youth can engage in social activities.
- Young people tend to have more partners and shorter relationships, so there is more opportunity for STIs to spread.
- They may find it difficult or embarrassing to obtain or use condoms.
- They may find it difficult to refuse sex in some situations (within the family, in exchange for goods such as school supplies, food or clothes).
- They may not recognize situations and sexual partners where risk of infection is high.
- They may lack knowledge about the symptoms of STIs and when to seek care.

- They may feel uncomfortable using family planning or other reproductive health services for fear of critical and judgemental responses from staff.
- They may not be aware of places to go for private and confidential services.
- They may be unable to afford health service

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

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

Box 5.4 includes some things to consider in seeking to improve the access of young people to STI/RTI prevention and treatment, 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 risk of infection and unable to negotiate safer sexual activities that minimize this risk.

Making services acceptable and accessible to adolescents provides prevention and care for a group in which risk-taking is high, and has 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. In a small number of countries, providing any care to adolescents or unmarried females is illegal. Community groups should advocate for changing such policies. In Tanzania all persons (women, men and adolescents) irrespective of their parity and marital status have the right of access to reproductive health information and services including family planning.

Box 5.4. Reaching young people

Services need to be convenient and ensure privacy and confidentiality. Barrier methods (with emergency contraception as backup) should be encouraged as contraceptive choices, and interactions should focus on building communication skills to help young people negotiate safer sex.	Safer behaviours that should be encouraged for young people include: • delaying onset of sexual activity; • learning how to use condoms consistently and correctly; • practising dual protection to prevent unplanned pregnancy as well as STI; • limiting numbers of sexual partners; • avoiding high-risk sexual practices (especially unprotected vaginal or anal sex) with any partner; • recognizing symptoms of STI and seeking early treatment.

HIGH TRANSMISSION AREAS (HTAs)

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

STI/HIV control at HTAs involves targeted interventions which 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. STI/HIV control interventions and related services at HTAs should be open to everybody. This is also important to avoid discrimination and stigmatization of those being targeted. Following these ground rules the special attention given to people at highest risk at HTAs aims to control STI/HIV not only among this group but also among members of the surrounding communities.

THE VULNERABLE GROUPS TO STI/RTI

Commercial Sex Workers (CSWs) or Multiple Sexual Partners

Some people are more likely to acquire an STI because they change sexual partners frequently. The greater the number of sexual partners a person has, the greater the chances of becoming infected with an STI, and the greater the chance of passing it on to someone else. Interventions that successfully reach such people at high STI risk can have the greatest impact on community STI transmission (see Box 5.5).

Thus, reaching these groups with high-quality preventive and curative services is essential for community control of STI. Effective outreach, peer education and clinical services for sex workers have been developed using mobile clinics or by reserving special times at regular clinics. Such services have contributed to reducing community STI prevalence (see Box 5.3).

Box 5.5. Reaching sex workers and their clients

Barriers to control of STIs in commercial sex workers include poor access to effective prevention and care, as well as difficult social conditions that reduce sex workers' 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 to supporting sex workers in demanding 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: • condom (and lubricant) supply and promotion of consistent and correct use; • STI screening or presumptive STI treatment; • STI treatment for those with symptoms or exposure; • dual protection for prevention of unplanned pregnancy as well as STIs/RTIs.

Other Groups

STI are often more common among certain groups, such as displaced and migrant populations, uniformed forces, prisoners, and street children. 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 for 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 for STI protection 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 STI, 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.

CHAPTER 6

STI/RTI ASSESSMENT DURING ROUTINE FAMILY PLANNING VISITS

Overview

The family planning (FP) visit is an opportunity to prevent not only unwanted pregnancies but also infection (dual protection). It is also a chance to detect some silent STIs/RTIs and to 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 STI/RTI is usually not the main reason for a client's visit to the clinic. Most women attend FP clinics to obtain contraception, and health care providers should bring up 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 contact in an FP clinic it is difficult to assess an individual's level of risk to STIs. Therefore, when meeting FP 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.
- Consistent and correct use of condoms is highly effective for preventing both pregnancy and STI, and 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 be taken to prevent future infection.

For these reasons, careful attention to the client's needs for both contraception and STI protection is essential. Some clinics use simple tools to assess a client's risk of STI (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 STI because of their partner's 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 these women, who may see no need for dual protection.

Key points

- STI/RTI prevention and concerns should be discussed with all family planning 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.

Continued next page

Continued from last page

- With regard to IUCD use, experts make a distinction between women at "increased risk of contracting an STI" and those at "a very high individual likelihood of exposure to gonorrhoea or chlamydial infection". The former includes, for example, women living in an area where STIs are common, and the latter includes, for example, young sexually active women who report having a partner (current or previous) with urethral discharge. WHO/ MOHSW recommends that while there is no justification to deny an IUCD to a woman simply because she lives in an area where STIs are common, IUCD use would not be recommended for those with a high individual likelihood of exposure to gonorrhoea or chlamydial infection.
- Women with a high individual risk of acquiring HIV infection, 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. Possible protection against bacterial STIs, no protection against viral STIs and HIV. May increase 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 arranged.
- Screening for STI/RTI should be done whenever warranted a blood test and a careful speculum and bimanual examination can identify many silent STIs/RTIs.
- Risk assessment may help identify some women who need special attention with regard to STI, but a negative risk assessment does not mean that a woman is not at risk.

INTEGRATING STI/RTI ASSESSMENT INTO ROUTINE FP VISITS

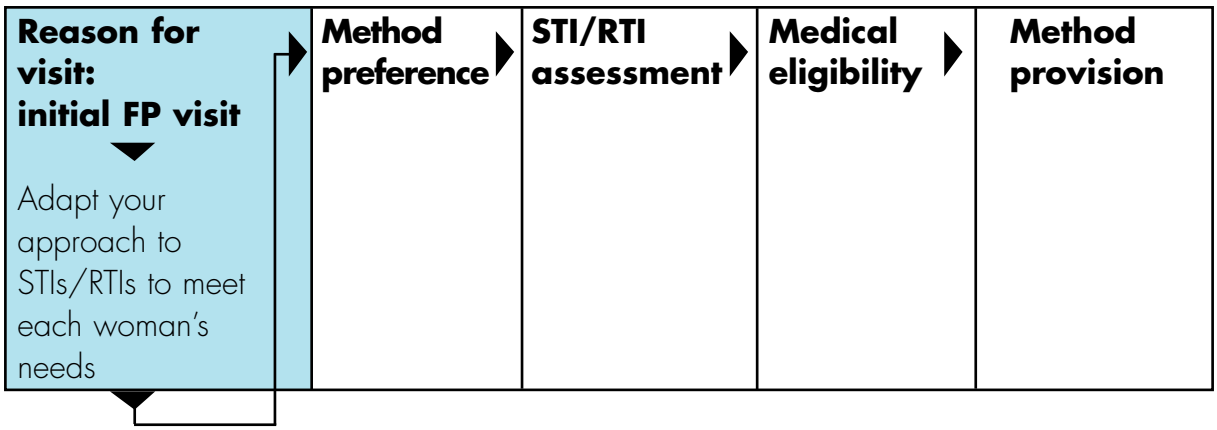
The general recommendations for integrating STI/RTI prevention into routine FP clinic visits given here are based on the approach to client–provider interaction developed in WHO's forthcoming publication entitled *Decision-making tool for family planning clients and providers*. The opportunities for addressing STIs/RTIs during the initial (method-choice) visit and routine follow-up visits are different and are treated separately.

INITIAL VISIT

Women attending an FP 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 STI/RTI. There are often many issues that need to be discussed before a woman can choose and be provided with a contraceptive method that meets her needs. STI prevention is one of the issues that should be addressed.

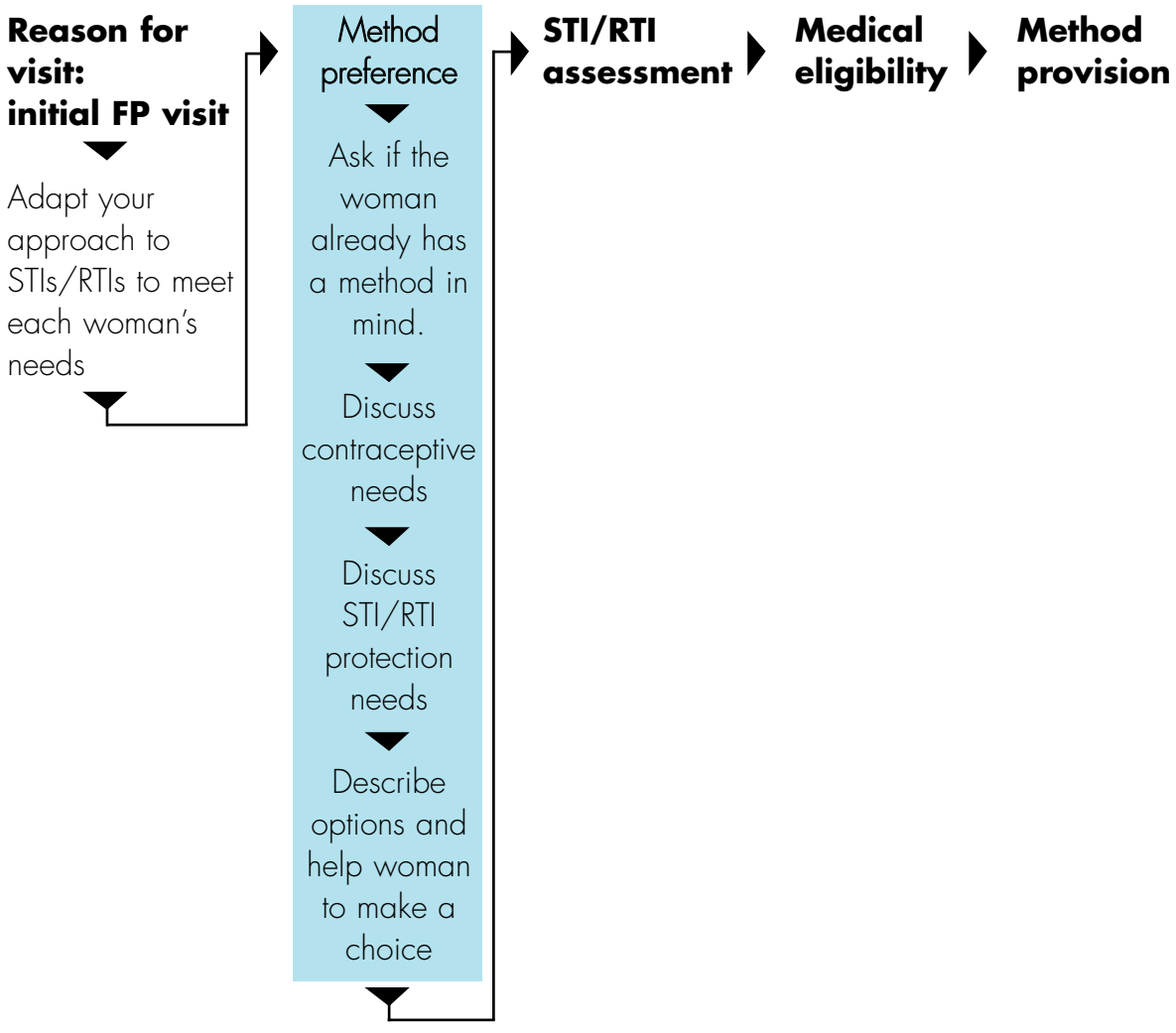
When should the subject of STI/RTI be introduced in the initial FP visit? If it is brought up too early, the woman may feel that her family planning needs are being ignored. If brought up too late, the choice of method may need to be reconsidered. The following pages illustrate an approach to dealing with STI/RTI issues in the course of the first FP 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 method, reviewing her medical eligibility for that method, assessing her risk of current or future STI/RTI, and providing her chosen method.

Steps in decision-making at initial FP visit



We will now consider each of these steps with particular attention to assessment and prevention of STI/RT

Step 1: Discuss method preference



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

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

Discuss STI protection needs. Invite the client to share her concerns about such infections. Open-ended, personalized questions ("Please tell me what concerns you have about infections that are spread by sex") are better than closed questions ("Do you want information about STI?") that can be easily dismissed with a simple "No".

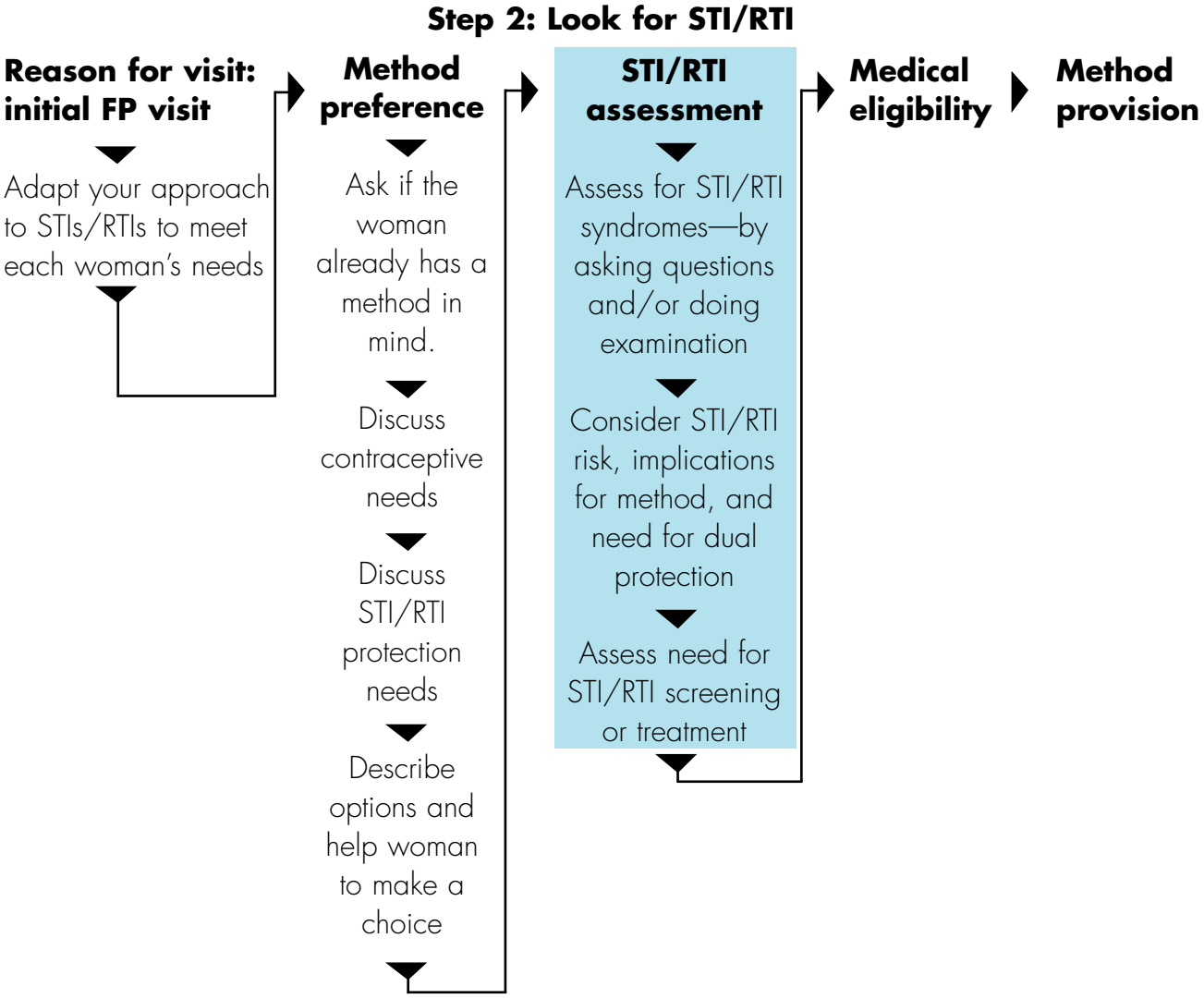
Describe options and help the woman make a choice. Table 6.1, later in this chapter, includes information on the effectiveness of different contraceptives in preventing pregnancy and STI.

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 combination of methods that includes the condom (dual methods). Box 6.1 gives some options for dual protection and some issues to discuss with clients.

Box 6.1.Dual protection options and issues

Some questions to ask:

- *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, pain or burning during urination, an open sore in the genital area, pus coming from his penis?
- *Do you think your partner has other sexual partners ?*



Assess for STI/RTI syndromes —by asking questions and/or doing examination.
After a woman has chosen one or two contraceptive methods depending on whether she requires single or dual protection, the health care provider should determine whether a more thorough examination or laboratory work-up is needed to identify current infection. He/she should ask about vaginal discharge, genital ulcer, and lower abdominal pain, and whether the woman's partner has symptoms of STI. The flowcharts in Chapter 8 can be used to manage patients with such complaints.

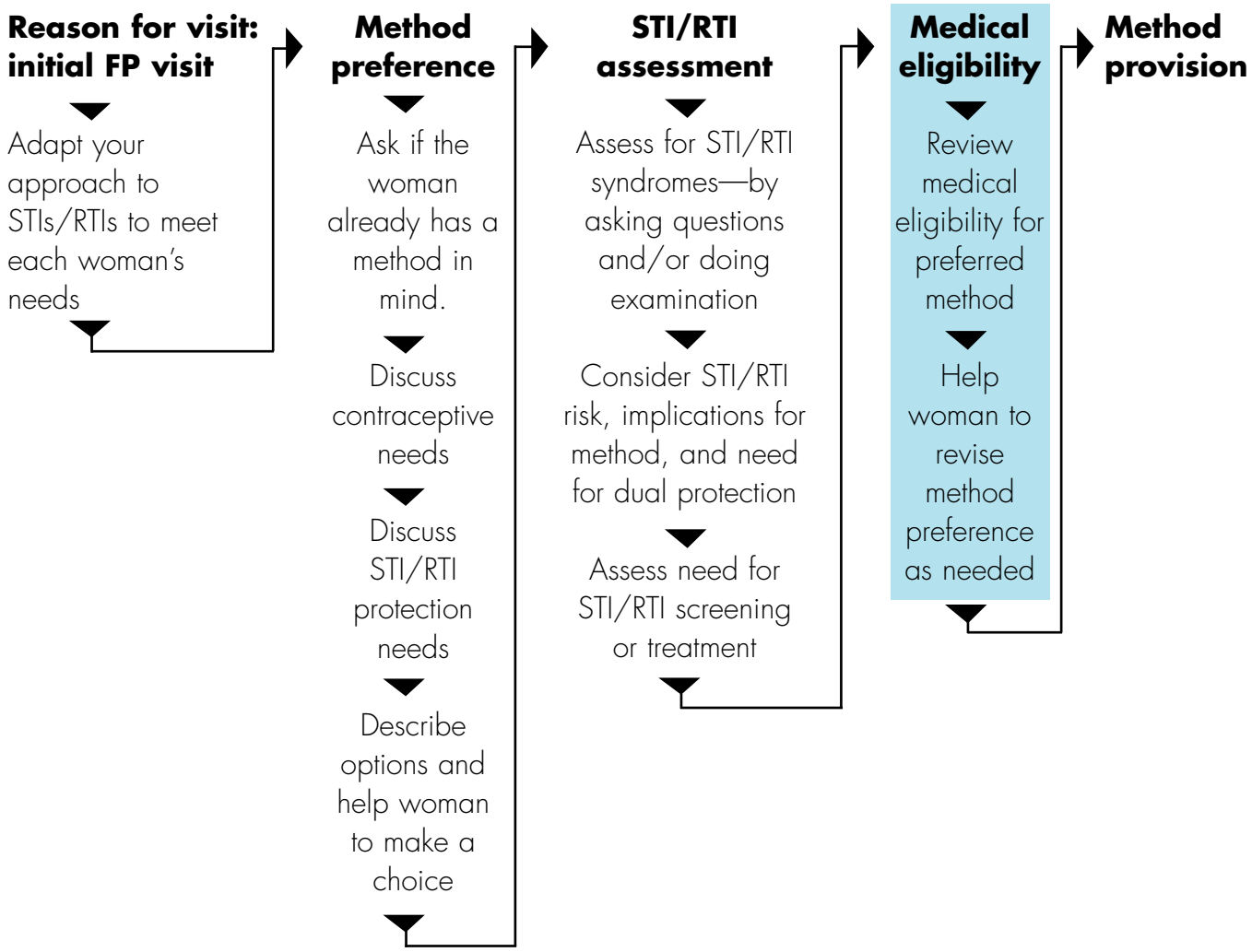
A pelvic examination is not required for the provision of contraceptive methods other than the IUCD (to rule out pregnancy and infection and determine uterine size, shape and position), diaphragm/cervical cap (to fit the device) and sterilization (to assess the size, position and mobility of the uterus). A speculum and bimanual examination can, however, be useful for evaluating STI/RTI concerns, and detecting some asymptomatic infections (Chapter 2).

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

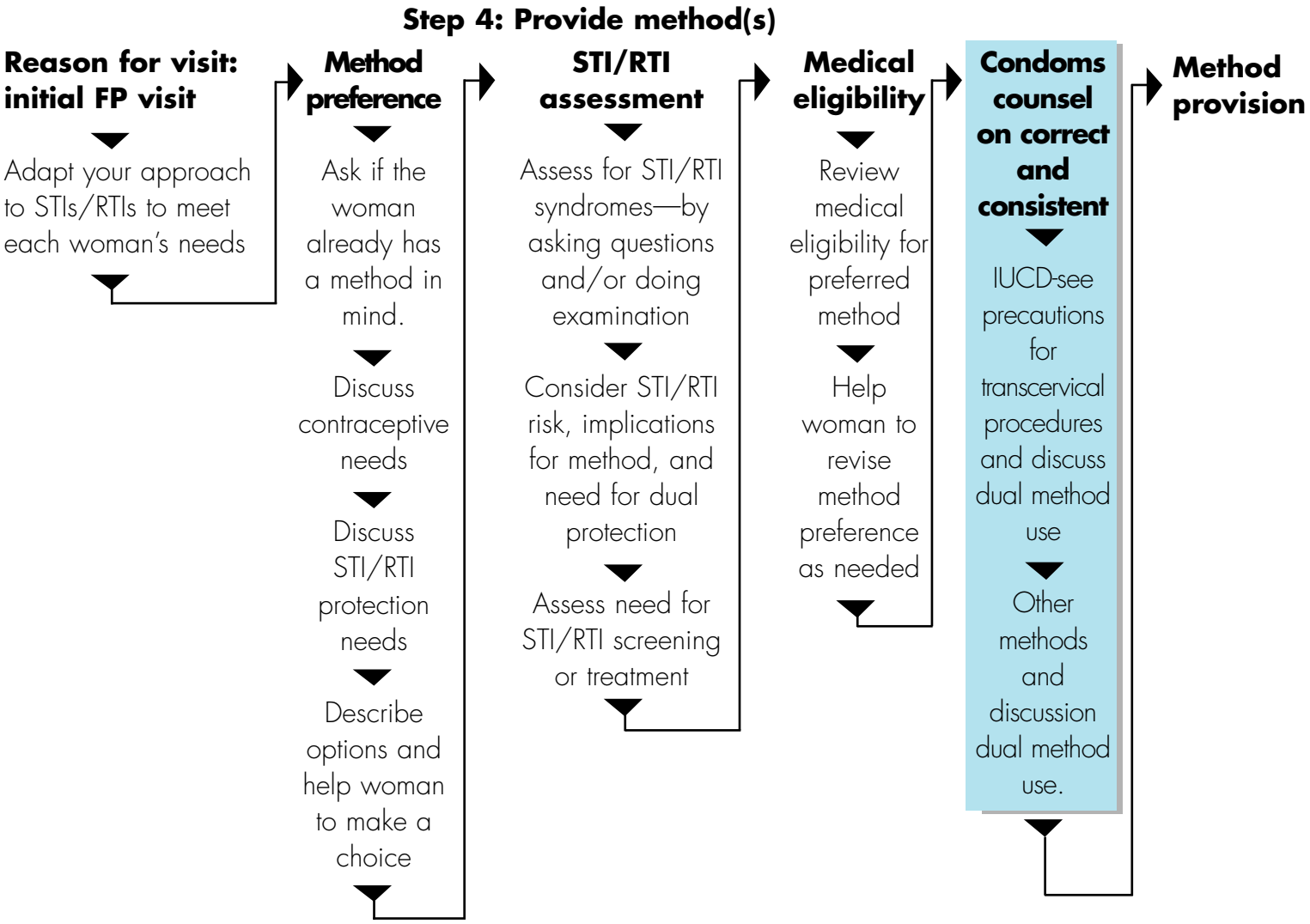
Assess need for STI/RTI screening or treatment. The extent of the STI/RTI diagnostic or screening work-up will depend on the resources available. Symptomatic women can be managed without laboratory tests (Chapter 8). Where resources permit, screening for common asymptomatic STIs such as cervical infection, syphilis and HIV (Chapter 2), can be included in the protocol for the initial visit along with other "well-woman" screening, such as Pap smear. Following examination and STI/RTI screening, a woman may want to reconsider her previous choice of method to improve her STI protection.

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

Step 3: Assess medical eligibility



Review medical eligibility for preferred method. The suitability of the preferred method or methods should be evaluated. Medical eligibility criteria (MEC) have been developed by WHO (and adopted in many countries) to assist health care providers in identifying health conditions or situations where certain contraceptive methods should be discouraged or where special precautions are advisable. For example, STI/HIV risk may influence the medical eligibility for use of the IUCD or spermicides.



The final step in the process is method provision. If the client chooses to use condoms, she will require counselling, demonstration of use, and skill-building to ensure that she and her partner can use them properly and consistently (Chapter 3 and Chapter 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 dual method use to add STI protection.

RETURN VISITS

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

- evaluation of method-related problems;
- investigation of STI/RTI symptoms;
- routine follow-up related to the 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 contraceptive and STI/ RTI protection. For 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 at regular intervals. 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. Table 6.1 presents estimates of contraceptive effectiveness and STI protection for common methods. Some contraceptive methods actually increase the risk of non-sexually transmitted RTI 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 the diaphragm 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 6.1. Family planning methods: protection from pregnancy and STIs

Method	Effectiveness in pregnancy protection[a]	Protection against STIs
Male condom	85–98%	Protects against most STIs, including HIV. Protection unproven against infections transmitted by skin-to-skin contact (HSV, HPV).
Female condom	79–95%	Laboratory studies show protection against STI/HIV. More human studies needed.
Spermicides	71–85%	Possible protection against bacterial STIs, no protection against viral STIs and HIV. May increase risk of HIV infection.
Diaphragm (with spermicides)	84–94%	Possible protection against bacterial STIs. Increased risk of bacterial vaginosis. Little is known about protective effect of diaphragm against HIV. Protective against cervical neoplasia. Spermicide use may increase risk of HIV infection.
Oral contraceptives	92–>99%	No protection against lower genital tract infections; reduced risk of symptomatic PID. No protection against viral STIs and HIV. Yeast infections more common.
Implantable contraceptives	>99%	No protection against bacterial or viral STIs and HIV.
Injectable contraceptives	>99%	protection against lower genital tract infections; reduced risk of symptomatic PID. No protection against viral STIs and HIV.
IUCD	>99%	No protection against bacterial or viral STIs and HIV. Associated with PID in first month after insertion.
Surgical sterilization (tubal ligation and vasectomy)	>99%	No protection against lower genital tract infections; reduced risk of symptomatic PID. No protection against viral STIs and HIV.

a. Effectiveness in normal ("typical") use.

DUAL PROTECTION AND EMERGENCY CONTRACEPTION

Only correct and consistent condom use provides reliable protection against STIs. Counselling on dual protection should thus always include promotion of condoms. When used consistently and correctly, condoms also provide good protection against pregnancy. Couples who want additional protection against pregnancy can combine condoms with another method, or use emergency contraception as back-up protection in the event of condom misuse or failure. Box 6.2 describes how to provide emergency contraception using different types of emergency contraceptive pills, including commonly available oral contraceptives.

Box 6.2. Use of emergency contraception

In many countries, special-purpose pills for emergency contraception (EC) are available. Regular birth control pills can also be used for EC. 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.

How to take emergency contraceptive pills: Ideally, take levonorgestrel-only or combined estrogen-progestogen as early as possible after unprotected intercourse, within 72 hours. Levonorgestrel-only or combined estrogen-progestogen can be used between 72 hours and 120 hours after unprotected intercourse. However, the patient should be advised that the effectiveness of emergency contraceptive pills 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

	Dose
Special-purpose contraception.	Preferably, take 1.50 mg of levonorgestrel in a single dose. Alternatively, take the levonorgestrel in 2 doses (1 dose of 0.75 mg of levonorgestrel, followed by a second dose of 0.75 mg of levonorgestrel 12 hours later).
Special-purpose combined pills for emergency contraception.	Take 2 combined emergency contraceptive pills (50 ?g of ethinylestradiol each). Repeat 12 hours later.
Low-dose combined pills.	Take 4 low-dose birth control pills (30 g of ethinylestradiol each). Repeat 12 hours later. High-dose combined pillsTake 2 high-dose birth control pills (50 g of ethinylestradiol each). Repeat 12 hours later.
High-dose combined pills	Take 4 low-dose birth control pills (30 g of ethinylestradiol each). Repeat 12 hours later. Take 2 high-dose birth control pills (50 g of ethinylestradiol each). Repeat 12 hours later.

much less common with progestogen-only (levonorgestrel) pills. Advise the woman to try eating 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

Continued next page

Continued from last page

contraceptive pills. If she vomits within two 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 the medical eligibility requirements for regular IUCD use. The IUD can then be used for continuing contraception, or removed at the next menses.

INTRAUTERINE CONTRACEPTIVE DEVICE (IUCD)

For women with a high individual likelihood of exposure 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 during IUCD insertion are described in Box 6.3.

Box 6.3. Reducing risk of iatrogenic RTI with IUCD insertion

Most of the increased risk of PID with IUCD use 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 re-insertions. 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.

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

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 for gonorrhoea or chlamydial infection should usually not use the IUCD, unless other more appropriate methods are unavailable or unacceptable.

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

SPERMICIDES AND DIAPHRAGM WITH SPERMICIDES

Women at high risk for HIV infection or those already HIV-infected should not use spermicides. Repeated and high-dose use of the spermicide nonoxynol-9 is associated with an increased risk of genital lesions, which may increase the risk of acquiring HIV infection. Women at high risk of HIV infection or those who are HIV-infected should not use the diaphragm with spermicides unless other more appropriate methods are unavailable or unacceptable.

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, as a woman's sexual activity may increase or decrease and exposure to infection may change. A number of STIs 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, or 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 not technically difficult or expensive to manage or prevent altogether. 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, on-site syphilis screening in antenatal clinics can lead to dramatic improvements in pregnancy outcome. Treatment of symptomatic bacterial vaginosis can reduce the risk of preterm labour, and prevention and effective management of postpartum and postabortal infections can reduce maternal morbidity and mortality.

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

Antenatal clinic visits provide opportunities for preventing and detecting STIs/RTIs. WHO and MOHSW through the antenatal programme recommend at least four antenatal care visits for women with uncomplicated pregnancy during which time screening for STI/RTIs should be offered at least once.

Key points

- Women should be encouraged to attend antenatal clinic early in pregnancy to allow timely detection and prevention of any problems, including STI/RTI.
- Women should be screened for syphilis at the first antenatal visit. Screening for syphilis should be done on-site, and results and treatment made available to the woman the same day before she leaves the clinic.
- Screening for other STIs/RTIs, including cervical infections, bacterial vaginosis and HIV, should be offered if available or through referral

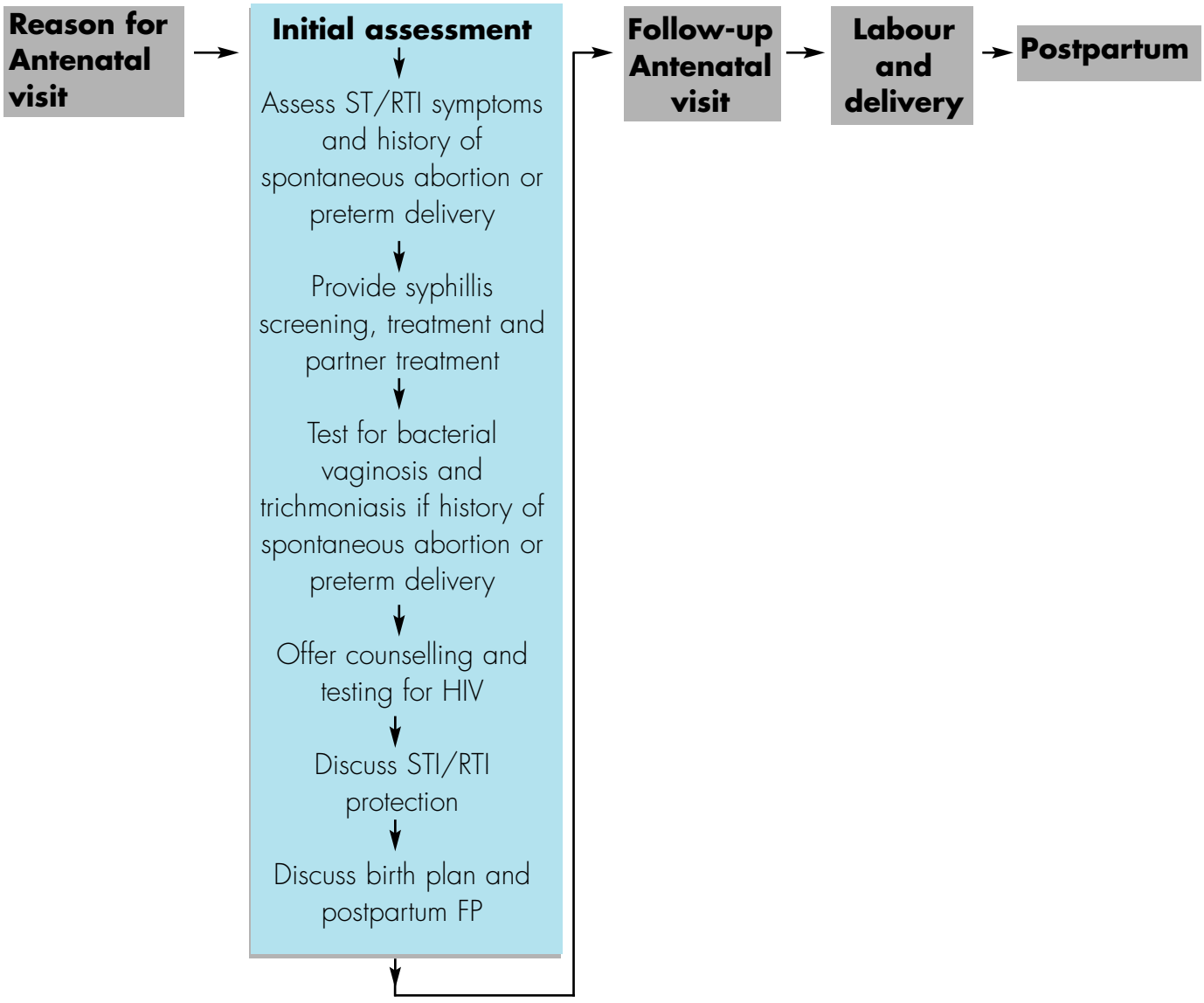
Continues next page

Continued from last page

- Women should be asked at each antenatal visit about STI symptoms in themselves and their partner. Screening and/or treatment of partners should be offered, for at least symptomatic STIs, syphilis and HIV.
- STI prevention should be promoted during pregnancy as a way of protecting both mother and child, and of safeguarding future fertility.
- Access to counselling and testing for HIV, interventions to prevent mother-to-child-transmission of HIV, and care of the mother should be available on-site or by referral.
- Prophylaxis for ophthalmia neonatorum should be given routinely to all newborn babies.

Step 1: Initial assessment visit during pregnancy

A woman may first come to the antenatal clinic any time between the first trimester and the onset of labour. She may or may not return to the clinic before delivery. It is therefore important to make the most of the first visit, and some consideration of STIs/RTIs should be included in the assessment.



The following is recommended as a minimal STI/RTI assessment at the initial antenatal visit:

- Ask the woman about symptoms of STI/RTI and whether her partner has urethral discharge or other symptoms. If the woman or her partner has symptoms, they should be immediately managed using the flowcharts in Chapter 8.

- Serological syphilis testing using RPR or equivalent non-treponemal syphilis antibody test should be carried out as early as possible in pregnancy (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.

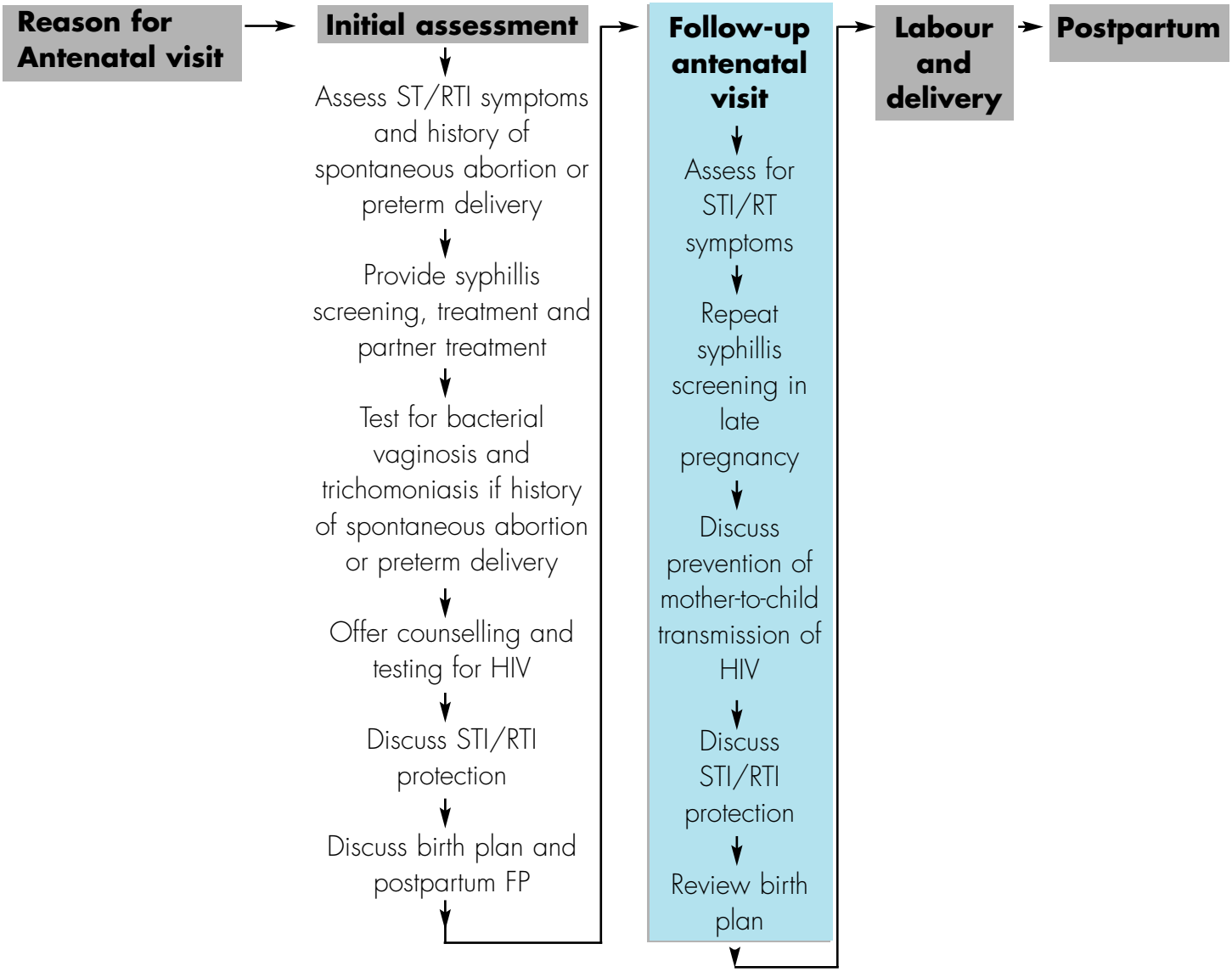
- Pregnant women with a history of spontaneous abortion or preterm delivery should be screened for bacterial vaginosis and trichomoniasis. Those who test positive should be treated after the first trimester of pregnancy with metronidazole, 500 mg three times a day for seven days, to reduce risk of adverse pregnancy outcome.

- Counselling and testing for HIV should be available on-site or through referral. Women who test positive should be referred to appropriate support services and advised on how to reduce the risk of mother-to-child transmission of HIV (MTCT) (Box 7.1).

- 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 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.

Step 2: Follow-up antenatal visit



When women return for follow-up during antenatal visits, attention should be paid to STI/RTI prevention and detection since risk of infection may persist. As at the first visit, women should be asked about symptoms in themselves or their partners. Any symptomatic STIs/RTIs should be managed using the flowcharts in Chapter 8 and Chapter 9.

- Syphilis testing should be repeated in late pregnancy, if possible, to identify women infected during pregnancy (Chapter 2). All women should be tested 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).

- For women who are HIV positive, management during the antenatal period should follow the national guidelines for PMTCT. Health care providers should review the birth plan and discuss options for infant feeding, postpartum contraception, 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 acquired in late pregnancy is capable of causing pregnancy complications and congenital infection. Condoms should be offered. Where partner treatment is indicated, it may be more readily

accepted if offered as a precaution to ensure a safe delivery and healthy newborn. This should be linked with counselling for behavioural change to reduce future risks and consequences of STIs/RTIs related morbidity and mortality.

Box 7.1. HIV and pregnancy

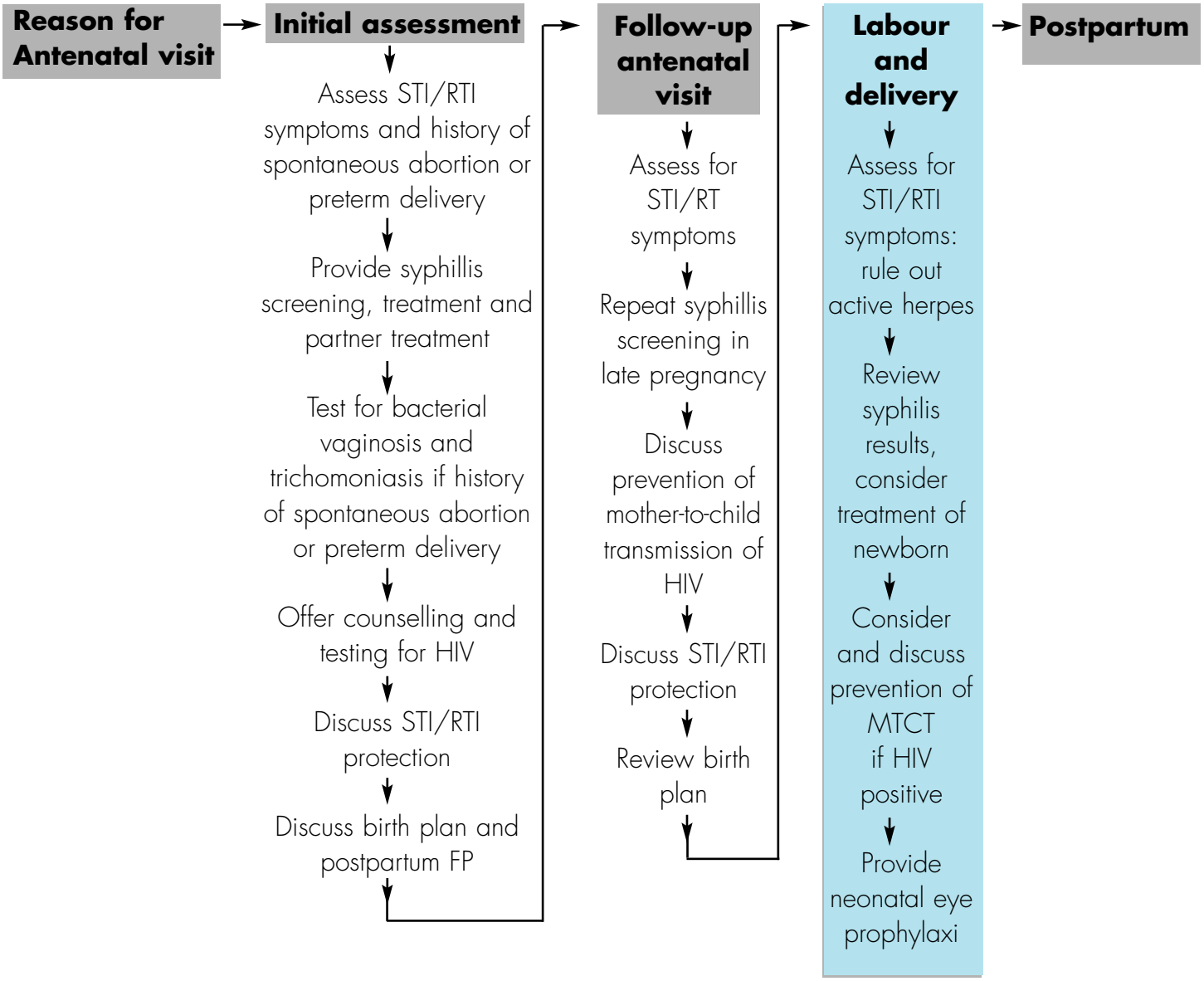
Mother-to-child transmission (MTCT) of HIV is the major cause of HIV infection in children throughout the world. Over half a million children are infected this way each year. Without intervention, up to 40% of children born to HIV-infected women will be infected. Infection can be transmitted from mother to child during pregnancy, during labour and delivery, and through breastfeeding. Prevention of MTCT should begin as early as possible in pregnancy by offering counselling and testing of the parents for HIV infection.

Routine antenatal care is similar for women who are HIV positive and for those who are uninfected. Detection and treatment of STIs/RTIs are important, since several STIs/RTIs increase the amount of HIV in genital secretions, which 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 STI/RTI. Invasive procedures such as amniocentesis should be avoided.

Apart from antiretroviral treatment, there is no need for HIV-infected women to be treated differently than other women during labour and delivery or to be isolated. Universal precautions to reduce the risk of transmission of HIV 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, counselling and support, and may need assistance if they choose substitute infant feeding. They should be linked to care and support services related to HIV/AIDS.

Step 3: Labour and delivery



STI/RTI concerns during labour and delivery are few but potentially important. The objectives are to identify infection that may not have been detected during the antenatal period, and to intervene where possible to prevent and manage 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 for the newborn of disseminated herpes, and a high risk of neonatal death. Where caesarean section is not possible or would be unsafe, a referral to hospital should be considered if delivery is not imminent. Caesarean delivery is not beneficial if more than six hours have passed since rupture of the membranes.

- Genital warts, even when extensive, are not an indication for caesarean delivery.

- Preterm rupture of membranes and rupture of membranes before the onset of labour require careful management to reduce risk of infection (see Chapter 9).

- Manage HIV-infected women based on the national guidelines for Prevention of Mother to Child Transmission of HIV infection.

Standard precautions should be followed for all deliveries (Box 7.2).

Box 7.2. Standard precautions during childbirth

The following precautions are advised for every childbirth regardless of the HIV or STI/RTI status of the woman.

- Use gloves, carefully wash hands between procedures, and high-level disinfect or sterilize all instruments/equipment used in the process of delivery.
- Follow standard practice for the delivery, avoiding unnecessary vaginal examinations, minimizing trauma, and actively managing the second stage of labour. Episiotomy should only be done for 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 HIV status of the mother, wear gloves when handling any newborn baby until maternal blood and secretions have been washed off. Immediately after birth, remove the mother's blood as well as meconium with soap and water. All babies should be kept warm after delivery.

Box 7.3 Prevention and management of STIs/RTIs in the newborn

1. 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. Use the eye ointment as shown below.

- Instill one drop of the following in each eye within one hour of birth
  tetracycline eye (1%) in a single application

2. Congenital syphilis

Syphilis test results should be reviewed at this time, and the newborn evaluated for signs of congenital syphilis. Women who have not previously been 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.

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

<table>
<tr><td colspan="4">Mother's RPR/VDRL status</td></tr>
<tr><td></td><td>Reactive</td><td>Unknown</td><td>Non-reactive</td></tr>
<tr><td rowspan="2">Infant with signs of congenital syphilis[a]</td><td rowspan="2">Treatment
1or 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 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 body weight, intramuscularly or intravenously, 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.

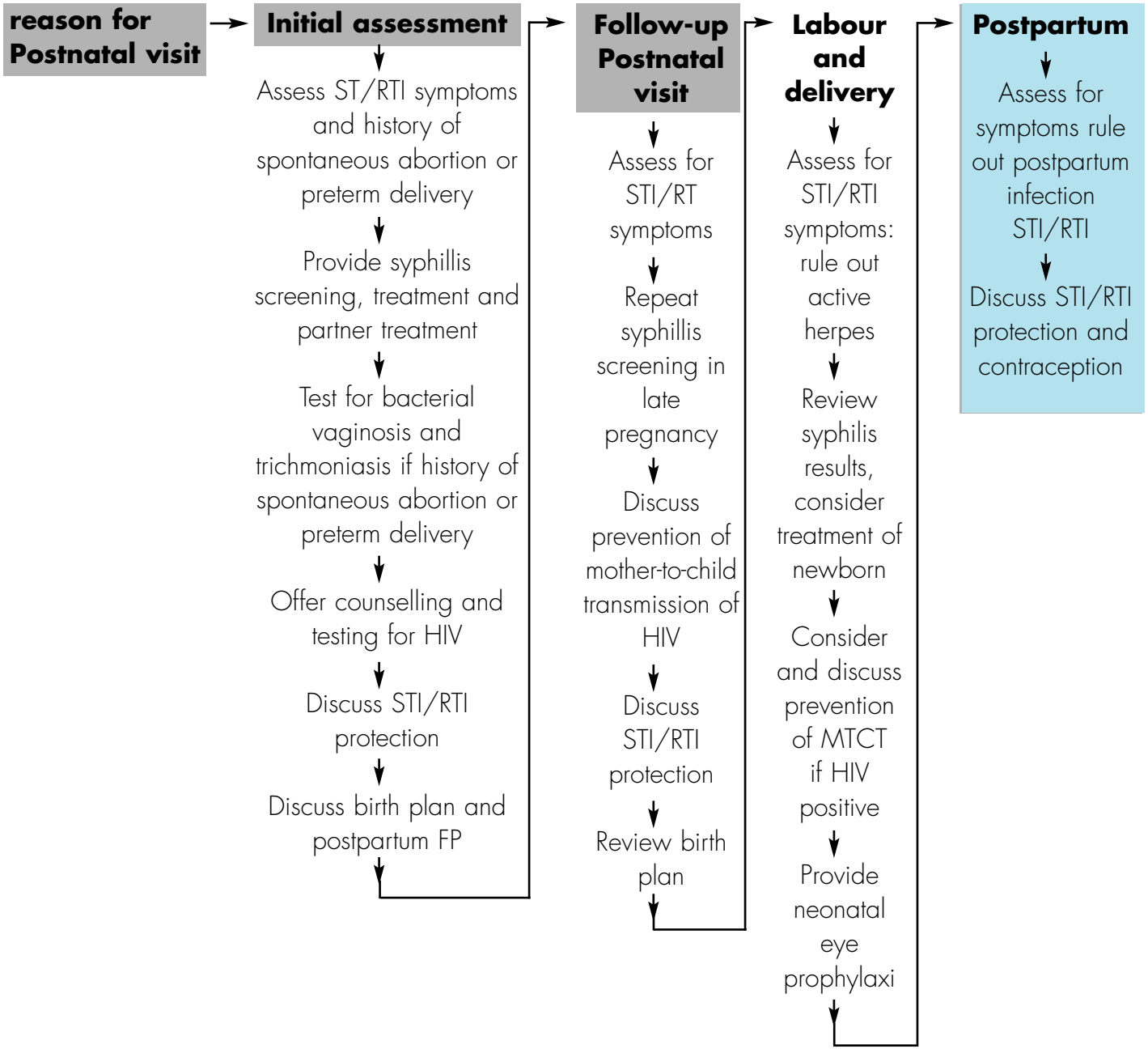
It is as important to be aware of signs of infection following delivery as during pregnancy. Postpartum uterine infection is a common and potentially life-threatening condition, and early detection and effective treatment are important measures to prevent complications. All women are vulnerable to infection following delivery, and retained 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 and 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 include consideration of 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.

Step 4: Postpartum care



SECTION 3:

MANAGEMENT OF STIs/RTIs

Section 3 deals with STI/RTI management – how to diagnose and treat STI/RTI related problems – and includes flowcharts 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 ones. The 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 in confirming the presence of a syndrome.

Key points

- Women with vaginal discharge should be treated for the common vaginal and cervical infections (gonorrhea, chlamydia, bacterial vaginosis and trichomoniasis). Treatment for yeast infection should be added if relevant clinical signs (curd-like discharge) are present.
- Women with lower abdominal pain should be treated for gonorrhoea, chlamydia and anaerobic infection. Hospitalization or referral should be considered if the patient has fever of T= or > 38^0 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 compliance with treatment, risk reduction, and condom use. They should also be offered counselling and testing for HIV infection.
- Treatment should be given to partners of clients diagnosed to have an STI. Partners of women who are treated for PID or cervicitis should be counselled and offered treatment.
- Routine follow-up visits for re-assessment are necessary for all syndromes. Women with lower abdominal pain, who have fever, missed period, abnormal vaginal bleeding, recent delivery, miscarriage or abortion should be referred to in-patient department. Neonates treated for ophthalmia neonatorum should be re examined 3 days after starting treatment and their parents should be treated for discharge syndrome.

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 STI/RTI symptoms.
- A patient admits to symptoms when asked by the health care provider (elicited symptoms).

- The health care provider detects signs of STI/RTI when examining a patient for other reasons
- A person comes to the clinic as a contact to STI/RTI index case with or without symptoms and signs.

Health care providers should be able to recognize STI/RTI symptoms and signs in these different clinical situations. They should know when it is possible to tell the difference between STIs and non-sexually transmitted conditions. Women with genital tract symptoms may be concerned about 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 absence of infection. Screening for asymptomatic STI/RTI should be done where possible (Chapter 3).

SYNDROMIC MANAGEMENT OF STI/RTI

The Concept of Syndromic Management of STIs

STIs can be managed through the following approaches:

Aetiological laboratory approach: Identification of causative agents through laboratory methods followed by disease specific treatment.

Aetiological clinical approach: Targeting treatment of disease based on suspected causative agents diagnosed clinically.

Syndromic approach: Identification of clinical syndromes
(symptoms and signs) followed by syndrome specific treatment targeting causative agents which can cause the syndrome.

Advantages and disadvantages of each STIs/RTIs management approach.

For the reasons outlined in Table 1, an aetiologic/laboratory approach is only undertaken in few health facilities with well equipped functional laboratory. It is the approach applied in referral STI facilities. The clinical aetiological approach is not appropriate at any health facilities 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 STI/RTI 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 Ministry of Health and Social Welfare 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 Ministry of Health and Social Welfare, which has been proven to be effective against the majority of endemic causative agents which can cause the syndrome.

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

APPROACH	ADVANTAGES	DISADVANTAGES
Aetilogical/ Laboratory approach	• Avoids overtreatment, saves drugs • Conforms to traditional clinical training • Satisfies patients who feel not properly attended without laboratory check-up • Can be extended as screening to identify patients with asymptomatic STIs/RTIs.	• Laboratory results are often not reliable due to lack of quality control • Mixed infections often overlooked • Treatment delays, reluctance of patients to wait for laboratory results • High costs • Laboratory services not available at the majority of health facilities.
Aetiological/ Clinical approach	• Saves time for patients • No need of laboratory facilities	• Mixed infections often overlooked • Similar clinical features can be caused by a variety of causative agents • Requires long term training • Does not identify asymptomatic STI. • 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 STI

OVERVIEW OF STI SYNDROMES

Although STIs are caused by many different organisms/agents, these organisms give rise to a limited number of syndromes. Table 8.2 outlines the 7 common STI syndromes and their aetiologic agents.

Table 8.2: STI Syndromes and their Aetiologic Agents

STI SYNDROME	SEX	AETIOLOGIC AGENTS
1. Urethral Discharge Syndrome (UDS)	Males	*Chlamydia trachomatis* *Neisseria gonorrhoeae*
2. Painful Scrotal Swelling (PSS) (acute epididymo-orchitis)	Males	*Chlamydia trachomatis* *Neisseria gonorrhoeae*
3. Vaginal Discharge Syndrome (VDS)	Females	*Candida albicans* *Chlamydia trachomatis* *Gardnerella vaginalis)* *Neisseria genorrhoeae* *Trichomonas vaginalis*
4. Pelvic Inflammatory Disease (PID) (Lower Abdominal Pain)	Females	*Anaerobic bacteria* *Chlamydia trachomatis* *Neisseria gonorrhoeae*
5. Genital Ulcer Disease (GUD)	Males Females	*Chlamydia trachomatis* *Haemophilus ducreyi* Herpes simplex virus type-2 *Treponema pallidum* *Klebsiella granulomatis*
6 Inguinal Bubos	Males Females	*Chlamydia trachomatis* *Haemophilus ducreyi*
7. Neo-natal Conjunctivitis (Opthalmia neonatorum)	Newborns Males and Females	*Neisseria gonorrhoeae* *Chlamydia trachomatis*

MANAGEMENT OF COMMON SYNDROMES

Introduction to Flow Charts

Syndromic approach of managing STIs/RTIs entails the service provider to follow laid down steps in a flow chart which guides him/her in making rational management decisions for treating the client. These are therefore 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 and suggestions it guides him to manage the client accordingly. Each flow chart is made up of a series of three steps. These are:

- The clinical problem (the patients presenting symptoms and signs);
- The decision that needs to be taken;
- The action that needs to be carried out.

Steps in using the flow charts:

- Start by asking the patient for his/her 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, which asks you to examine

the patient and/or take the history.

- Next, move to the decision box. After taking the history and examining the patient you should have the necessary information to choose Yes or No accurately.
- Depending on your choice, there may be further decision boxes and action boxes.

URETHRAL DISCHARGE SYNDROME (UDS)

UDS refers to the presence of abnormal secretions in the distal portion of the urethra, usually accompanied with symptoms and signs. The common symptoms and signs of UDS include urethral discharge, burning or painful micturition, itchy urethra and increased frequency and urgency of micturition.

Male patients complaining of urethral discharge and/or dysuria should be examined for evidence of discharge. If none is seen per inspection, the urethra should be gently milked from the ventral part of the penis towards the meatus.

If microscopy is available, 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 5 polymorphonuclear leukocytes per high power field (x 1000) are indicative of urethritis.

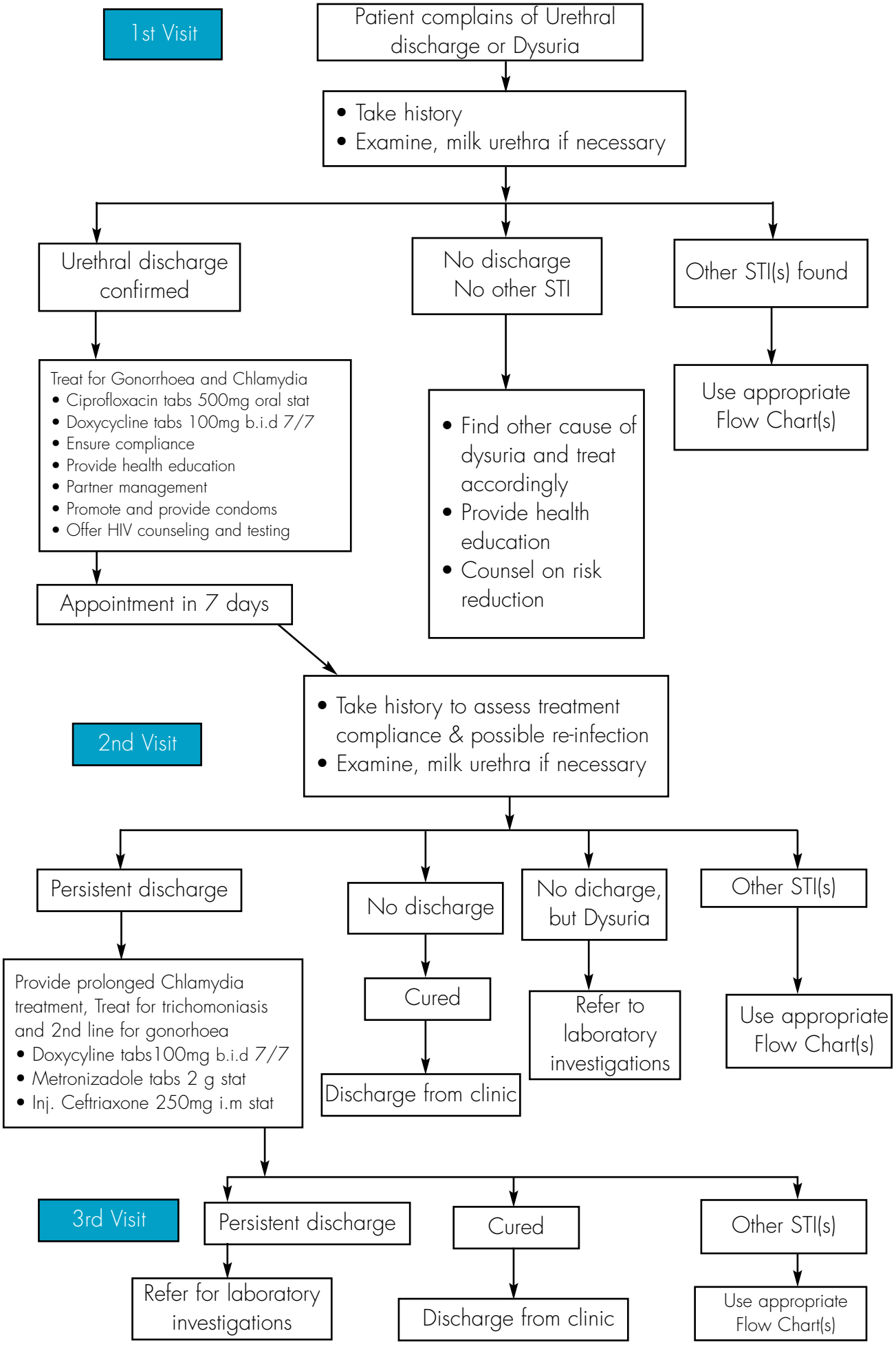
The major pathogens that cause urethral discharge are *Neisseria gonorrhoeae* and *Chlamydia trachomatis*. In syndromic management, treatment of a patient with urethral discharge should adequately cover these two organisms. Where laboratory facilities are available, a distinction may be made between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

Persistent or recurrent symptoms of urethritis may be due to drug resistance, poor compliance or re-infection. In some cases there may be infection with *Trichomonas vaginalis* (TV).

There is new evidence suggesting high prevalence of TV in men with urethral discharge in some geographical settings. Where symptoms persist or recur after adequate treatment for gonorrhoea and chlamydia in index patient and partner(s), the patient should be treated for TV, if the local epidemiological pattern so indicates. If symptoms will persist at follow up, the patient must be referred to a facility that can do laboratory tests.

Delayed or inadequate treatment may result into Orchitis, Epididymitis, Urethral stricture and/or infertility.

Flow Chart 1: MANAGEMENT OF URETHRAL DISCHARGE SYNDROME (UDS)



- Other option for secondline treatment of Neisseria Gonorrhoea is Spectinomycin Inj. 2gm i.m. stat
- This flowchart assumes effective therapy for gonorrhoea to have been received and taken by the patient prior to this visit

VAGINAL DISCHARGE SYNDROME (VDS)

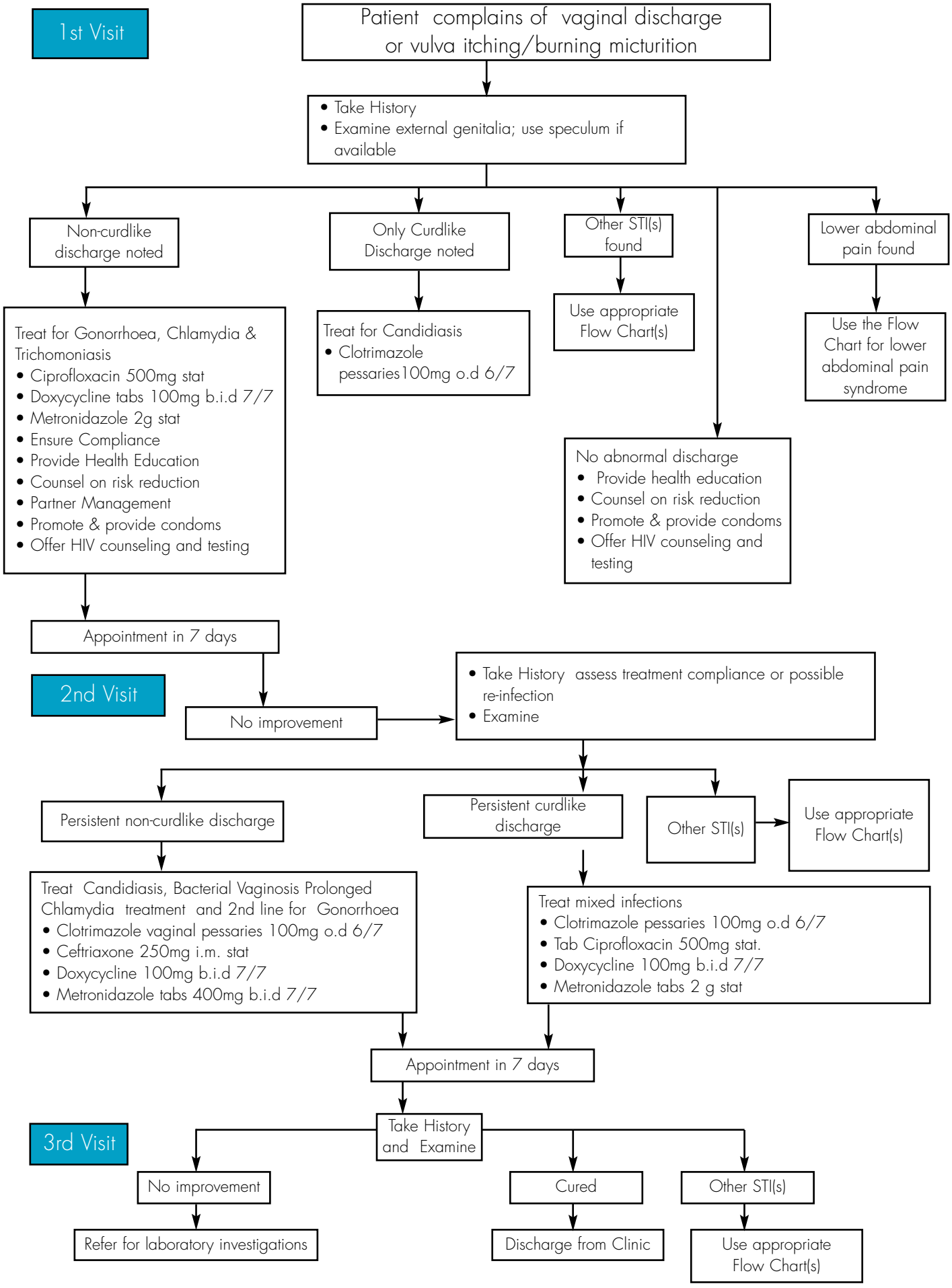
VDS refers to change of colour, odour and/or amount of vaginal secretions, usually accompanied with symptoms and signs. The common signs and symptoms are abnormal vaginal discharge, burning or painful micturition, itchy vulva, increased frequency and urgency of micturition and/or painful coitus.

A spontaneous complaint of abnormal vaginal discharge is most commonly due to a vaginal infection. It may also be the result of muco-purulent STI-related cervicitis. *T. vaginalis, C. albicans* and Bacterial Vaginosis are the commonest causes of vaginal infection while *Neisseria gonorrhoeae* 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 to 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 1st trimester of pregnancy:
- Do not give Doxycycline or Ciprofloxacin in pregnancy or to lactating mother: substitute with Erythromycin 500 mg t.i.d 7/7 and Ceftriaxone 250 mg i.m. stat.

LOWER ABDOMINAL PAIN SYNDROME OR PELVIC INFLAMMATORY DISEASE (PID)

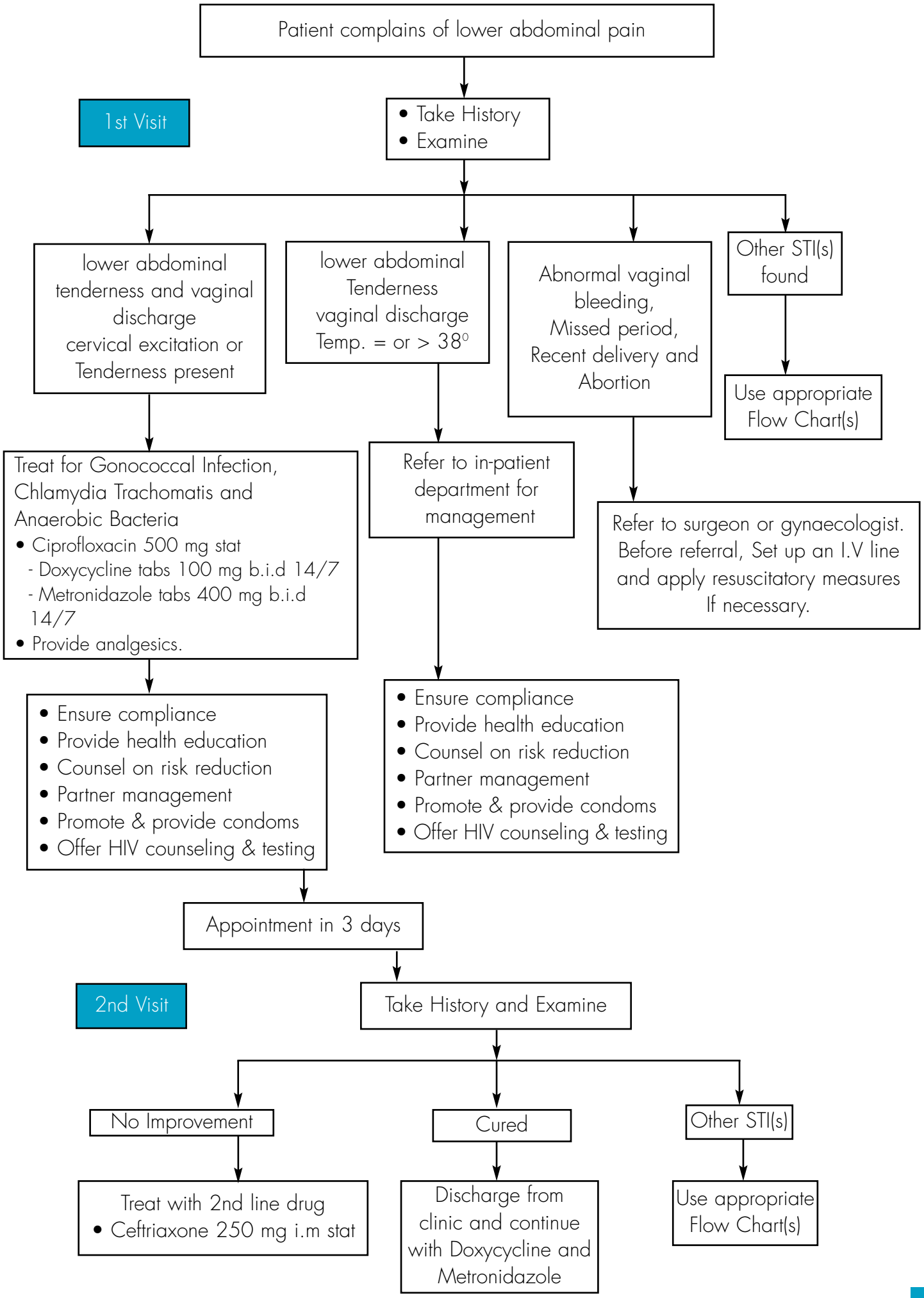
PID is defined as the inflammation of the uterus, fallopian tubes, ovaries and pelvic peritoneum. It is also known as lower abdominal pain syndrome. It commonly occurs as a result of infection ascending from the cervix. It can also occur as a result of trans-cervical procedure.

Common symptoms and signs of PID include lower abdominal pain and tenderness, painful micturation, painful coitus, abnormal vaginal discharge, menometrorrhagia, fever and sometime nausea and vomiting.

Common aetiologies of PID are *Neisseria gonorrhoeae*, *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)



In patient treatment of PID

All patients with PID who have fever of body temperature = or > 38^{0}C should be admitted for closer care. The recommended in-patient treatment options for PID are as follows:

Regimen 1:

- Ciprofloxacin 500 mg orally, twice daily or spectinomycin 1g by intramuscular injection,4 times daily

PLUS

- Doxycycline 100 mg orally or by intravenous injection, twice daily, or tetracycline 500mgorally, 4 times daily

PLUS

- Metronidazole, 400-500mg orally or by intravenous injection, twice daily, or chloramphenicol 500 mg orally or by intravenous injection, 4 times daily.

Regimen 2

- Ceftriaxone, 250mg by intramuscular injection, once daily

PLUS

- Doxycycline, 100mg orally or by intravenous injection, twice daily or tetracycline 500mg orally 4 times daily.

PLUS

- Metronidazole, 400-500mg orally or by intravenous injection, twice daily or chloramphenicol, 500 mg orally or by intravenous injection, 4 times daily.

Regimen 3

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

PLUS

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

NOTE

- For all three regimens, therapy should be continued until at least two days after the patient has improved and should then be followed by either doxycycline, 100mg orally, twice daily for 14 days, or tetracycline, 500mg orally, 4 times daily, for 14 days.
- Patients taking metronidazole should be cautioned to avoid alcohol.
- Tetracyclines are contraindicated in pregnancy.

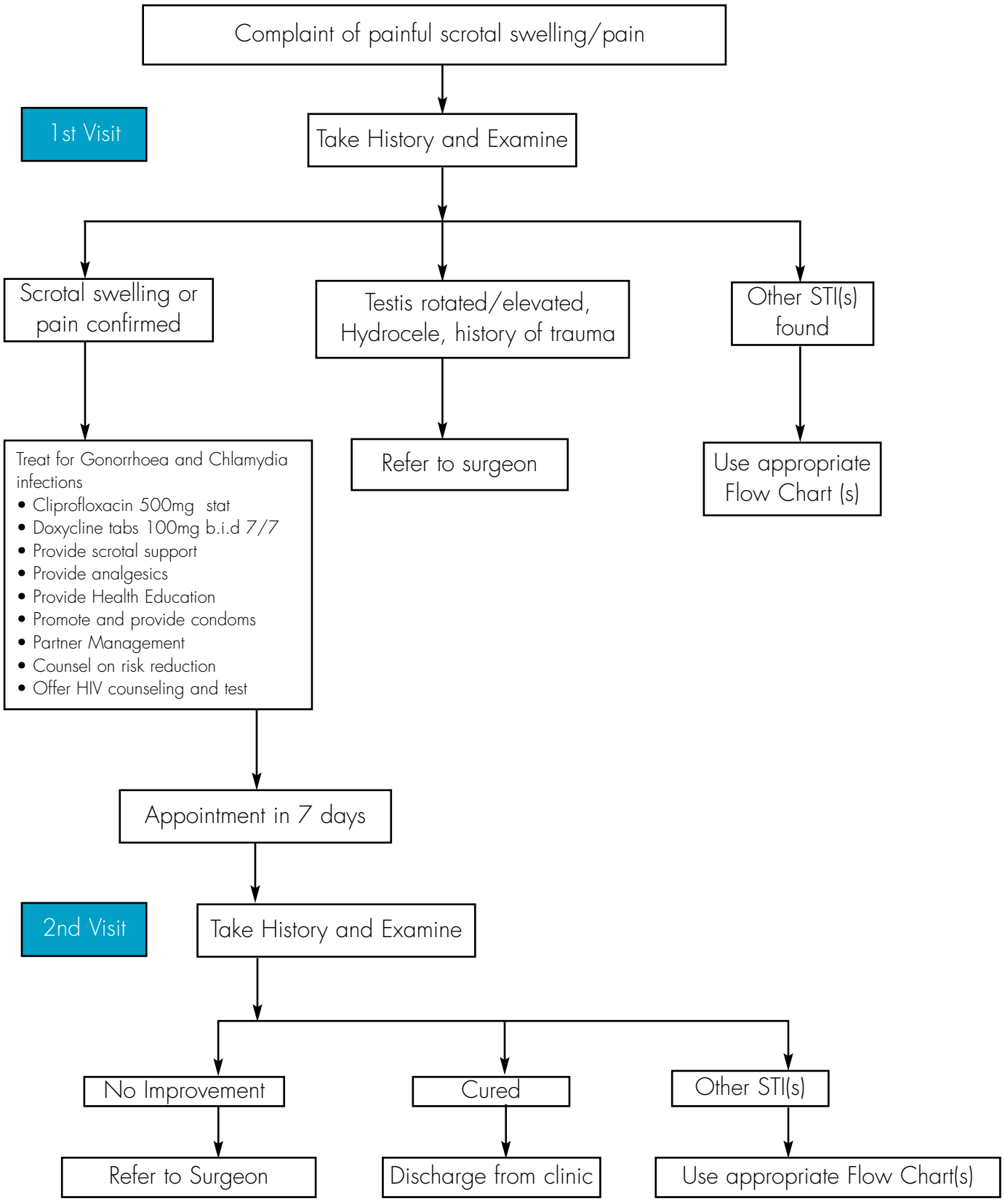
PAINFUL SCROTAL SWELLING (PSS)

PSS 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 of PSS are scrotal pain, scrotal swelling and tenderness, scrotal oedema, and fever. The common aetiologies of PSS are *Neisseria gonorrhoeae* and *Chlamydia trachomatis*

Among the common complications of painful scrotal swelling include infertility and scrotal abscess.

Flow Chart 4: MANAGEMENT OF PAINFUL SCROTAL SWELLING (PSS)



NEONATAL CONJUNCTIVITIS (OPHTHALMIA NEONATORUM)

Ophthalmia Neonatorum (ON) means inflammation of the conjunctiva of a newborn baby of less than 1 month of age. This is a potentially sight threatening condition. If the baby is older, the cause is unlikely to be an STI.

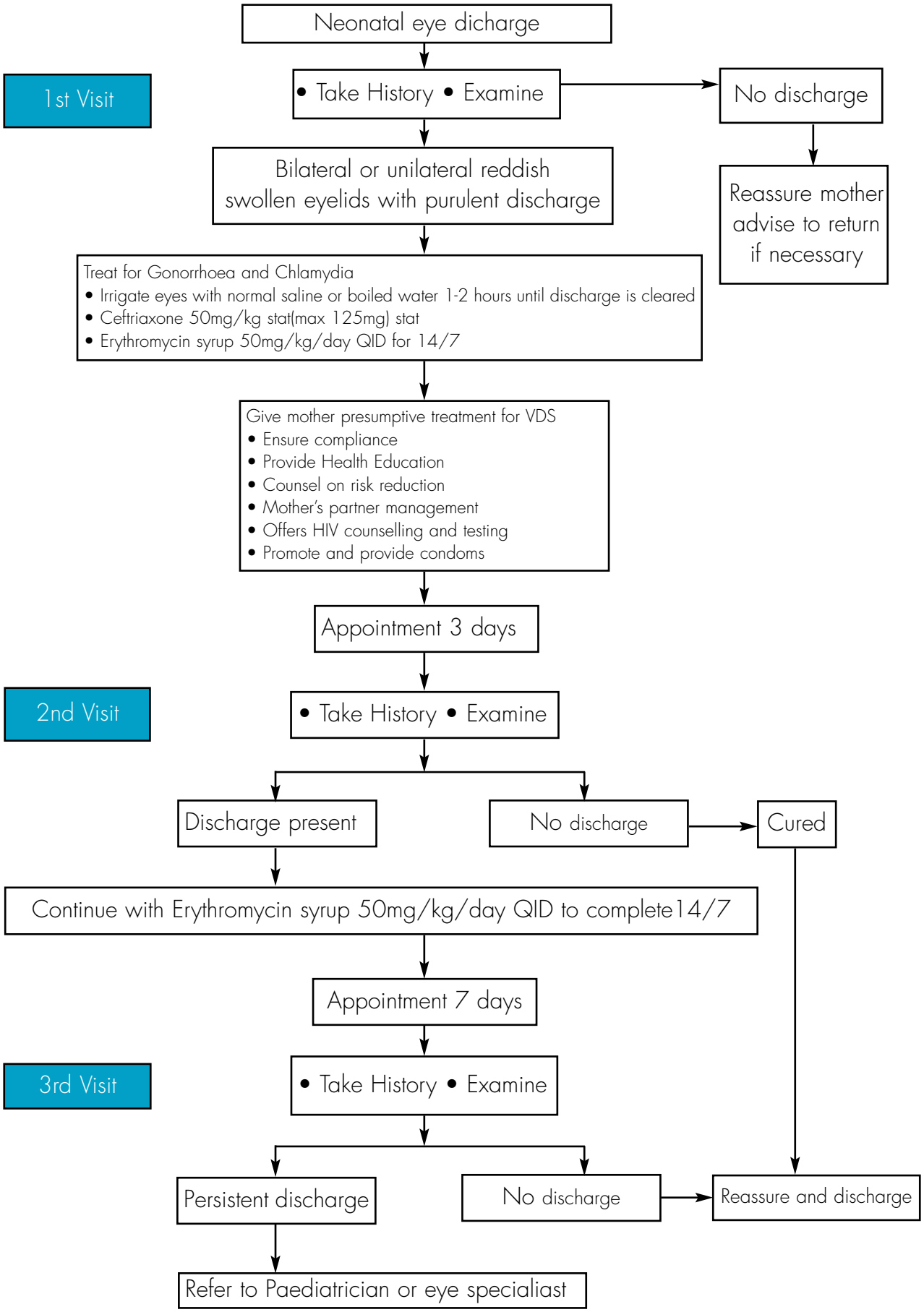
The most common sexually transmitted pathogens which cause ON are *Neisseria gonorrhoeae and Chlamydia trachomatis*

Other non-STI causes of neonatal conjuctivitis include: *Staphylococcus aureus, Streptococcus pneumoniae, Haemophilus* and *Pseudomonas* spp, viral, chemical and physical iritation.

Common symptoms and signs of Neonatal Conjunctivitis 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 providing 1% tetracycline eye ointment to all newborns.

Flow Chart 5: MANAGEMENT OF NEONATAL CONJUCTIVITIS



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

GENITAL ULCER DISEASE (GUD)

GUD is defined as loss of continuity of skin or mucous membrane producing one or more lesions in the genital area.

The relative prevalence of causative organisms for genital ulcer disease varies considerably in different parts of the world and may change dramatically over time. Clinical differential diagnosis of genital ulcers is inaccurate, particularly in settings where several aetiologies are common. Clinical manifestations and patterns of genital ulcer disease may be further altered in the presence of HIV infection.

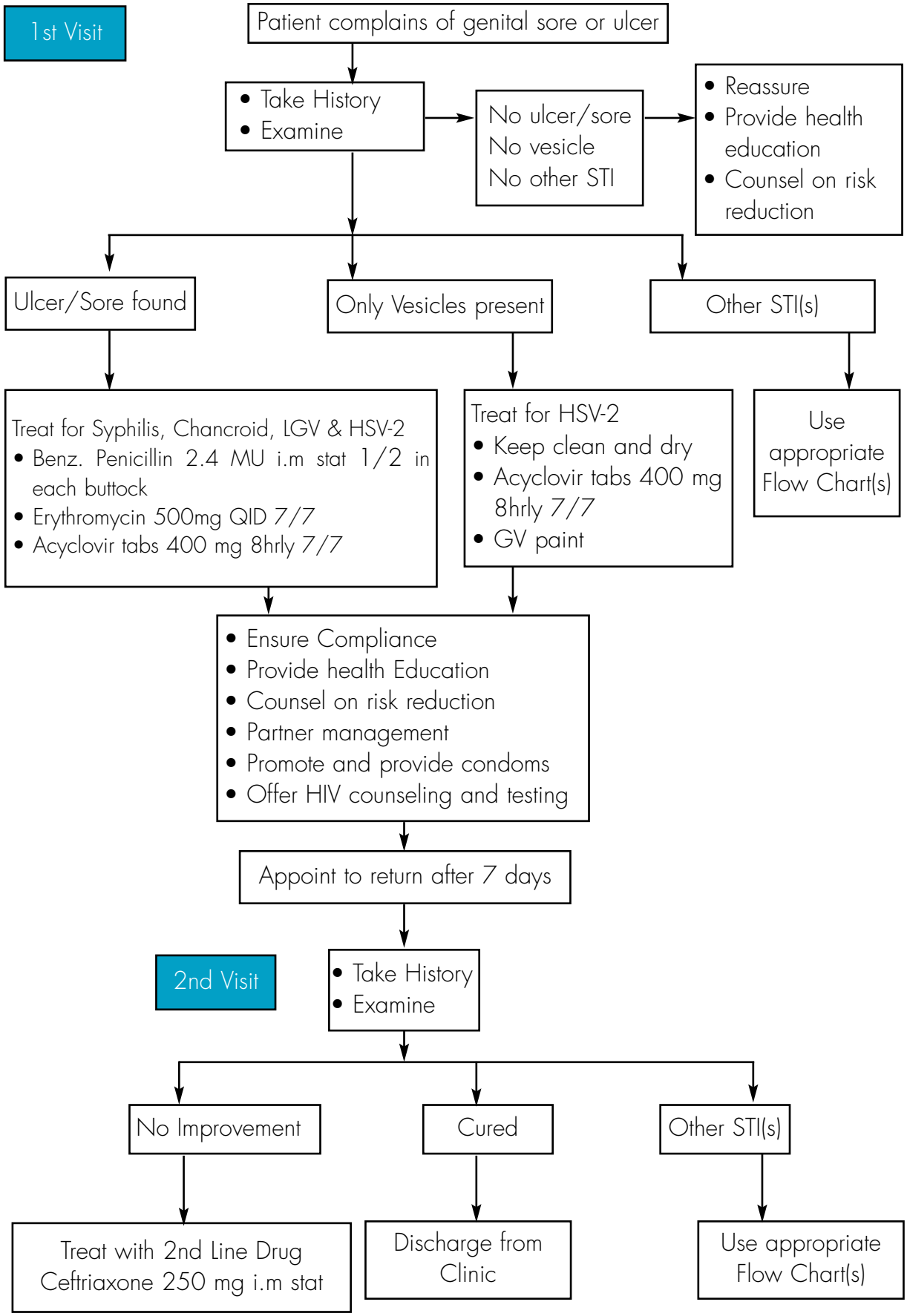
After examination to confirm the presence of genital ulceration, treatment appropriate to local aetiologies and antibiotic sensitivity patterns should be given. For example, in areas where both syphilis and chancroid are prevalent, patients with genital ulcers should be treated for both conditions at the time of their initial presentation to ensure adequate therapy in case of loss to follow-up. In areas where granuloma inguinale or lymphogranuloma venereum (LGV) is prevalent, treatment for these conditions should be included. In many parts of Tanzania, genital herpes is another frequent cause of genital ulcer disease. Where HIV infection is prevalent, an increasing portion of cases of genital ulcer disease is likely to harbour herpes simplex virus. Herpetic ulcers may be atypical and persist for long periods in HIV-infected patients.

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.

The common aetiologies of GUD in Tanzania are *Treponema pallidum*, *Haemophilus ducreyi*, *Chlamydia trachomatis*, Herpes simplex virus type 2 (HSV) and *Calymmatobacterium granulomatis*.

Genital ulcers may take different shapes, appearance and consistency. In addition to the observed ulcer(s), there may be lymphadenopathy which are painful/non-painful, painful coitus and painful micturition.

Flow Chart 6: MANAGEMENT OF GENITAL ULCER DISEASE (GUD)



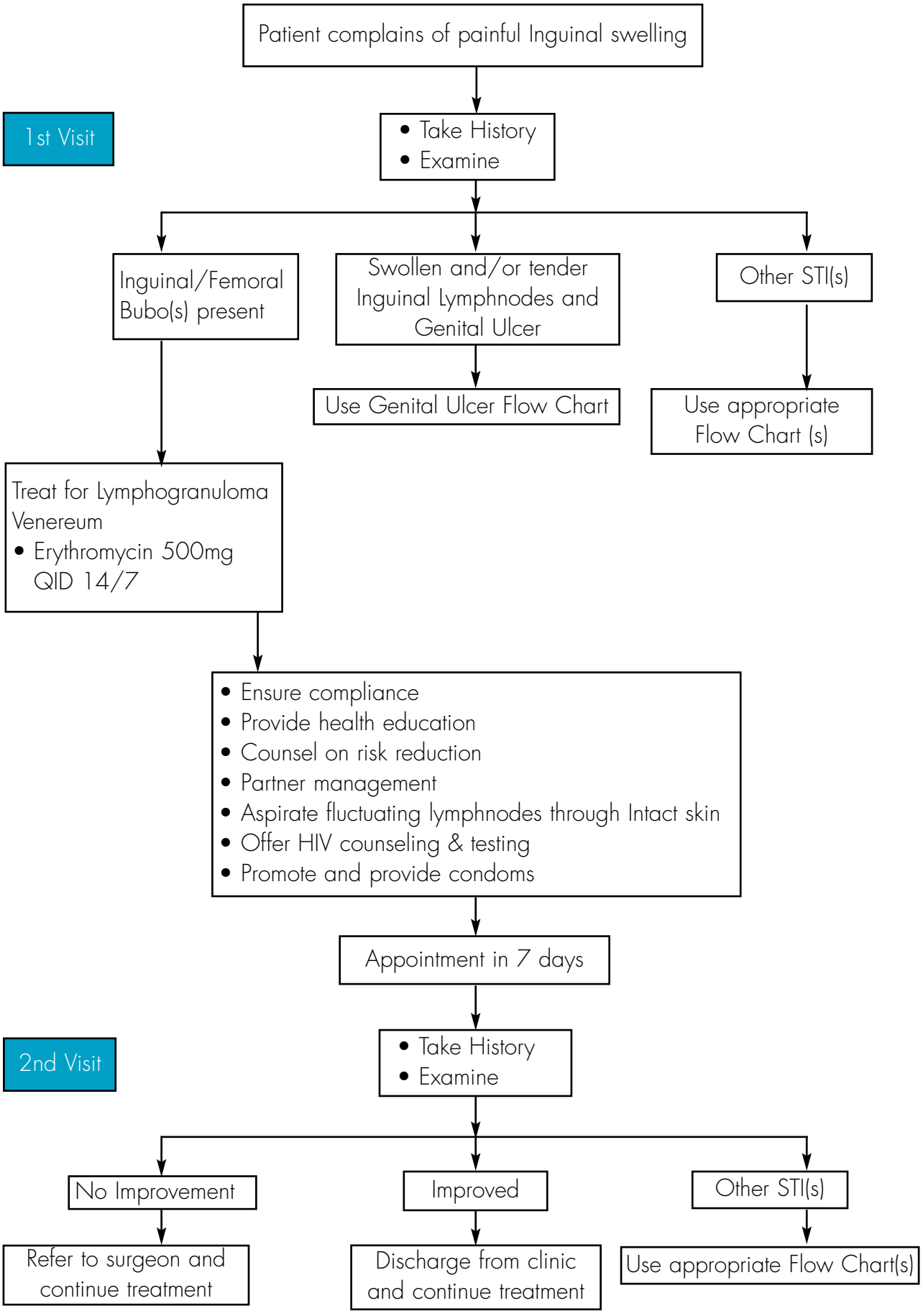
- Patients allergic to penicillin substitute with Erythromycin tabs 500mg QID for 15 days
- Do not give Acyclovir during pregnancy and breast feeding.

INGUINAL BUBO (IB)

Inguino Bubo refers to inguinal and femoral bubos which 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. Non-sexually 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 IB include swelling in the groin which are often fluctuant and associated with pain, fever and tenderness.

FLOW CHART 7: MANAGEMENT OF INGUINAL BUBOS (IB)



- Alternative treatment for Chancroid is Ciprofloxacin 500mg orally twice daily for 3 days and Doxycycline 100mg b.i.d 14/7.
- Do not incise the BUBO.

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 some conditions which 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 two years duration. In this case it is recommended to treat by giving Benzathine Penicillin 2.4 MU, I.M single dose given as two injections at separate sites.
Alternative regimen for penicillin allergic non-pregnant patients is
Doxycycline 100 mg orally twice daily for 15 days or Tetracycline,500mg orally, 4 times daily for 15 days.

Late Syphilis: This refers to Syphilis infection of more than 2 years. Recommended regimen is Benzathine Benzyl Penicillin 2.4 M.U once weekly for 3 consecutive weeks.

Syphilis In Pregnancy: Pregnant women should be regarded as a separate group requiring close surveillance, in particular, to detect possible re-infection after treatment has been given. It is also important to treat the sexual partner(s).

Pregnant women with syphilis at all stages of pregnancy, who are not allergic to penicillin, should be treated with penicillin according to the dosage schedules recommended for the treatment of non-pregnant patients at a similar stage of the disease, that is Benzathine Benzyl penicillin 2.4 MU, IM as single dose. However, if there are clinical reasons to suspect that the client has late syphilis 3 doses of Benzathine Benzyl Penicillin should be provided.

Congenital Syphilis: All infants born to sero-positive mothers should be treated with a single intramuscular dose of benzathine penicillin, 50 000 IU/kg whether or not the mothers were treated during pregnancy (with or without penicillin). Hospitalisation is recommended for all symptomatic babies born to mothers who were sero-positive. Symptomatic infants and asymptomatic infants with abnormal CSF (up to 2 years of age) should be treated as early congenital syphilis. The following are recommended treatment regimens for early congenital syphilis (up to 2 years of age), and Infants with abnormal cerebrospinal fluid:

- Aqueous benzyl penicillin 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 intramuscular 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; 4 times daily for 30 days. For congenital syphilis in children 2 or more years is aqueous benzylpenicillin, 200,000 – 300, 000 IU/kg/day by intravenous or intramuscular injection, administered as 50,000 IU/kg every 4-6 hours for 10-14 days.

All infants of sero-positive 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, IgM-specific serology may aid diagnosis.

Early congenital syphilis generally responds 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 condition 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 infection and its 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 that in non-HIV-infected patients. However, some authorities advise examination of the cerebrospinal fluid and/or more intensive treatment with a regimen appropriate for all patients with the dual infections of *Treponema pallidum* and HIV, regardless of the clinical stage of syphilis. In all cases, careful follow-up is necessary to ensure adequacy of treatment.

Genital Warts (Venereal Warts)

Human papilloma virus (HPV) is a common sexually transmitted pathogen. Genital warts are painless but may lead to serious complications. The removal of the lesion does not mean cure of the infection. No treatment is completely satisfactory. In most clinical situations, podophyllin, podophyllox 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 non-toxic, does not require anaesthesia and, if used properly, does not result in scarring.

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 to the occurrence of carcinoma of the cervix. It is a recommended practice to examine the cervix in all female STI/RTI patients, and to perform regular cervical smears in this population for Papanicolaou examination. 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), removing the need for frequent clinic visits; or provider-administered. Podophyllotoxin 0.5% solution may be applied with a cotton swab and the gel can be applied with a finger.

Recommended regimens for venereal warts are as follows:

A. Chemical Treatment

Self patient-applied

- Podophllotoxin 0.5% solution or gel twice daily for 3 days, followed by 4 days of no treatment, and the cycle repeated up to 4 times. (total volume of podophyllotoxin should not exceed 0.5ml per day).

OR

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

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

Provider Administered

- Podophyllin 10-25% in compound tincture of benzoin, applied carefully to the warts, avoiding normal tissue. External genital and perianal warts should be washed thoroughly 1-4 hours after the application of podophyllin. 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 0.5%, one 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 contraindicted.

OR

- Trichloroacetic acid (TCA) (80-90%) applied carefully to the warts avoiding normal tissue, followed by powdering of the treated area with talc or sodium bicarbonate (baking soda) to remove unreacted acid. Repeat application at weekly intervals.

B. Physical Treatment

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

OR

- Electrosurgery

OR

- Surgical removal.

Treatment For Vaginal Warts

Recommended regimens for treatment of vaginal warts are:

- Cryotherapy (with liquid nitrogen)

OR

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

OR

- TCA (80-90%)

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 trichloroacetic acid for cervical warts.

Management Of Meatal And Urethral Warts

- Cryotherapy

OR

- Podophyllin 10-25%

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

Urethroscopy is necessary to diagnose intra-urethral warts, but they should be suspected in men with recurrent meatal warts. Some experts prefer electrosurgical removal. Intra-urethral 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:

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

OR

- Pyrethrins plus peperonyl butoxide; applied 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 linen that may have been contaminated by the patient in the two days prior to the start of the treatment should be washed and well dried, or dry cleaned.

OR

- Permethrin 1% as 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 application of an occlusive ophthalmic ointment to the eyelid margins daily for 10 days 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 condition, it is more common in uncircumcised males, however, a client with the condition should be advised to keep local hygiene, wash with soap and safe water and paint with Gentian Violet 0.5% or use of 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 such as nursing homes, prisons and psychiatric hospitals. The labeling of scabies as a sexually transmitted infection should be avoided when the likely cause is close body contact, in order to prevent stigmatization. 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 non-sexual close body contact, treatment of all people involved is critical.

Adults, adolescents and older children: recommended regimen

- 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, applied to the entire body from the neck down, nightly for 2 nights; patients may bathe before reapplying the drug and should bathe 24 hours after the final application

OR

- Crotamiton 10%, lotion, applied to the entire body from the neck down, nightly for 2 nights and washed off thoroughly 24 hours after the second application; an extension to 5 nights is found necessary in some geographical areas (crotamiton has the advantage of an antipruritic action).

OR

- Sulfur 6%, in petrolatum applied to the entire body from the neck down, nightly for 3 nights; patients may bathe before reapplying the product and should bathe 24 hours after the final application.

Recommended regimens in Infants, children under 10 years of age, 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.

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 re-infection can be excluded and compliance assured, topical anti-inflammatory therapy may be considered as an allergic reaction may be the reason for clinical manifestation.

Clothing or bed linen that may have been contaminated by the patient in the two days prior to the start of treatment should be washed and well dried, or dry-cleaned.

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 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.

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 and stabilizing patients, and starting intravenous 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 obstetrical procedures is given in Chapter 4.

Key points

- Infection in pregnancy, following miscarriage, induced abortion or in the postpartum period can be life-threatening and must be managed aggressively and without delay.
- Patients with infectious complications of induced abortion (safe or unsafe) should be treated with intravenous fluids and antibiotics, and referred immediately if emergency management cannot be provided on-site.
- Infection in pregnancy can provoke preterm labour and serious complications for mother and foetus. Prevention and early management are key to reducing morbidity and mortality.
- Patients with postpartum infection should be treated with intravenous fluids and antibiotics, and referred immediately if emergency management cannot be provided on-site.
- Vaginal discharge in pregnancy may mask signs of abortion complications, rupture of membranes or postpartum infection. If there is no evidence of blood or amniotic fluid, treatment should be given to cover yeast infection, trichomoniasis and bacterial vaginosis.
- Activities to prevent postpartum infection include prevention and detection of STI/RTI during pregnancy (Chapter 2 and Chapter 4) and good delivery practice.

INFECTION IN EARLY PREGNANCY

Upper genital tract infection is different in pregnant than in non-pregnant women. Women with pre-existing pelvic inflammatory disease have difficulty becoming pregnant as acute infection in the uterus interferes with fertilization and implantation of the ovum, while established PID may cause scarring, infertility and ectopic pregnancy. Almost all infections

that do occur develop during the pregnancy itself, usually because of some event that disrupts the body's normal defences.

Most infectious complications of early pregnancy are related to spontaneous or induced abortion. Spontaneous abortion (or miscarriage) is common in the first trimester and usually resolves without complication. Induced abortion is also common and risk of infection is high when it is performed in unsafe conditions. Spontaneous or induced abortion is incomplete when tissue remains inside the uterus, and infection may develop if any remaining products of conception are not removed.

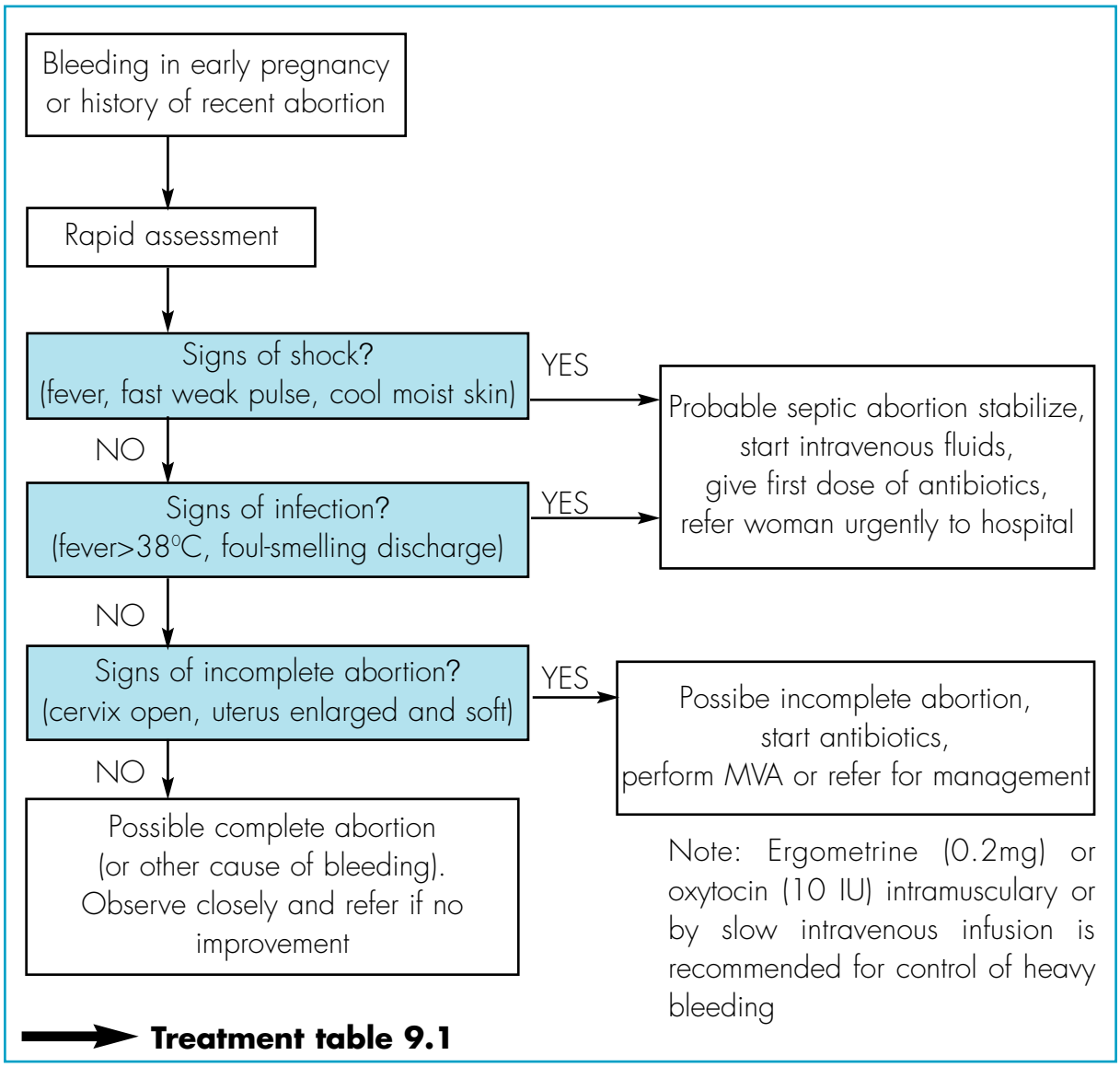
Such details are not always apparent when a woman seeks medical care for abortion complications. In fact, women with problems following induced abortion may not mention having had a procedure, especially in places where abortion is illegal. They may simply complain of spontaneous bleeding or other problems instead. Health care providers should thus have a high index of suspicion and manage possible infection following abortion based on objective signs, regardless of history.

MANAGEMENT OF POST- ABORTAL COMPLICATIONS

The treatment of complicated abortion includes stabilization of the patient, removal of remaining products of conception from the uterus, and administration of intravenous or intramuscular antibiotics (Flowchart 8, 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 examination should be performed and emergency treatment started. Women with signs of shock should be stabilized with intravenous fluids. All women with signs of shock or infection in early pregnancy should be given the first dose of antibiotics intravenously or intramuscularly, 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 with spontaneous abortion

FLOW CHART 8. POSSIBLE COMPLICATIONS OF ABORTION



INCOMPLETE ABORTION AND RISK OF INFECTIONS

Vaginal bleeding in early pregnancy may indicate that abortion is threatened, in progress or incomplete, or may be a sign of ectopic pregnancy or other problem. Signs of incomplete abortion include a soft, enlarged uterus 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 removal of 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 appears.

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, and fetal 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 post-abortion infection, chorioamnionitis, and 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 antenatal visits where possible (Chapter 2).

INFECTIONS AND RUPTURE OF MEMBRANES

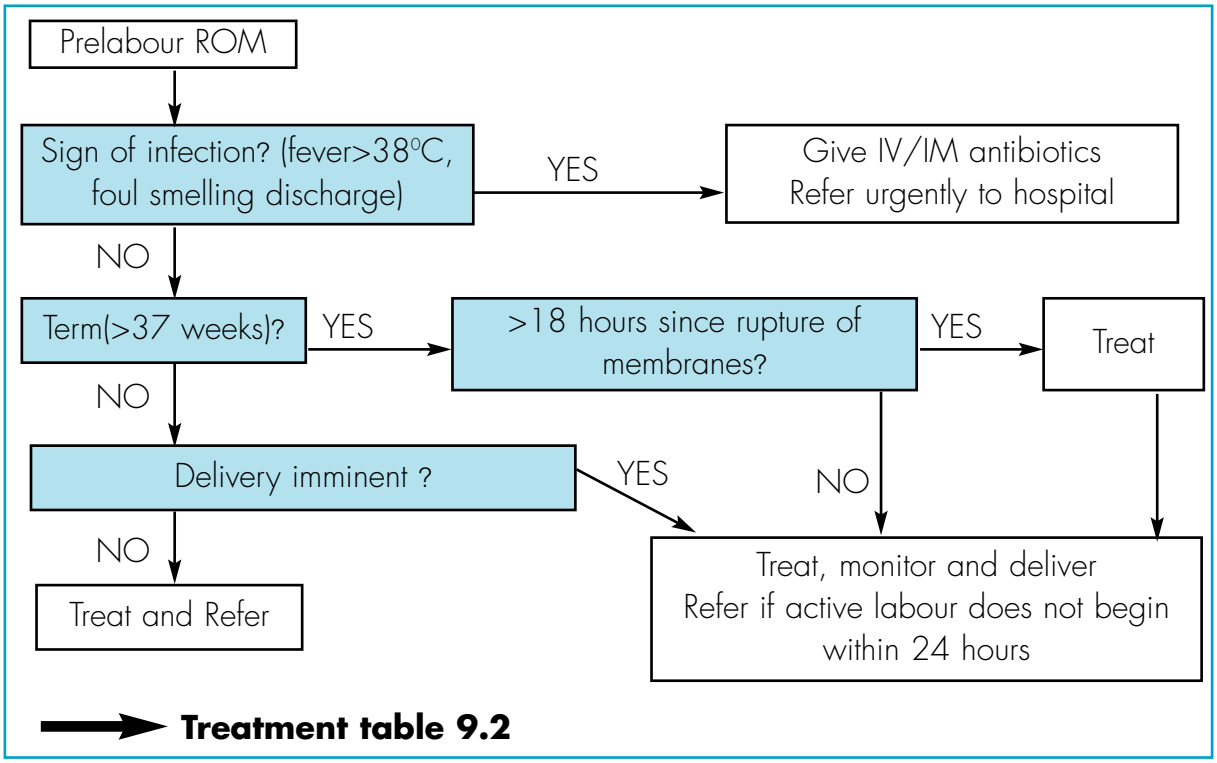
Infections may cause rupture of membranes (ROM) or follow it. All women—whether at term or preterm—with ROM and any signs of infection (fever, increased white blood cells, increased C-reactive protein or foul-smelling discharge) should be given antibiotics intravenously or intramuscularly (Flowchart 9) 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.
- If labour has not begun within 18 hours, give antibiotics (Treatment table 9.2) to reduce the risk of infection before and after delivery.

When membranes rupture before term, complications—preterm delivery, low birth weight, and perinatal morbidity and mortality—are more common. When rupture of membrane 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. Flowchart 9 summarizes the management of women with pre-labour rupture of membranes.

FLOW CHART 9. PRELABOUR RUPTURE OF MEMBRANES



In choosing the antibiotics to treat infection in a woman with a viable pregnancy, the risks and benefits should be carefully weighed. Antibiotics that may be harmful to the foetus should be avoided where possible (see Annex 4). If infection is severe, however, the priority should be given to 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 STI/RTI. Where feasible, screening for common STIs/RTIs implicated in pre-labour rupture of membranes and other adverse pregnancy outcomes is recommended at the first antenatal visit, and again later in pregnancy for women at high risk of preterm labour (see Chapter 3). The importance of primary prevention of STI/RTI to a healthy pregnancy should be emphasized to women and their partners.

INFECTIONS FOLLOWING CHILDBIRTH

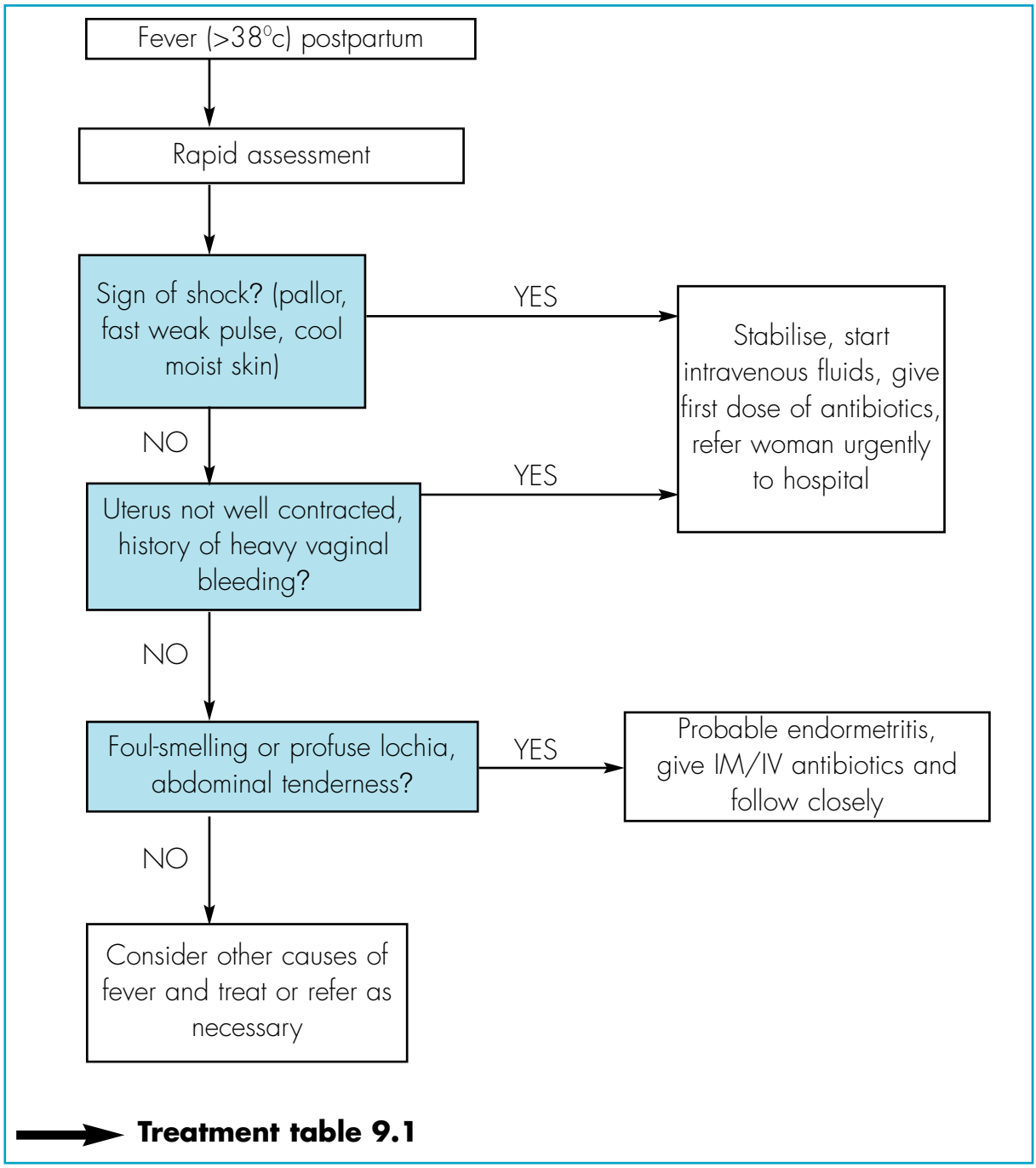
Postpartum Endometritis And Puerperal Sepsis

Postpartum endometritis (uterine infection) and puerperal sepsis are common causes of maternal morbidity and mortality respectively and are largely preventable with good antenatal care, delivery practices and postpartum care. When care is delayed or inadequate, however, infection can progress quickly to 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 section. Elsewhere, postpartum endometritis more often follows vaginal delivery. Early postpartum endometritis occurs within the first 48 hours, and late infection between 3 days and 6 weeks following delivery. Aggressive treatment should be given for all postpartum infections.

Women with signs of infection immediately postpartum should be stabilized, given a first dose of antibiotics intravenously (or intramuscularly) and referred urgently to hospital. Flowchart 10 outlines the management of women presenting with fever between 24 hours and 6 weeks postpartum.

FLOW CHART 10. POSTPARTUM INFECTION



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 3 drugs	Choose one drug from each box (=3 drugs)	Give both drugs	Choose one drug from each box (=3 drugs)
ampicilin 2g intravenously or intramusculary. then 1g every 6 hours	**ceftriaxone** 250mg by intramuscular injection, every 8 hours	**clindamycin** 900mg by intravenous injection, every 8 hours	**ciproflaxin**[b] 500mg orally, twice a day, or spectinomycin 1g by intamuscular injection, 4 times a day
gentamicin 80mg intramuscularly every 8 hours	**doxycycline** 100mg orally or intravenous injection, twice a day, or tetracycline 500mg orally 4 times a day	**gentamicin** 1.5mg/kg of body weight by intavenous injection every 8 hours	**doxycline** 100mg orally or by intravenous injection twice a day, or **tetracycline**, 500mg orally, 4 times a day
metronidazole[a] 500mg orally or intravenous infusion every 8 hours	**metronidazole**[a] 400-500mg orally or by intavenous injection, twice a day, or chloramphenicol 500mg orally or intravenous injection, 4 times a day		**metronidazole**[a] 400-500mg orally or by intravenous injection, twice a day, or chloromphenicol 500 mg orally or by intravenous injection, 4 times a day

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

b. The use of quinolones should take into consideration the patterns of *Neisseria gonorrhoeae* resistance

NOTE:

For all regimens, therapy should be continued for 2 days after the patient is fever free

Treatment table 9.2. Antibiotic regimens for treatment of infectious complications with viable pregnancy (chorioamnionitis, rupture of membranes)

OPTION 1 - Safest for fetus when there are no signs of maternal infection	**OPTION 2** - best coverage when maternal signs of infection (fever, foul smelling discharge) are present
Oral/intramuscular combination that is safe in pregnancy. Choose one from each box (=3 drugs)	Commonly available. least expensive. Give all 3 drugs until delivery. If woman delivers vaginally discontinue all antibiotic after delivery. If delivery is by Caesarean section, continue antibiotics until she is fever free for 48 hours
cefixime 400mg orally as a single dose, or **cefriaxone** 125-250mg by intramuscular injection	**ampicilin 2g intravenously** or intramuscularly, then 1g every 6 hours
erythromycin[a] 500mg orally 4 times a day for 7 days, or azithromycin 1g orally as a single dose	**gentamicin** 80mg intramuscularly every 8 hours
metronidazole[b] 2g orally as a single dose	**metronidazole**[b] 500mg orally or by intravenous 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.

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. For example:

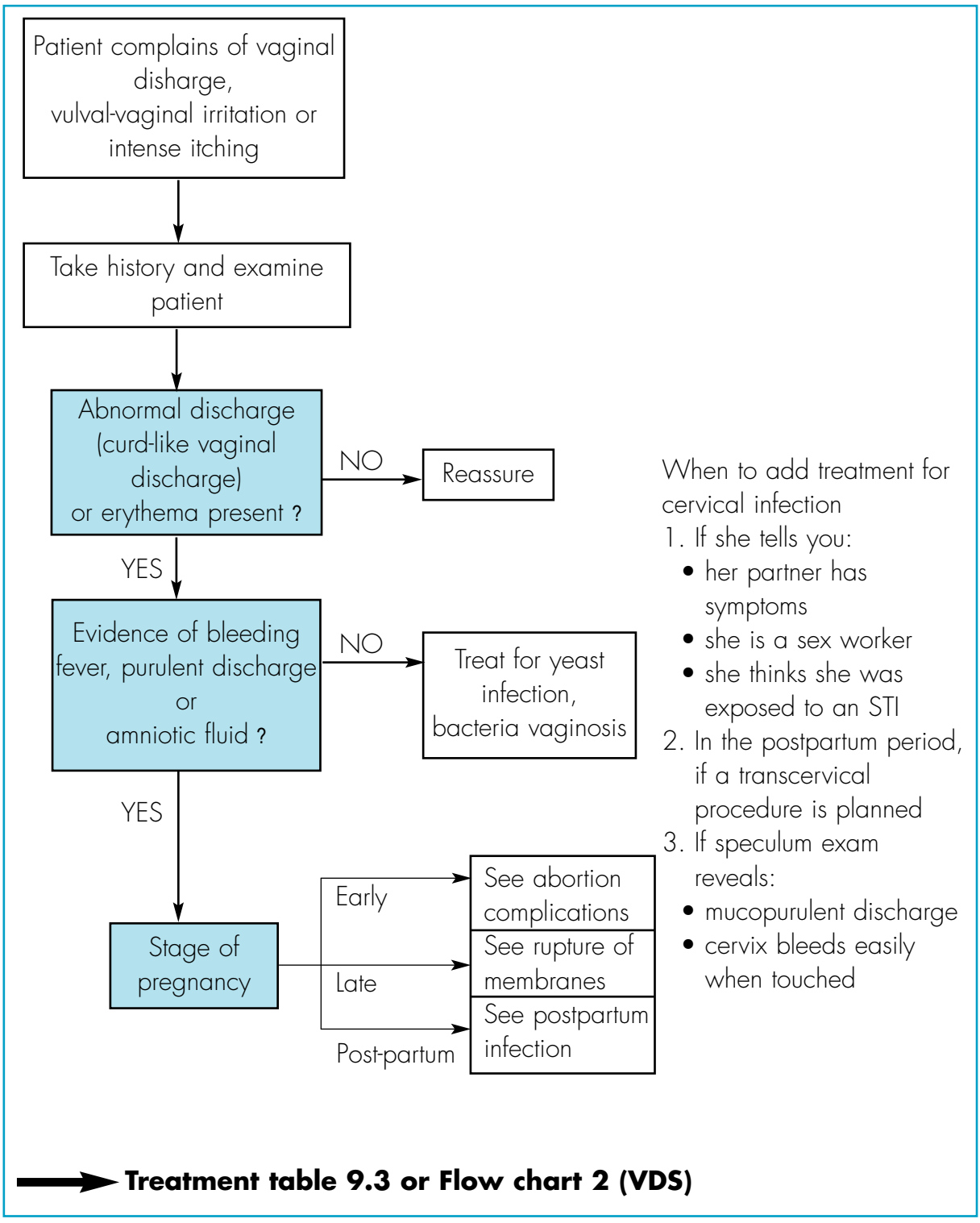
- In early pregnancy, discharge may mask spotting or light bleeding that could indicate ectopic pregnancy, threatened abortion, or cervical cancer.

- A watery discharge in late pregnancy could be amniotic fluid from ruptured membranes.

A careful history and examination will usually provide clues that will help distinguish simple vaginitis from more serious conditions. 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 11. VAGINAL DISCHARGE IN PREGNANCY AND POSTPARTUM PERIOD



Treatment table 9.3. Recomemended treatment for vaginal infection in pregnancy

- Therapy for **bacterial vaginosis** and trichomoniasis

PLUS

- Therapy for **yeast infection** if curd-like white discharge, vulvo-vaginal redness, and itching are present

Coverage	First choice Choose one from BV/TV box below, or one from each box if yeast infection is suspected	Effective substitutes	If woman is pregnant or breastfeeding Choose one from BV/TV 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 or 500 mg orally twice a day for 7 days	**clindamycin** cream 2%, one full applicator (5 g) intravaginally at bedtime for 7 days, or **clindamycin** 300 mg orally twice a day for 7 days	Preferably after first trimester **metronidazole** 200 or 250 mg orally 3 times a day for 7 days, or **metronidazole** gel 0.75%, one full applicator (5 g) intra-vaginally twice a day for 5 days, or **clindamycin** 300 mg orally twice a day for 7 days
Trichomo-niasis		**tinidazole**[a] 2 g orally in a single dose, or **tinidazole** 500 mg orally twice a day for 5 days	
Candida albicans (yeast)	**miconazole** 200 mg vaginal suppository, one a day 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, one a day for 14 days	**miconazole** 200 mg vaginal suppository, one a day for 3 days, or **clotrimazole**[b] 100 mg vaginal tablet, two tablets a day for 3 days, or **nystatin** 100,000 unit vaginal tablet, one a day for 14 days.

a. Patients taking metronidazole or tinidazole should be cautioned to avoid alcohol. Use of metronidazole is not recommended in the first trimester of pregnancy.

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

CHAPTER 10

SEXUAL VIOLENCE

Overview

Sexual violence

Sexual violence is defined as "*any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic women's sexuality, using coercion, threats of harm or physical force, by any person regardless of relationship to the victim, in any setting, including but not limited to home and work*"1.

Service providers should note that:

- 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 ten the abuser is a male.
- Sexual abuse acts are so common and frequently happen, but they are seldom reported
- More often than not, the abuser 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 gives some information on the occurrence of sexual violence.

Key points

- Sexual abuse is common but is frequently not talked about by the person concerned—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 local legal requirements.
- Women or children who have been sexually abused may need shelter and legal protection. Psychosocial management includes counseling 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 referral links should be made.
- Referral should be available if services cannot be provided on-site.

Box 10.1. 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, sexual abuse before age 15years was reported in10% 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 ex-partner at some time in their life. 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)

(WHO Multi Country Study on Women's Health and Domestic Violence Against Women, 2005)

Common characteristics of survivors of sexual violence

Health service providers should be aware that sexual violence survivors may present with atypical symptoms like; feelings of fatique, 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 accident proneness.

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

MEDICAL AND OTHER CARE FOR SURVIVOR OF SEXUAL ABUSE

All health facilities should have up-to-date policies and procedures for managing persons who have survived or experienced sexual violence that are in line with the National Sexual Offence Special Provision Act (SOSPA) 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 in order to deal confidentially, sensitively and effectively with people who have experienced sexual violence.

Step 1: Be prepared

Sexual violence identified	Initial evaluation and consent	Documentation and evidence	Medical management	Referral
Be prepared to offer appropriate clinical and psychological care for survivors of sexual violence				

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

- essential medical care for any injuries and health problems;
- collection of forensic evidence;
- evaluation for STI 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.

Step 2: Initial evaluation and consent

Sexual violence identified	Initial evaluation and consent	Documentation and evidence	Medical management	Referral
Be prepared to offer appropriate clinical and psychological care for 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 she or he agrees) ↓ Obtain informed consent for any examination, treatment, notification or referral			

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. 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.

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 for 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 she or he agrees) 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		

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, usually parental or legal guardian consent is required. These should not deny adolescents immediate access to medical services.

Where facilities or referral for a more complete examination are not available, the following minimal information should be collected: date and time of assault; date and time of examination; patient's statement; and results of clinical observations and any 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 goes to legal proceedings. Ideally, a trained health care provider of the same sex should accompany the survivor during the history taking and examination.

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

Step 4: Medical management

Sexual violence identified	Initial evaluation and consent	Documentation and evidence	Medical management	Referral
Be prepared to offer appropriate clinical and psychological care for 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 she or he agrees) 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 as appropriate	

The medical management of the survivor includes treatment of any injuries sustained in the assault, and initial counselling. 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.

EMERGENCY CONTRACEPTION

Emergency contraceptive pills can be effective if given up to 5 days after unprotected intercourse. However, the sooner they are taken, the more effective they are. Several regimens exist using levonorgestrel or combined oral contraceptive pills.

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

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

PRESUMPTIVE TREATMENT OF STI

Another concrete benefit of early medical intervention following rape is the treating the person for a number of STIs. STI prophylaxis can be started on the same day as emergency contraception.

Treatment may thus relieve a source of stress, but the decision about whether to provide prophylactic treatment or wait for results of STI tests should be made by the woman.

Treatment table 10.1 lists options that are effective whether taken soon after exposure or after the appearance of symptoms.

N.B: *Effort should be made to examine the assailant, and when a presumptive diagnosis is made, the victim should receive presumptive treatment as shown in table 10.1 and 10.2. In cases where the assailant can not be examined, the presumptive treatment to be given will be guided by the most likely STI transmitted.*

Treatment table 10.1. STI presumptive treatment options for 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 Mega units by intramuscular injection	**doxycycline**[c] 100 mg orally twice a day for 14 days (in case of penicillin allergy only)	**benzathine penicillin** 2.4 MU by single intramuscular injection
Gonorrhoea/ chancroid	**cefixime** 400 mg orally as a single dose, or ceftriaxone 125 mg by intramuscular injection	**ciprofloxacin**[d] 500 mg orally as a single dose, or **spectinomycin** 2 g by intramuscular injection	**cefixime** 400 mg orally as a single dose, or **ceftriaxone** 125 mg by intramuscular injection
Chlamydia/ lymphogranuloma venereum	**azithromycin** 1 g orally as single dose	**doxycycline**[c] 100 mg orally twice a day for 7 days, or **tetracycline** 500 mg orally 4 times a day for 7 days	**azithromycin** 1 g orally as single dose, or **erythromycin** 500 mg orally 4 times a day for 7 days
Trichomoniasis	**metronidazoleb** 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 3 times a day 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 gonorrhoeae* resistance.
e. Patients taking tinidazole should be cautioned to avoid alcohol.

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. STI presumptive treatment options for 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 intramuscular injection, or **erythromycin** 12.5 mg/kg of body weight orally 4 times a day for 14 days	>45 kg, use adult protocol
Gonorrhoea/chancroid	**cefixime** 8 mg/kg of body weight as a single dose, or **ceftriaxone** 125 mg by intramuscular injection, or **spectinomycin** 40 mg/kg of body weight (maximum 2 g) by intramuscular injection	>45 kg, use adult protocol
Chlamydia/ lymphogranuloma venereum	**erythromycin** 12.5 mg/kg of body weight orally 4 times a day for 7 days	12 years or older, use adult protocol
Trichomoniasis	**metronidazole** 5 mg/kg of body weight orally 3 times a day for 7 days	12 years or older, use adult protocol

POST EXPOSURE PROPHYLAXIS FOR HIV (PEP)

The possibility of HIV infection should be thoroughly discussed as it is one of the most feared consequences of rape. If PEP services are available, rape survivors who wish to be counselled on the risks and benefits should be referred within 72 hours. The provider should assess the person's knowledge and understanding of HIV transmission and adapt the counselling appropriately. Counselling should take into account the local prevalence of HIV and other factors (trauma, other STI exposure) that could influence transmission. If the person decides to take PEP, two or three antiretroviral drugs are usually given for 28 days.

Recommendations for chemoprophylaxis after accidental exposure to HIV

TYPE OF EXPOSURE	SOURCE OF MATERIAL	ARV PROPHYLAXIS	ARV REGIMEN
Percutaneous	Blood +++		
	Highest Risk	Recommended	ZDV plus 3TC plus EFV or NVP
	Increased Risk	Recommended	ZDV plus 3TC, + /-EFV or NVP
	No Increased Risk	Offer	ZDV plus 3TC
	Fluid containing visible blood, other potentially infectious fluids ++, or tissue	Offer	ZDV plus 3TC
Mucous Membrane	Blood	Offer	Offer ZDV plus 3TC +/- EFV or NVP
	Fluid containing visible blood, other potentially infectious fluid ++ or tissue	Offer	ZDV plus 3TC
	Other body fluids e.g. urine	Do not offer	Do not offer
Skin	Increased risk ****Blood	Offer	ZDV plus 3TC, +/- EFV or NVP**
	Fluid containing visible blood, other potentially infectious fluid ++ or tissue	Offer	ZDV plus 3TC
	Other body fluids e.g. Urine	Do not offer	Do not offer

- Any exposure to concentrated HIV (e.g., in a research laboratory or production facility) is treated as per-cutaneous exposure to blood with highest risk.

+ Recommend – Post-exposure prophylaxis (PEP) should be recommended to the exposed worker with counselling

Offer – PEP should be offered to the exposed worker with counselling.

Not offer – PEP should not be offered because these are not occupational exposures to HIV.

***Regimens: Zidovudine (ZDV) 300mg twelve hourly; Lamivudine (3TC), 150mg twelve hourly; Efavirenz 600mg nocte or Nevirapine 200mg 12 hourly, Prophylaxis is given for 4 weeks.

+++ Highest risk – BOTH larger volume of blood (e.g., deep injury with large diameter hollow needle previously in source patient's vein or artery, especially involving an injection of source-patient's blood) AND blood containing a high titer 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 titer of HIV

No increased risk – NEITHER exposure to larger volume of blood NOR blood with a high titer 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; cerebrospinal, synovial, pleural, peritoneal, pericardial, and amniotic fluids.

****For skin, risk is increased for exposures involving a high titer 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 for drug toxicity outweighs the benefit of PEP.

++Recommended 2 drug PEP for adults in Tanzania is AZT 300mg 12hourly and 150mg 3TC 12hourly for 4weeks.

+++Recommended expanded 3 drug PEP for adults in Tanzania is AZT 300mg 12 hourly, 150mg 3TC 12 hourly and 600mg Efavirenz nocte or 200mg Nevirapine 12 hourly for 4 weeks.

NB: Always reference should be made to prevailing national guidelines for PEP and those found to be infected at baseline or during follow-up should be linked to a care and treatment centre.

(Source: MoH, "National Guidelines for the Clinical Management of HIV and AIDS", 2005)

PROPHYLACTIC IMMUNIZATION AGAINST HEPATITIS B

Hepatitis B virus (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 intramuscular 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 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

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

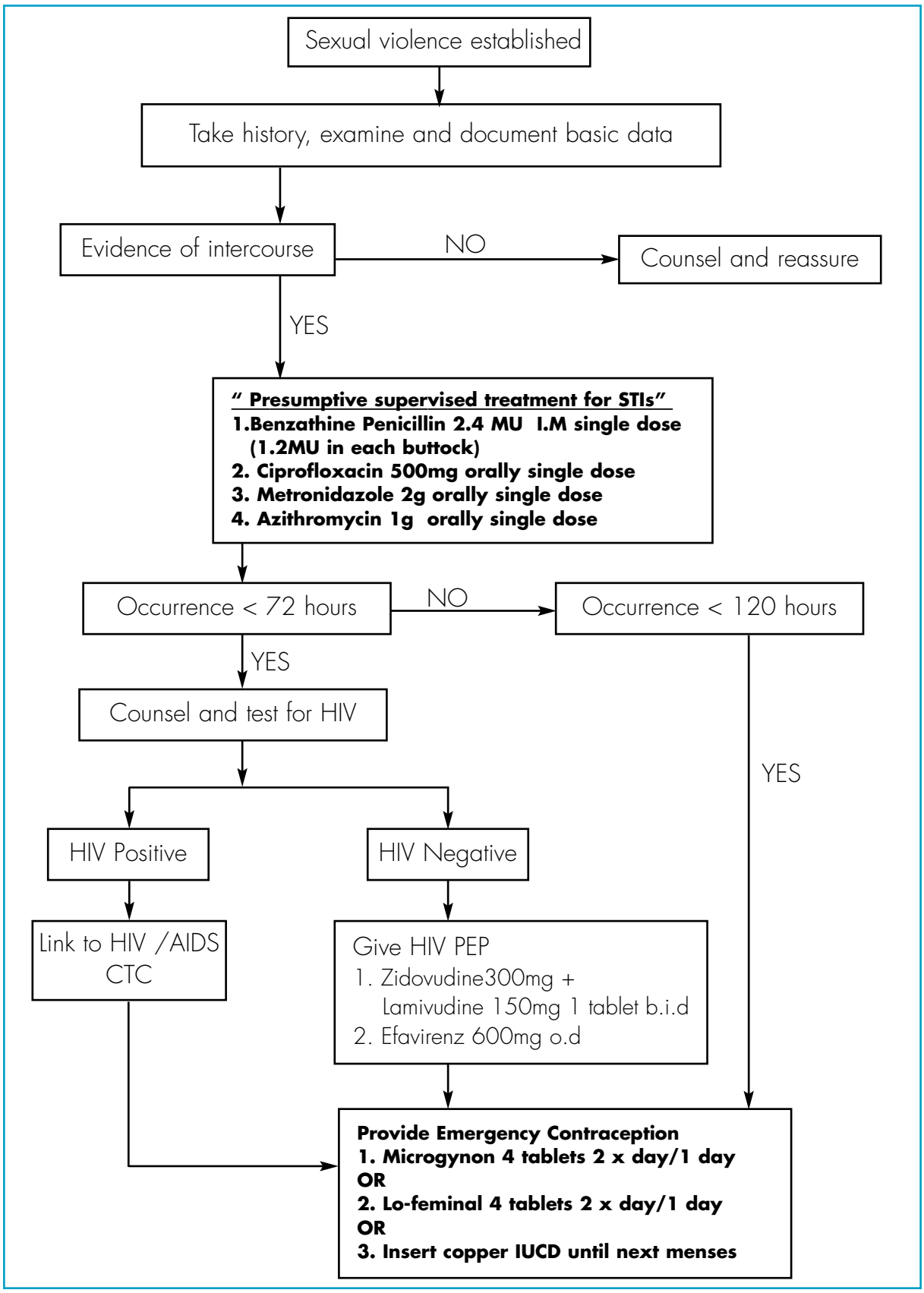
Step 5: Referral to special services

Sexual violence identified	Initial evaluation and consent	Documentation and evidence	Medical management	Referral
Be prepared to offer appropriate clinical and psychological care for 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 she or he agrees) 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 Post Exposure Prophylaxis as appropriate	Psychosocial support ↓ Forensic examination ↓ Protective services ↓ Follow-up care of the survivor

Following the initial provision of care, referrals may be needed for additional services such as specialized medical care, psychosocial and legal support. An evaluation of the person's personal safety should be made by a protective services agency or shelter, if available, and arrangements made for protection if needed. Referral for forensic examination should be made if this is desired but could not be adequately performed at the clinic visit.

It is essential to arrange follow-up appointments and services during the first visit. The victim 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 carers (legal guardian)

Flowchart 12:
CLINICAL MANAGEMENT OF SURVIVORS OF SEXUAL VIOLENCE



NB:

- Always treat injuries including provision of TT
- Advice for legal protection issues
- Psychological support (both at time of crisis and long-term
- Immunization against Hepatitis B (1 and 6 months)
- Re-evaluate after 3 months (genital examination) HIV and syphilis testing)

CHAPTER 11

MONITORING AND EVALUATION OF STI/RTI

Key points

- Health care providers should know the objectives of monitoring and evaluation in STI/RTI services.
- STI registrer, MTUHA Register Books and other standardized forms should be utilized to collect and record the information.
- The report should be compiled timely and submitted to relevant authority according to regulation (monthly, quarterly and annually).

MONITORING OF STI/RTI SERVICES

Monitoring involves recording properly the various steps and events involved in implementing the activities. Monitoring should concentrate on key information in order to measure and report progress of the activities.

Monitoring should also be standardized using well-designed formats for recording. The information collected should be analysed and utilized to make decisions at the point of collection of information and at higher levels.

Objectives for monitoring and evaluation of STI/RTI services would be:

- 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 STI/RTI, testing requirement, drug consumption and demand.
- Assess the effectiveness of the programme through quantitative and qualitative methods.
- Improve the management of STI/RTI services as necessary and inform the policy-making decisions.
- Gather, analyse service statistics and use the information for planning, prevention and control.

Standardised formats / Recording tools

The key information should be recorded for each STI/RTI client. The information should be compiled on daily, monthly quarterly and annual basis. The following relevant forms, STI and MTUHA Register Books should be used to record the information.

- Daily STI Register book
- MTUHA Register Book
- Health Facilities Survey - STI Services Indicators
- Report and Request book (R&R) for ordering STI commodities in quarterly basis
- STI Monthly Reporting Form
- Sentinel Surveillance form.

Table 11.1.
Summary of Monitoring System in STIs/RTIs/HIV/AIDS in place

TYPE OF MONITORING	INFORMATION COLLECTED
Disease Monitoring Reporting (STI daily register, STI Monthly Reporting Form, MTUHA books, Counselling and testing register	STI/RTI syndrome & sex, AIDS, Syphilis screening at RCH; screening of blood for HIV
Condom Use	Condoms distributed
Sentinel Surveillance	HIV & Syphilis in ANC women
Community based surveys in the catchment area of the sentinel sites or in area of special interest	Care seeking behaviour information, Sexual behaviour in a local context and STI disease pattern.
School-based surveys (Questionnaire for secondary schools every second year)	Sex behaviour: Knowledge of STIs/RTIs, care seeking behaviour.
Survey in a sample of health institutions	Quality of care (SSI 1,2,3): STI/RTIs syndromes and clinical outcome, care seeking behaviour data in STI patients and drug availability .
National Surveys DHS/KAP/RCHS	Knowledge on STI/RTI/AIDS Sexual behaviour.
Research Studies	Surveys on subjects or area of special interest or of principle importance.

DEFINITIONS:

SSI 1 – STI Service Indicator 1:
Number of individuals presenting with specific STIs or STI symptoms in health facilities who are treated in an appropriate way according to (national guidelines) divide by the number of individuals presenting with specific STIs or STI symptoms in the visited health facilities

SSI 2 – STI Service Indicator 2:
Number of individuals seeking STI care in health facilities that have received appropriate advice on condoms use, partner notification and who are referred for HIV testing divide by the number of individuals presenting with specific STIs or STI symptoms at the visited health care facilities.

SSI 3 – STI Service Indicator 3:
Number of individuals served by health care facilities that have a current supply of essential STI drugs and that have reported no stock outs lasting longer than 1week in the proceeding 12 months as numerator divided by the number of individuals treated for specific STIs or STI symptoms at the visited health care facilities for the past 12 months.

DAILY STI REGISTER BOOK
This is a daily register in which STI episodes and contacts attending 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 District Medical Officer by the 7th day of next month. The data will be consolidated into STI monthly report form. *(See the format ANNEX 6)*

STI MONTHLY REPORT FORM

This is STI monthly report form which summarizes data from the STI daily register. The in - charge of the facilities and District AIDS Control Coordinator verify the data before submitting to NACP. *(See the format ANNEX 7)*

FLOW OF THE REPORT FROM HEALTH CARE FACILITY TO DISTRICT/ REGION/ NACP:

1. Form to be completed by the 7th day of next month in triplicate at the facility and send:
   - First copy to District Medical Officer
   - Second copy to remain at the Health Facility
   - Third copy to NACP Epidemiology Unit
2. District Medical Officer aggregate/consolidate the reports and send to Regional Medical Officer by 14th day of next month.
3. Regional Medical Officer aggregate the reports and send both aggregated and individual district reports to NACP Epidemiology Unit by 21st day of next month.

MTUHA SYSTEM:

Routine monitoring of STI/RTI/HIV and AIDS is done through the MTUHA system and includes reporting of STI and AIDS cases, syphilis screening of pregnant women attending RCH clinics and screening of blood donors for HIV. This system is now in place in all parts of the country, but has to be complemented by sentinel surveillance to give a more complete picture of the status of the STI/RTI and AIDS control.

Reporting is done with the use of MTUHA books and separate STIs /HIV and AIDS forms, some of which (mainly those dealing with STIs) are reproduced in Annex 7. The forms are to be used only at sentinel sites and for supervision. Thus for routine reporting MTUHA forms are used.

SENTINEL SURVEILLANCE:

Sentinel Surveillance is a systematic collection of data from a defined population at defined sites for surveillance purposes. The purpose could be to follow an epidemic or endemic disease and the studied population could be ante-natal women.

HIV surveillance in Tanzania is using this method. Several regions have been selected for national surveillance. However, other regions which 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 Ministry of Health and Social Welfare 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 three 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 catchments population it may only be possible to enroll 200 pregnant women. Still the survey should be limited to three consecutive months.

The third quarter of the year (July to Sept) has been designated as the time of the year during which all surveillance surveys should be undertaken. However, Regional/Council Health Management Teams could recommend other months of the year where necessary.

All pregnant women coming to a selected ANC sentinel site for the first time for any pregnancy during the data collection period will be enrolled. Over-sampling of young pregnant women may introduce participation or selection bias and thus, should be avoided.

Data to be collected from each enrolled woman are socio-demographic 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, 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 booking, 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 filled in the data collection form (Form A). This will be followed by collection of 3-5 ml of blood from the woman using vacutainer tube and needle.

The blood is tested for syphilis with the use of Rapid Plasma Reagin (RPR) test. A midwife within the antenatal clinic or a laboratory assistant at a laboratory within the ANC premises (local laboratory) will perform the RPR test.

HIV testing is performed with an ELISA test and a double ELISA test strategy applied 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 will 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 need to be linked to a proper counselling and testing service.

Reporting and Dissemination:

To whom should the report be submitted ?

- At the health facility: to the Health Facility In-charge.
- At the District level: to the District Medical Officer (DMO)
- Copy to Regional Medical Officer
- At the Ministry level: to the Permanent Secretary of the MoHSW (NACP-Epidemiology Unit).

When should the report be submitted?

- At facility level – monthly
- At District level – monthly
- At MoHSW – Quarterly for MTUHA and in Monthly basis for STI report

An STI/RTI services provider should be able to keep records, evaluate, process, analyze, make interpretation and use them

EVALUATION

Evaluation is the system of assessing actions in order to improve planning or implementation of activities or planning for future activities.

The purposes of conducting evaluation of STI/RTI services:

Determine the STI/RTI services performance, effectiveness and efficiency that is:

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

When to conduct evaluation of STI/RTI Services:

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 immediate re-design of intervention strategies

End of STI/RTI Services (Outcome/summative evaluation)
- Assess the STI/RTI Services outcome.

Techniques of evaluating STI/RTI Services include:

Various methods can be used in evaluating STI/RTI services including interview and questionnaires, observations and focus group discussions.

ANNEX 1:

CLINICAL SKILLS NEEDED FOR STI/RTI MANAGEMENT

Contents

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. Since history taking with STI/RTI clients involves discussion of sensitive issues, a conducive environment is an important pre-condition. 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 two chairs on which the clinician and the client can sit during the interview. In order to help the client to feel at ease, the following aspects should be observed:

- Greet the client in a friendly manner and offer him/her a chair.
- Show that you are interested and make sure that your body gives the same friendly relaxed message as your words.

- Ask the reason for her or his visit.
- Speak a language which clients can understand and encourage your client to talk.
- Assure the client that her/his consultation is confidential.
- Ask the client's permission to question him/her about STI/RTI or his/her 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.
- Make questions free from any moral tone.
- Avoid "leading" (closed ended) questions and let client answer in his/her own style.

Table below illustrates in detail the specific information required.

Table A: Information required during history taking in 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 her/his 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. • Any current or long term medication. • Drug allergy.
Social and sexual history	Ask about: • Last sexual intercourse: When it took place, whether and what preventive measures were taken, whether partner had any symptoms. • Use of contraceptive methods. • Number of sexual partners in the last three months. • Alcohol intake, drug and substance use In addition, ask females about: • Number of children and age of last born child. • Menstrual history.

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.

Table B: Symptoms associated with specific syndomes

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 6)
Swelling, lumps or ulcer in the groin area		Inguinal bubo (Flow Chart 7)

Other symptoms and signs that may suggest 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 flowchart. 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 flowchart.
- 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 (pharyngeal gonorrhoea) is also possible.

PHYSICAL EXAMINATION ON 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 STIs. Also, other problems may be revealed even if the client had not complained about them. Since the client will feel highly sensitive about the clinical examination of the genital area, a conducive environment is absolutely essential. In addition to what is required for history taking, an examination couch, a screen/curtain and a good light source are needed as minimum equipment. Other equipment needed for the examination include speculum, gloves, gauze and cotton wool, soap, water, dustbin, bucket and hypochlorite solutions/or household bleach. It must be ensured that nobody who is not directly involved in the clinical examination interrupts the process.

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 and 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 examination coach.
- The service provider should be gentle during examination.
- Clients should not be over exposed.
- Service providers should preferably seek consent for a third person or a nurse to be around during examination.

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

- Preparing and setting equipment and materials.
- Preparing client for the examination.
- Preparing self for examination.
- Examining client by observing general appearance and conducting head to toe assessment using the principles of inspection, palpation, percussion and auscultation.

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

- external genital examination;
- speculum examination;
- bimanual examination.

Table C: Steps for conducting physical examination on an STI client

FEMALE CLIENT	MALE CLIENT
• With the client sitting on an examination coach examine for enlarged lymph nodes in the anterior and posterior triangles of the neck, the submental, epitroclear and suboccipital areas. • Ask the client to remove her clothing from the chest down and to lie on the coach using 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 for enlarged lymph nodes. • Gently palpate the abdomen for tenderness and the presence of any pelvic masses taking care not to hurt the client.	• Ask the client to remove his shirt. • With the client sitting on an examination coach, 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. • 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.

Continues on next page

Continued from last page

FEMALE CLIENT	MALE CLIENT
• Examine the pubic hair for nits/lice. • Palpate the inguinal areas noting any tenderness and/or swelling of lymph nodes. • Put a clean glove on the hand. • With the knees of the client bent and separated, inspect vulva, perineum and anus for abnormal discharge, ulcers, swellings or any other abnormalities. • For all enlarged lymph nodes, note location, number, consistency and whether painful or not.	• Put a clean glove on the hand. • Palpate the scrotum feeling for the testis, epididymis and the spermatic cord noting any enlargement or tenderness. • Examine the penis for rashes or sores, then ask the client to retract the foreskin. • Inspect the glans penis, coronal sulcus, frenum 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 whether any discharge appears. • With the knees of the client bent and separated, inspect the peri-neum and anus for abnormal discharge, ulcers, swellings, or any other abnormalities. • For all enlarged lymph nodes, note location, number, consistency and whether painful or not.

Table D: Signs and Management – External Examination

SIGNS TO LOOK FOR WHEN DOING AN EXTERNAL EXAMINATION	MANAGEMENT
Discharge and redness of the vulva are common signs of vaginitis. When the discharge is white and curd-like, yeast infection is likely.	Vaginal discharge, 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

How to do speculum examination

- 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 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 handle 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 on the speculum) so 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 towards 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 E: Signs and Management – Speculum Examination

SIGNS TO LOOK FOR WHEN DOING AN EXTERNAL EXAMINATION	MANAGEMENT
Vaginal discharge and redness of the vaginal walls are common signs of vaginitis. When the discharge is white and curd-like, yeast infection is likely.	Vaginal discharge, Flowchart 2 (for pregnant women, Flow Chart 11)
Ulcers, sores or blisters.	Genital ulcer, Flow Chart 6
If the cervix bleeds easily when touched or the discharge appears mucopurulent with discoloration, cervical infection is likely.	Treatment table 2
If you are examining the woman after birth, induced abortion or miscarriage, look for bleeding from the vagina or tissue fragments and check whether the cervix is normal.	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, push gently downward on the muscles surrounding the vagina. When the muscles relax, put the middle finger in too. Turn the palm of your hand up.
- Feel the opening of her womb (cervix) to see if it is firm and round. Then put one finger on either side of the cervix and move the cervix gently while watching the woman's facial expression. It should move easily without causing pain. If it does cause pain (you may see her grimace), this sign is called cervical motion tenderness, and she may have an infection of the womb, tubes or ovaries. If her cervix feels soft, she may be pregnant.
- Feel the womb by gently pushing on her lower abdomen with your outside hand. This moves the inside parts (womb, tubes and ovaries) closer to your inside hand. The womb may be tipped forward or backward. If you do not feel it in front of the cervix, gently lift the cervix and feel around it for the body of the womb. If you feel it under the cervix, it is pointed back.

- When you find the womb, feel for its size and shape. Do this by moving your inside fingers to the sides of the cervix, and then "walk" your outside fingers around the womb. It should feel firm, smooth and smaller than a lemon.
    - If the womb feels soft and large, she is probably pregnant.
    - If it feels lumpy and hard, she may have a fibroid or other growth.
    - If it hurts when you touch it, she may have an infection inside.
    - If it does not move freely, she could have scars from an old infection.
- Feel the tubes and ovaries. If these are normal, they will be hard to feel. If you feel any lumps that are bigger than an almond or that cause severe pain, she could have an infection or other emergency. If she has a painful lump, and her period is late, she could have an ectopic pregnancy and needs medical help right away.
- Move your finger and feel along the inside of the vagina. Make sure there are no unusual lumps, tears or sores.
- Have the woman cough or push down as if she were passing stool. Watch to see if something bulges out of the vagina. If it does, she could have a fallen womb or fallen bladder (prolapse).
- When you are finished, dispose glove appropriately. Wash your hands well with soap and water.

Table F: Signs and Management – Bimanual Examination

SIGNS TO LOOK FOR WHEN DOING A BIMANUAL EXAMINATION	MANAGEMENT
Lower abdominal tenderness when pressing down over the uterus with the outside hand.	Use the lower abdominal pain flowchart (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).	
Any abnormal growth or hardness to the touch.	Refer for Pap smear or cytology

SYMPTOMS AND SIGNS OF 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 put on 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 the man to lie down during the examination
- Palpate the inguinal region (groin) looking for enlarged lymph nodes and buboes
- 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 towards 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, buboes, genital warts, and urethral discharge, noting colour and amount.

SIGNS TO LOOK FOR WHEN EXAMINING MEN

SIGNS TO LOOK FOR	MANAGEMENT
Urethral discharge	Urethral discharge, Flow Chart 1
Ulcers, sores or blisters	Genital ulcer, Flow Chart 6
Swelling or lumps in the groin (inguinal lymphadenopathy) and swelling of testicles.	Inguinal bubo, Flow Chart 7

ANNEX 2:

DISINFECTION AND STANDARD PRECAUTIONS

Contents

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:

- 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, mucus, 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. Then rinse, 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:

- 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 3 steps followed in fulfilling 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 infection when cleaning them. If you do not have bleach, soak your instruments in water.

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

3. Disinfecting. Steam or boil the instruments for 20 minutes.

- To steam them, 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 instruments should protrude above the rim of the pot.
- To boil them, 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 the 20 minutes after the water with the instruments is fully boiling. Do not add anything new to the pot once you begin to count.

How to make a disinfection solution of 0.5% bleach

- If the label on your bleach says:
  - 2% available chlorine —use 1 part bleach to 3 parts water
  - 5% available chlorine —use 1 part bleach to 9 parts water
  - 10% available chlorine —use 1 part bleach to 19 parts water
  - 15% available chlorine —use 1 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.

STANDARD PRECAUTIONS

The same precautions against spreading infection 'universal precautions' should be used with all patients whether they appear sick or well, and whether or not 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. Hepatitis B and C viruses and HIV are incurable infections that are easily transmitted by reuse of contaminated sharps. Because RTIs are often asymptomatic, it is not possible to know which patients have 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, vomitus, 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, vomitus 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. Handle clothing or sheets stained with blood, diarrhoea or other body fluids carefully. Separate from other laundry for washing. Dry laundry thoroughly in the sun if possible or iron after drying

ANNEX 3:

LABORATORY TESTS FOR STIs/RTIs

Contents

Rapid Plasma Reagin (RPR) Laboratory tests

PERFORM RPR TEST AND RESPOND TO RESULTS:

Seek consent to collect blood for screening for antibodies to syphilis.
Explain procedure of blood collection.
Use a sterile needle and syringe. Draw up 5 ml of blood from a vein. 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 2000–3000 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 ?l) of serum to fall onto a circle. Spread the drop to fill the circle using a toothpick or other clean spreader.
Important: *Carefully label each sample with a patient name or number. Several samples may be done on one test card. Be careful not to contaminate the remaining test circles. Use a clean spreader for every sample.*
Attach dispensing needle to a syringe. Shake antigen[1]. Draw up enough antigen for the number of tests done (one drop per test).
Holding the syringe vertically, allow exactly one drop of antigen to fall onto each test sample. Do not stir.
Rotate the test card on a mechanical rotator or smoothly on the palm of the hand for 8 minutes[2].

***NEED TO INTRODUCE SIMPLER TESTS WHICH DO NOT REQUIRE MECHANICAL SHAKERS**

[1]Make sure antigen was refrigerated (not frozen) and has not expired.
[2] Room temperature should be 22.8oC–29.3oC

INTERPRETING RESULTS

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

Example test card

1. Non-reactive (no clumping) Negative for syphilis
2. Reactive (highly visible clumping) Positive for syphilis
3. Weakly reactive (minimal clumping) Positive for syphilis

NOTE: Weakly reactive can also be more finely granulated and difficult to see than this illustration

Continues on next page

Continued from last page

IF RPR POSITIVE:
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 newborn in 2 weeks. Counsel on safer sex. Initiate HIV testing and counselling

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 Flowchart 1 Chapter 8).

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

Treponemal tests, such as *Treponema pallidum* haemagglutination test (TPHA) *Treponema pallidum* particle agglutination test (TPPA), fluorescent *Treponema* antibody absorption test (FTA-Abs can be used to confirm non-treponemal test results.

Quantitative RPR showing a significant drop of the titres can help evaluate the response to treatment.

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

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

Interpreting serological test results

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

CRITERIA FOR BACTERIAL VAGINOSIS (BV)

BV 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 on swab or speculum and note the pH.
Prepare slide	Place specimen on a glass slide. Add a drop of 10% potassium hydroxide and note any odour. Stain with gram method and look for clue cells.
What to look for	The diagnosis of BV is based on the presence of at least 3 of the 4 following characteristics • Homogeneous white-grey discharge that sticks to the vaginal walls • Vaginal fluid pH >4.5 • Release of fishy amine odour from the vaginal fluid when mixed with 10% potassium hydroxide (positive whiff test) • "Clue cells" visible on microscopy 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 1 or 2 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 trichomonads. Examine at 40X magnification to look for budding yeast cells and trichomonads. To make identification of yeast cells easier in wet mount slides, mix the vaginal swab in another drop of saline and add a drop of 10% potassium hydroxide to dissolve other cells.
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	1. Heat fix. 2. Stain with crystal violet (60 seconds) and rinse. 3. Stain with Lugols iodine (60 seconds) and rinse. 4. Decolorize briefly with acetone-ethanol for few seconds (until the liquid runs clear). 5. Stain with dilute Carbol Fuschin/neutral red or safranin (60 seconds) and rinse. 6. Gently blot dry and examine under oil immersion (1000X).
What to look for	1. Lactobacilli only—normal 2. Mixed flora, mainly lactobacilli with a few short rods (coccobacilli)—considered normal 3. Presence of clue cells; mixed flora, mainly *Gardnerella*-like and anaerobic bacteria with a few lactobacilli—treat for BV 4. Presence of clue cells; mixed flora of Gram-positive, Gram-negative and Gram-variable rods; no lactobacilli—treat for BV
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 gonorrhoeae* 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.

ANNEX 4:

MEDICATIONS

Contents

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 preference to new or untried drugs and the smallest effective dose should be used. The following list includes information about use of some common drugs in pregnancy. Absence of a drug from the list does not imply that it is safe.

DRUG SAFETY IN PREGNANCY

acyclovir	No studies which have shown their safety in preganancy 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
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

Continues on next page

Continued from last page

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 for 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 (>1g)
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 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 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 (>1g)
tetracycline	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
trimethoprim	First trimester: theoretical teratogenic risk (folate antagonist)
valaciclovir	Animal studies did not show any risk for 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 fetal 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	125 mg by intramuscular injection	Yes	No
ciprofloxacin	500 mg orally as a single dose	No	Extensive quinolone resistance in parts of the WHO South-East Asia and Western Pacific Regions
spectinomycin	2 g by intramuscular injection	Yes	No
Other effective treatments for urogenital and rectal gonorrhoea			
cefotaxime	1 g by intramuscular injection	Yes	No
ceftizoxime	1 g by intramuscular injection	Yes	No
cefuroxime	1.5 g by intramuscular injection	Yes	No
levofloxacin	250 mg orally as a single dose	No	Extensive quinolone resistance in parts of the WHO South-East 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

a. Penicillin ask for information on history of allergy to penicillin injection

b. The use of quinolones should take into consideration the patterns of *Neisseria gonorrhoeae* 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 (125 mg), cefixime (400 mg), ciprofloxacin (500 mg), and ofloxacin (400 mg) appear to offer the best balance of proven efficacy and safety. In Tanzania Spectinomycin injection is used as a second line drugs.

ANNEX 5:

STI/RTI REFERENCE TABLE

STI/RTI	Etiological agent	Acute manifestations	Possible complications	Effect on pregnancy and newborn
Sexually transmitted infections				
Gonorrhoea	*Neisseria gonorrhoeae*	In women: cervicitis, urethritis In men: urethritis	In women: pelvic inflammatory disease (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: preterm delivery Newborn: low birth weight, conjunctivitis, pneumonia, otitis
Trichomon-iasis	*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 endometritis Newborn: transientvaginal infection

Continues on next page

Continued from last page

STI/RTI	Etiological agent	Acute manifestations	Possible complications	Effect on pregnancy and newborn
Sexually transmitted infections				
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
Lympho-granuloma venereum (LGV)	*Chlamydia trachomatis*	In both women and men: small, painless genital ulcer, non-specific 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

Continues on next page

Continued from last page

STI/RTI	Etiological agent	Acute manifestations	Possible complications	Effect on pregnancy and newborn
Sexually transmitted infections				
Genital herpes	Herpes simplex virus (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
Genital warts/ cervical lesions	Human papilloma virus (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
Hepatitis B	Hepatitis B virus (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	Human immuno-deficiency virus (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

Continues on next page

Continued from last page

STI/RTI	Etiological agent	Acute manifestations	Possible complications	Effect on pregnancy and newborn
Non-sexually transmitted infections in women				
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 birth weight
Vulvovaginal candidiasis	*Candida albicans*	Vaginitis	None known	Pregnancy: increased susceptibility to *Candida* Newborn: neonatal thrush

ANNEX 6:

DAILY STI REGISTER FORM

Date (dd/mm/yyyy)																														
Client reg. number																														
Name																														
Age (years)																														
Sex (male=M; female=F)																														
Client referred from (IP, TB, ANC, Counseling..)																														
Type of attendance	Follow up	New																												
		Contact																												
		Cured																												
		retreatment 2nd line																												
		retreatment 3rd line																												
Symptoms and signs																														
Diagnosis																														
Drug Issued (number of units/tablets)	Ciprofloxacin																													
	Doxycycline																													
	Metronidazole																													
	Erythromycine																													
	Benz.Penicilline																													
	Cotrimoxazole																													
	Clotrimazole Pess.																													
	Clotrimazole cream																													
	Ceftriaxone																													
	Others																													
Counselled and advised on condom use																														
Number of Condoms provided																														
Counselled and referred for HIV testing																														
Comments																														
Provider's signature																														

DEFINITION OF TERMS USED

Date – Enter the date a client attends clinic

Client registration number – Enter registration number of every client in a facility. This number is used to identify that particular client, it should not be repeated to another client within the year.

Name – Enter first and second name of the client

Age – Enter the age in years

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

Counseled 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

Counseled and referred for HIV testing – tick if the client was counseled and referred for HIV testing

Comments – Enter your comments on management of the client

Providers' signature – Enter your signature

MINISTRY OF HEALTH AND SOCIAL WELFARE
NATIONAL AIDS CONTROL PROGRAMME
MONTHLY STI REPORT SUMMARY

HEALTH FACILITY: _____
TYPE: Hosp._____ HC. _____ Disp _____
DISTRICT: _____
REGION: _____
Total number of facilities provided STI syndromic management: _____
Number of facilities reported: _____

REPORTING MONTH_____YEAR _____
OFFICER REPORTING:
Name: _____
Designation: _____
Qualification: _____
Signature: _____

INDICATOR	AGE GROUP AND SEX										TOTAL		GRAND TOTAL
	<15		15 - 24		25 - 34		35 - 49		≥50				
	M	F	M	F	M	F	M	F	M	F	M	F	
Number of new clients with Genital Discharge syndrome													
Number of new clients with Genital Ulcer Disease													
Number of new clients with Pelvic Inflamatory diseases													
Number of new clients with VDRL/RPR +VE													
Number of new clients with other STIs													
Total new visits this month													
Number of Episodes re-treated -2nd line													
Number of Episodes re-treated -3rd line regimen													
Number of Episodes referred for 3rd - line regimen													
Number of Contacts treated													
Number of clients counselled and advised on condom use													
Number of clients linked to HIV counseling and testing													
Number of clients referred from other services (OPD, IP, TB, VCT FP and ANC)													

• This form is filled in triplicate

ANNEX 7: STI MONTHLY REPORT FORM

DEFINITIONS OF TERMS USED:

Sexually transmitted infections (STI) - an infection with sexually transmitted pathogens that cause recognized symptoms or clinical signs in individuals.

STI Episode - a new sexually transmitted infection presented by an individual/client during a particular period.

Episode re-treated - an infection which was treated but not cured and therefore treated again using second line drug regimen.

Contact/s - sexual partner/s referred to the clinic by the index client for treatment

Index client - the first STI client reported for treatment

Other common STIs - these are clearly described in the National Guigelines for the Management of ST/RT Infections

Episode in need of third line regimen - an infection which was treated using second line regimen but not cured and therefore either treated using third line regimen or referred for third line regimen.

Episode re-treated - an infection which was treated but not cured and therefore treated again using second line drug regimen.

Clients tested for syphilis using VDRL/RPR - clients tested through STI clinics excluding routine ANC screening

GLOSSARY

Adnexae	Ovaries, fallopian tubes and supporting structures.?
Algorithm	A 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	A 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 women who have a vaginal infection.
Complicated abortion	Spontaneous or induced abortion that results complications, such as infection or bleeding.
Curd-like vaginal discharge	whitish vaginal discharge, like cottage cheese; common in yeast infection.
Dilatation and curettage	a 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	A 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 risks of sexually transmitted infections, including HIV.
Dual method use	Using a barrier method for protection against sexually transmitted infection and another method for contraception.
Dual protection	Prevention of both STI/HIV infection and unwanted pregnancy. This 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/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. The most common site is within a fallopian tube.
Epididymitis	Inflammation of the epididymis; occasional complication of untreated urethral infection
Epithelialize	to become covered with epithelial tissue (to heal).
Female reproductive tract	Includes vulva, vagina, uterine cavity and the fallopian tubes (see figure).
Forensic examination:	examination to look for evidence that can later be used in legal proceedings; should be done by specially trained professional.
Health care providers:	individuals who are trained to provide various health services.

HIV voluntary counselling and testing (VCT):	counselling prior to HIV test, testing itself, and post-test counselling conducted when results of the test are given to the patient.
Incidence rate:	the number of new cases of a disease in a defined population over a specified period of time.
Index patient:	the original patient diagnosed for a particular infection.
Induced abortion:	intentional termination of pregnancy prior to foetus reaching 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 the use of any form of 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 infection.
Manual vacuum aspiration (MVA):	a technique for evacuating the contents of the uterus through use of 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 towards the base of the penis.
Mobile population:	This is a group of population which 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 (MTCT):	Transmission of HIV from an infected mother to her infant during pregnancy, labour or after delivery through breast milk.
Outpatient:	a patient who receives treatment without being hospitalized.
Oral Sex:	Sex done through the oral cavity.
Parenteral therapy:	therapy given by some other means than through the gastrointestinal 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:	the 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 <37 weeks (2) Term when foetus is mature >37 weeks.
Presumptive treatment:	treatment with a full curative dose of drugs (e.g., antibiotics) based on assumption that person is infected, not on evidence of the disease.
Preterm rupture of membrane:	rupture of membranes before 37 weeks of gestation (before pregnancy is carried to term).
Prevalence rate:	The 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 that 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 than 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 that 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 he or she has 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 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.
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:	the 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. IUD 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:	These are the groups of populations which are at more risk of acquiring STI/HIV compared to the rest of the population.

REFERENCES

1. Ministry of Health, Tanzania, (2001): STI Training for Clinicians, User's Manual, National AIDS/STD Control Programme second edition 2001.
2. Ministry of Health, Tanzania, (2003): National Policy Guidelines for Reproductive and Child Health Services, Reproductive and Child Health Section, May.
3. Ministry of Health, Tanzania, (2004): National Guidelines for Screening and Treatment of Syphilis during pregnancy, First Edition.
4. Ministry of Health, Tanzania, Reproductive and Child Health Section and National AIDS Control Programme (2003): Sexually Transmitted Infections, A Manual For Service Providers.
5. Ministry of Health, Tanzania, (2005): National Guidelines for Voluntary Counseling and Testing.
6. Ministry of Health, Tanzania, (2004) National Guidelines for Prevention of Mother to Child Transmission of HIV.
7. Ministry of Health, Tanzania Mainland, National AIDS Control Programme, (2004): HIV/AIDS/STI surveillance Report No.19.
8. Ministry of Health and Social Welfare Tanzania (2005): A National Curriculum for Service Providers on Adolescent Reproductive Health, Participants Handout.
9. Ministry of Health, Tanzania Mainland: Surveillance of HIV and Syphilis Infections Among Antenatal Clinic Attendees 2003/2004,
10. The Use of Rapid Syphilis Tests, Sexually Transmitted Diseases Diagnostics Initiative (SDI) UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Disease (TDR). Draft Version 4.
11. World Health Organization, (2005) Department of Reproductive Health and Research: A guide to Essential Practice on Sexually Transmitted and other Reproductive Tract Infections.
12. World Health Organization (2003) Guidelines for the management of sexually transmitted infections.
13. 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.
14. Deborah Watson-Jones et al, Syphilis in Pregnancy in Tanzania. 1. Impact of Maternal Syphilis on Outcome of Pregnancy. The Journal of Infectious Diseases 2002;186:940-7
15. Deborah Watson-Jones et al, Syphilis in Pregnancy in Tanzania. 11. The Effectiveness of Antenatal Syphilis Screening and Single-Dose Benzathine Penicillin Treatment for the Prevention of Adverse Pregnancy Outcomes. The Journal of Infectious Diseases 2002;186:948-57
16. S. Takenaka et al, Challenges to the implementation of programs for STIs/VCT services: rapid assessment in rural Tanzania. XVI International AIDS Conference, 2006 Abstract no. CDC1214.

CONTACTS:
Ministry of Health and Social Welfare
National AIDS Control Programme (NACP)
P.O. Box 11857, Dar es Salaam, Tanzania
Tel: +255 22 2131213, Fax: +255 22 2127175
Website: http://www.nacptz.org/

Printed by: JamanaPrinters with the support from JICA

World Health Organization